



A2B / 20Connect - SWGP

Airport to Botany & 20Connect - Benefits Realisation Plan

Waka Kotahi NZ Transport Agency and Auckland Transport

Reference: 501094-4401-PLN-JJ-0003

Revision: Final

12/03/2021



aurecon

Document control record

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Document control			aurecon			
Report title		Airport to Botany & 20Connect - Benefits Realisation Plan				
Document ID		501094-4401-PLN-JJ-0003	Project number		501094 & 502334	
File path		pw:\designshare.au.aurecon.info:PW_AUDC1_01\Documents\Projects\501xxx\501094 - SWG - 20Connect SSBC\5 Deliver Design\501 Engineering\4401 - SH20, SH20A & SH20B Improvements\501094-4401-PLN-JJ-0003_20Connect A2B BRP\01 Deliverables\501094-4401-PLN-JJ-0003				
Client		Waka Kotahi NZ Transport Agency and Auckland Transport				
Client contact			Client reference			
Rev	Date	Revision details/status	Author	Reviewer	Verifier (if required)	Approver
Final	12/03/2021	Final Issue to client				
D	25/02/2021	Draft for Review				
C	29/01/2021	Draft for Review				
B	10/12/2020	Draft for Review				
A	07/04/2020	Draft for Review				
Current revision		Final				

Approval

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1 Introduction

The following sections describe the study area of the Southwest Gateway Programme (SWGP), its associated projects, and the purpose and scope of this Benefits Realisation Plan (BRP).

1.1 The SWGP

The SWGP study area encompasses the broad swathe of southern and eastern Auckland from the airport and surrounds in the south-west to Botany in the east, as shown in Figure 1-1 below.



Figure 1-1: SWGP initiatives¹

The four programme partners Waka Kotahi New Zealand Transport Agency (Waka Kotahi), Auckland Transport (AT), Te Ākitai Waiohū and Auckland Airport are working together to address the opportunities listed above through the SWGP. While the wider programme has a focus on the southwest and the airport, the public transport element – Airport to Botany Rapid Transit (A2B) - also addresses passenger needs between these areas and the east and south of Auckland.

The SWGP was developed as part of the earlier Airport Access Supplementary Programme Business Case (SPBC) and comprises the following projects:

- 20Connect – State Highway (SH) 20, 20A and 20B projects in the southwest largely connecting to the Airport
- Airport to Botany Rapid Transit (A2B)
- Auckland Airport Precinct Improvements (AAPI).

Both A2B and 20Connect have early stages that are now being progressed to construction that will include an enhanced interchange on the main rail line at Puhinui with priority for bus services to the airport.

¹ Sourced from: <https://www.nzta.govt.nz/assets/projects/southwest-gateway/Southwest-Gateway-programme-overview-poster.pdf>

1.2 Scope of this document

This document is a BRP, which sets out the approach to identification, analysis, planning and reporting of benefits related to the 20Connect and A2B projects as part of the SWGP.

The BRP is intended to be a living document that will be reviewed and updated over time as required to remain current with the delivery of the programme and relevant standards.

1.3 Structure of this document

Benefits realisation monitoring and reporting is a requirement of Waka Kotahi for the Business Case Approach. Waka Kotahi guidance notes state that *“there are significant gains from having a robust benefit realisation monitoring programme, such as increased investor confidence and demonstration of public value.”*²

This BRP has been developed to provide an overview of the benefits identified in the combined SWGP 20Connect and A2B Investment Logic Map (ILM), and how these will be realised and monitored.

Figure 1-2 summarises the structure of this document and the information flow leading to the identification of performance measures and next steps.

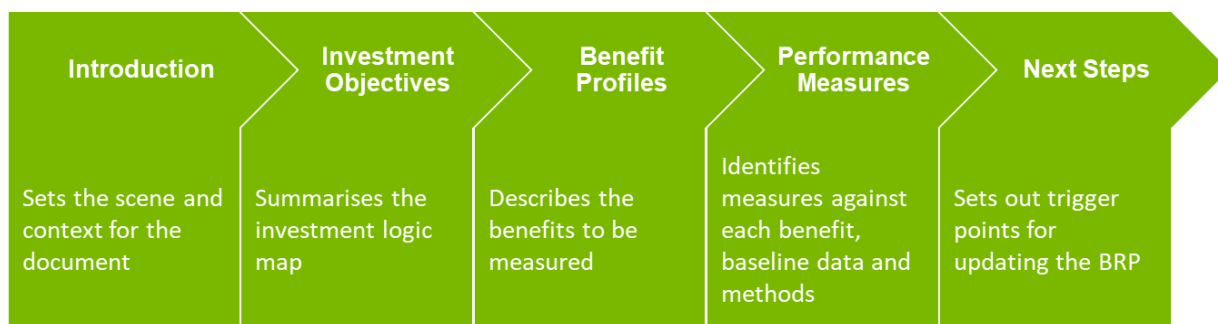


Figure 1-2: Structure of this BRP

² Source: <https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/processes/project-development/benefit-realisation/>



2 Investment objectives

The following sections set out the context of the development of the ILM (as per Waka Kotahi guidelines³) and are split into the following sections:

1. Problems – describes the problems identified in the ILM
2. Objectives and benefits of investment – describes the investment objectives of A2B and 20Connect, aligned to government strategy, and the benefits of addressing these objectives and the above problems.

These sections summarise information derived from the A2B and 20Connect Single Stage Business Case (SSBC).

Section 3 describes the benefits mentioned above in more detail, and the proposed performance measures to be used as part of this BRP.

2.1 SWGP Investment Logic Map

SWGP programme partners were invited to attend an Investment Logic Map (ILM) workshop, which took place on 17 January 2018 and was facilitated by accredited facilitator [REDACTED] (Blue Rocket Consulting). Invitees were requested to contribute ideas and views reflecting those of their represented organisation and departmental strategies.

Since the overarching long term ILM was developed, the programme partners have progressed the SH20B and Short-Term Airport Access Improvements SSBCs⁴ as part of the SWGP. A suite of investment objectives has been developed and approved for the short-term projects during collaborative meetings in April and May 2018.

The ILM was thus further refined on 24 October 2018 where stakeholders identified and agreed key problems, benefits and investment objectives considering the short- and long-term outcomes sought, as well as the Government Policy position and overall Programme outcomes. Following the decision to combine the A2B and 20Connect projects into one SSBC, the ILM underwent a final update (see Appendix A). Note that the 'measures' identified at the time of development of the ILM were not intended for direct use in benefits realisation, hence these 'measures' have been adapted per consultation with both AT and Waka Kotahi to the performance measures identified in Section 3 and 4.

Figure 2-1 depicts a summary of the ILM, including the original and combined problems, investment objectives and benefits identified for A2B and 20Connect.

³ Source: <https://www.nzta.govt.nz/roads-and-rail/highways-information-portal/processes/project-development/strategic-case/investment-logic-mapping/>

⁴ <https://at.govt.nz/media/1981509/item-94-short-term-airport-access-improvements-single-stage-business-case-incl-attachments.pdf>

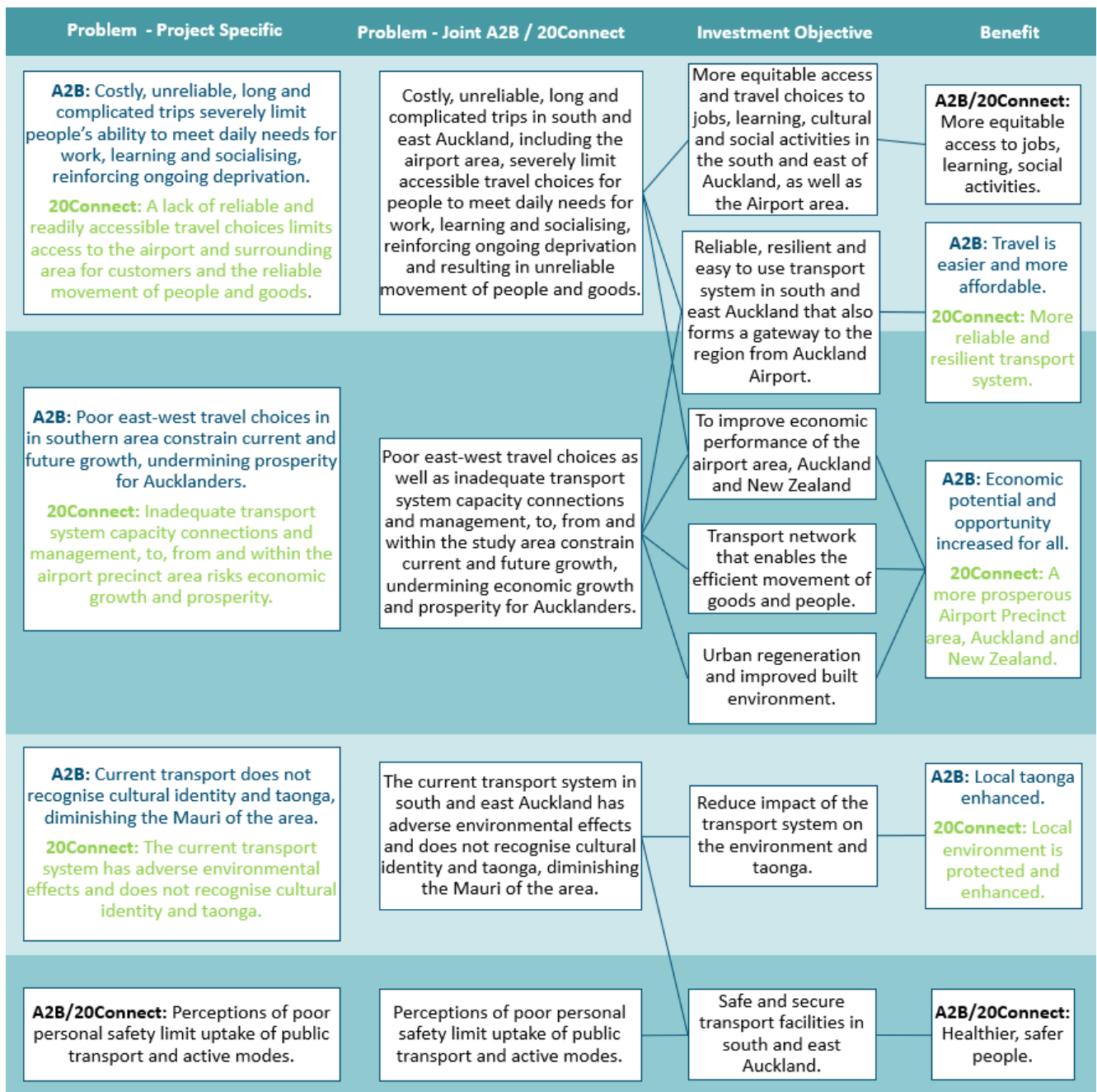


Figure 2-1: A2B and 20Connect ILM Summary (blue = A2B, green = 20Connect, black = combined)

Section 3 describes the benefits, individual key performance indicators (KPIs) for each benefit and summarises the proposed performance measures to be used to measure performance against KPIs.



3 Benefit profiles

Table 3-1 provides further detail on the benefits described in Section 2.1 and further outlines the proposed performance measures for this BRP (linked to investment objectives). The performance measures mentioned here are described in further detail in Section 4.

Table 3-1: Benefits profiles for the SWGP



ID#	Investment Objective	Benefit	KPI (Including ID number (#))	20Connect Measures Summary (Refer Table 4-2 for detail)	A2B Measures Summary (Refer Table 4-1 for detail)
1	<i>More equitable access and travel choices to jobs, learning, cultural and social activities in the south and east of Auckland, as well as the Airport area.</i>	A2B & 20Connect: More equitable access to jobs, learning, social activities.	(1) Population Accessible to key locations (2) Jobs Accessible from key locations (3) Access to education and social opportunities (4) Access to resources and places of customary practice (5) Cost of Travel in south and east Auckland	N/A	<ul style="list-style-type: none"> ■ Number of people within 45min public transport and walking trip of metropolitan centres, Auckland Airport and places of customary practice. ■ Cost of travel in south and east Auckland.



ID#	Investment Objective	Benefit	KPI (Including ID number (#))	20Connect Measures Summary (Refer Table 4-2 for detail)	A2B Measures Summary (Refer Table 4-1 for detail)
2	<i>Reliable, resilient and easy to use transport system in south and east Auckland that also forms a gateway to the region from Auckland Airport.</i>	A2B: Travel is easier and more affordable. 20Connect: A more reliable and resilient transport system.	(6) Capacity and resilience of the option to meet demand (7) Travel time reliability, including separation of road space (8) Ability for high priority trips to have reliable journeys (9) Directness and ease of use (10) Travel time for key journeys	<ul style="list-style-type: none"> Travel time reliability and overall travel times for key journeys. Traffic counts on key 20Connect routes. Length / volume / capacity of priority lanes. 	<ul style="list-style-type: none"> Number of people within 45min public transport and walking trip of metropolitan centres, Auckland Airport and places of customary practice. Delivered versus theoretical service.
3	<i>To improve economic performance of the airport area, Auckland and New Zealand</i>	A2B: Economic potential and opportunity increased for all. 20Connect: A more prosperous Airport Precinct area, Auckland and New Zealand.	(11) Population accessible to key locations (12) Jobs accessible from key locations (13) Improved access to local, town and metropolitan centres (14) Land development around stations	<ul style="list-style-type: none"> Population / jobs within 30 min drive from the Airport. 	N/A
4	<i>Transport network that enables the efficient movement of goods and people.</i>			<ul style="list-style-type: none"> Population / jobs within 30 min drive from the Airport. 	N/A
5	<i>Urban regeneration and improved built environment.</i>			N/A	<ul style="list-style-type: none"> Number of people within 45min public transport and walking trip of metropolitan centres, Auckland Airport and places of customary practice.



ID#	Investment Objective	Benefit	KPI (Including ID number (#))	20Connect Measures Summary (Refer Table 4-2 for detail)	A2B Measures Summary (Refer Table 4-1 for detail)
6	<i>Reduce impact of the transport system on the environment and taonga.</i>	A2B: Local taonga enhanced 20Connect: Local environment is protected and enhanced	(15) Air emissions from transportation (16) Water quality effects of transportation system (17) Effects on places of heritage (18) Māori communities and wellbeing (19) Te Taiao (air, land, water, taonga) (20) Effects on culture and tradition	<ul style="list-style-type: none"> Vehicle emissions within airport precinct area. Environmental measures (pre-implementation baseline vs post implementation ongoing monitoring). 	<ul style="list-style-type: none"> Measure of environmental and community impacts relative to the implementation of the project.
7	<i>Safe and secure transport facilities in south and east Auckland.</i>	A2B & 20Connect: Healthier, safer people	(21) Air emissions from transportation (22) Walking accessibility to public transport stations (23) Extent of local walking and cycling connections (24) Amenity function of activity areas and town centres (25) Safe walking and cycling conditions	<ul style="list-style-type: none"> Vehicle emissions within airport precinct area. Environmental measures (pre-implementation baseline vs post implementation ongoing monitoring). Changes in number / severity of walking / cycling incidents 	<ul style="list-style-type: none"> Measure of environmental and community impacts relative to the implementation of the project. Active mode uptake and extent along key routes. Measure changes in active mode incidents over time (ie incidents per commuter). Measure changes in perceptions of personal safety.

Figure 3-1 provides a summary of the linkage between investment objectives, benefits of investment and performance measures described in Table 3-1 as an extension of the investment logic summary depicted in Figure 2-1.

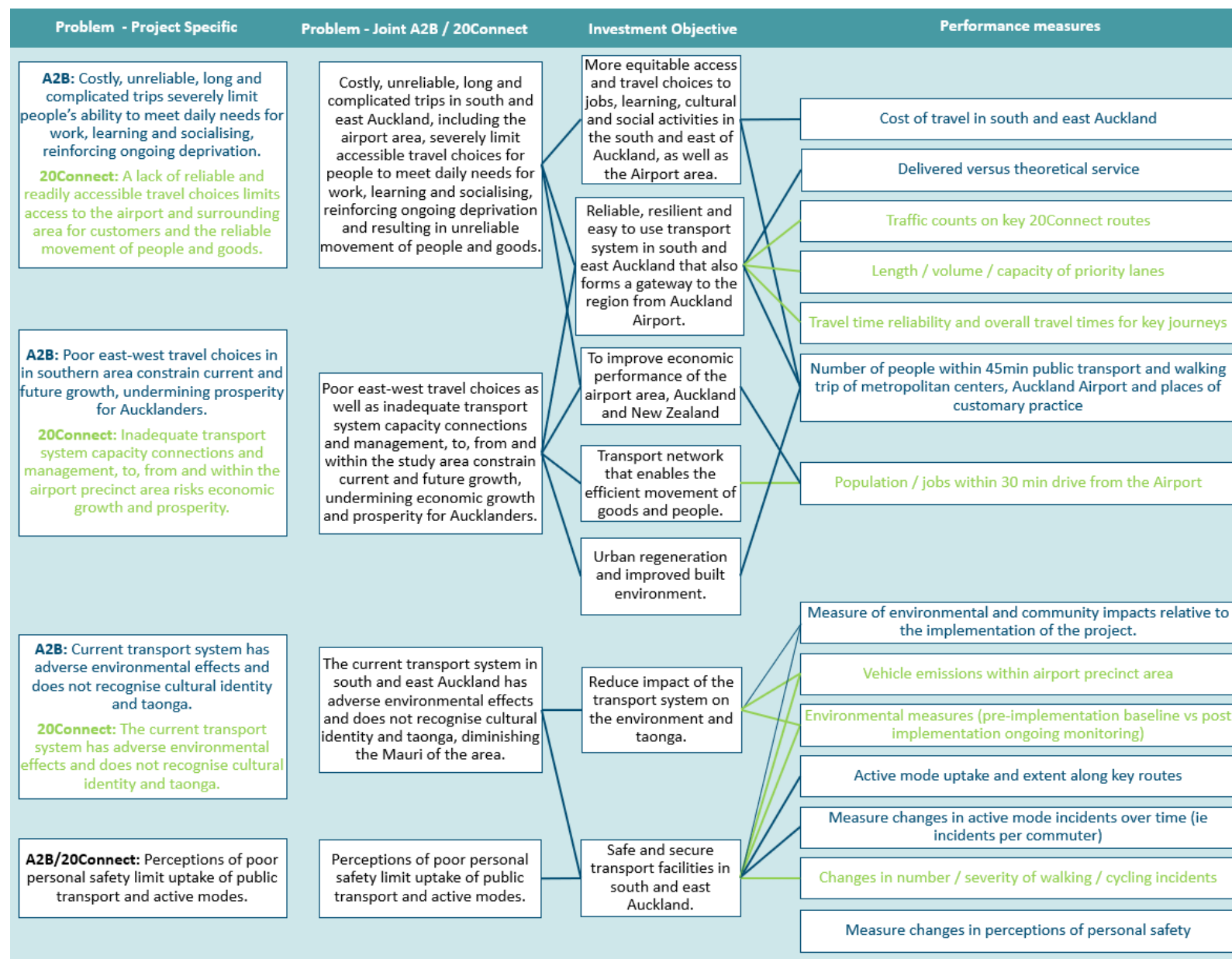


Figure 3-1: Investment Logic Summary including link to Performance Measures (blue, green and black relate to A2B, 20Connect and the combined respectively)

4 Performance measures

This section provides further detail on the performance measures described in Section 3, including proposed methodology for capture, baseline data and expected results. Performance measures for the SWGP are described in Table 4-1 (A2B measures) and Table 4-2 (20Connect measures) respectively. These tables are separated across projects to align with the proposed Governance Structure developed within the Management Case of the SSBC, where A2B measures are predominantly⁵ AT managed, while 20Connect measures are predominantly managed by Waka Kotahi. Measures related to environmental sustainability, health and safety of people should be measured in accordance with (as a minimum) Waka Kotahi's Benefits and Measures document¹⁰.

Table 4-1: Performance measures for the A2B project

Measure	Linked KPI (ID#) ⁶	Method	Time of measurement ⁷	Baseline	Expected Result
<i>Number of people within 45min public transport and walking trip of metropolitan centres, Auckland Airport and places of customary practice.</i>	1, 2, 3, 4, 10, 13, 14	<p>Baseline the existing 45-min public transport catchment and walking catchments around metropolitan centres, Auckland Airport and places of customary practice, and the number of people living within that boundary. Measure the future size of the catchment and number of people / jobs / education / development within the catchment at key census dates (and normalise for standard population growth).</p> <p>45-min public transport trip and walking catchment:</p> <ul style="list-style-type: none"> Geospatial Information System (GIS) mapping – based on existing data modelling, model the size of the 45-min public transport trip / walking catchment for key journeys and locations. <p>Changes in population:</p> <ul style="list-style-type: none"> Census data of the changes in population within the catchment areas. 	Per each census update.	Should be measured prior to construction start. See Appendix C for example catchment maps.	Size of catchments increase over time as the staged completion of the programme is finished, and other key projects in the area are completed (e.g. Eastern Busway and CC2M) ⁸ etc. Population is expected to also grow significantly in the study area, although this is less directly attributable to the SWGP.

⁵ "Predominantly" here refers to the likely inclusion of SH20B in the scope of the A2B project as at the time of writing. Clear ownership of measures within the SWGP Governance structure should be identified when this programme is progressed through to delivery, as discussed in Section 6.

⁶ These refer to the KPI ID numbers identified in Table 3-1.

⁷ Longevity of measurement is assumed as the either the first 10 instances of measurement or first 10 years of operation, whichever takes longer. This assumption should be tested at each iteration of the BRP

⁸ CC2M – City Centre to Māngere light rail project.

Measure	Linked KPI (ID#) ⁶	Method	Time of measurement ⁷	Baseline	Expected Result
<i>Cost of travel in south and east Auckland.</i>	5	Measure baseline generalised cost of travel for key journeys and compare this to changes in the generalised cost of travel over the implementation (staged delivery) and post implementation of A2B.	12 months after completion of each construction stage, and then annually after full project completion.	Existing generalised costs of travel along key routes, aligned to the routes measured as part of Performance Measure 1.	Generalised cost of travel to decrease as public transport mode share is increased, travel times are improved, car ownership and car running costs reduce.
<i>Delivered versus theoretical service.</i>	6, 9, 10	<p>Baseline: the planned level of service to be provided (at each project stage), i.e. frequency, headways, reliability.</p> <p>Measure: Annual trip data along the route – based on AT operational data for the route (e.g. AT APIs⁹).</p> <p>Directness / ease of use: conduct customer surveys to track perceptions of directness of service and ease of use.</p> <p>Measurement should consider if the desired service levels are being met, or if the desired service levels are too high at any given horizon, indicating potential inefficiencies. Reliability measured as the percentage of scheduled service trips between 59 seconds before and 4 minutes 59 seconds after the scheduled departure time of selected points¹⁰.</p>	Annually, or in-line with AT regular operational data release.	<p>Span: 04:30am – 01:30am</p> <p>Frequency¹¹:</p> <ul style="list-style-type: none"> ■ Horizon 1 - 10mins peak, 15mins off-peak (including weekends) ■ Horizon 2 & 3 – 5-10mins peak, 10mins daytime, 15mins other ■ Horizon 4 & 5 – 3mins peak, 10mins daytime, 15mins other. <p>Reliability: trip lengths at peak times are within acceptable range of their expected average length.</p> <p>Directness / ease of use: Refer to AT's customer insights expectations.</p>	Desired service levels are met.

⁹ APIs are "application programme interfaces", in this context used by AT to disseminate data to the wider public for use.

¹⁰ Measures related to environmental sustainability, health and safety of people should be measured in accordance with Waka Kotahi's Benefits and Measures guidance. At the time of writing this guidance was being updated. Measures should be reviewed and updated in the future in line with the latest guidance at the time and in agreement with Investment Quality Assurance.

¹¹ "Horizons" refer to the SWGP staging Horizons – refer to the SWGP Staging Technical Note for more information.



Measure	Linked KPI (ID#) ⁶	Method	Time of measurement ⁷	Baseline	Expected Result
<i>Measure of environmental and community impacts relative to the implementation of the project.</i>	15 - 21	<p>Baseline environmental measurements from key locations along the route and other areas of influence as identified in the SSBC, including:</p> <ul style="list-style-type: none"> • Air, water, land, biodiversity, greenhouse gas emissions impacts • Cultural and heritage site impacts • Community engagements. <p>Once baseline quantitative data is gathered, implement monitoring plan to regularly measure changes in key indicators over the life of the project.</p> <p>Regularly engage with the community throughout staged implementation and post-implementation to monitor impacts and perceptions of the community.</p>	Minimum - Annual measurements.	Should be measured prior to construction start.	Potential positive and adverse negative effects to be managed and mitigated through the consenting and construction process. Air emissions are likely to net reduce once full implementation of electric buses is in place and public transport mode share increases. Some land and areas with associated cultural values are being impacted and should be closely monitored over time to ensure agreed impact levels are maintained.
<i>Active mode uptake and extent along key routes.</i>	22, 23	<p>Walking and cycling count on key routes and shared-use paths.</p> <p>Extents of active modes are as per the preferred option design.</p>	As per AT operational data counts – preferred Annual.	<p>Gather counts on existing routes (in some cases, dedicated walking and cycling does not exist). As staged delivery is completed, gather new “baselines” on walking and cycling infrastructure to measure additional uptake as the project progresses and continue after completion.</p> <p>From 2013 census data, “Other” mode share (which includes working at home, taxi, ferry, motorcycle, walking, cycling – indicating actual active mode share is much lower) is:</p> <ul style="list-style-type: none"> ■ East Tamaki: 5% ■ Manukau and Wiri: 6% ■ Airport and environs: 5% 	Uptake of active modes will increase over time as infrastructure is rolled out and public perception of active modes improves and active modes “become the norm”.



Measure	Linked KPI (ID#) ⁶	Method	Time of measurement ⁷	Baseline	Expected Result
<i>Measure changes in active mode incidents over time (i.e. incidents per commuter).</i>	25	Measure number of active mode related incidents over time per commuter for key routes in the project area.	Annual, or as regular incident reporting occurs (i.e. the Waka Kotahi Crash Analysis System data).	Data can be obtained via Waka Kotahi Disaggregated Crash data.	Potential for mixed results, considering that while the interventions will be safely designed and implemented, the raw increase of active mode uptake may increase total number of incidents on the route (including routes where there is currently no provision for active modes).
<i>Measure changes in perceptions of personal safety.</i>	25	Measure changes in perceptions of personal safety in the community through surveys.	Minimum - Annual measurements.	Should be measured prior to construction start.	Perceptions of safety improve over time as preferred option design interventions are successful in improving access, asset and vehicle conditions, reduction in incidents etc.

Table 4-2: Performance Measures for the 20Connect project

Measure	Linked KPI (ID#) ¹²	Method	Time of measurement ¹³	Baseline	Expected Result
<i>Travel time reliability and overall travel times for key journeys</i>	6, 7, 8, 10	Travel times for key journeys - measured regularly as per existing Waka Kotahi methodologies for SH20, SH20A and SH20B. Travel time reliability and variability – monitored as per Waka Kotahi travel time reliability measures ¹⁴ . Compare future measures (post project implementation) with historical measures to gauge changes in this performance measure.	Measured at commencement	Measures for network average travel times of SH20A/20B – see Appendix B for example data in 2017.	As per the intended outcomes of the SWGP, reduced travel time and increased reliability is anticipated first through travel demand management initiatives (staging and active / public transport mode uptake) then through direct highway upgrades. See the SSBC for detailed forecasts.

¹² These refer to the KPI ID #'s identified in Table 3-1

¹³ Longevity of measurement is assumed as the either the first 10 instances of measurement or first 10 years of operation, whichever takes longer. This assumption should be tested at each iteration of the BRP

¹⁴ <https://www.nzta.govt.nz/roads-and-rail/management-and-maintenance/traffic-management/travel-time-reliability/>



Measure	Linked KPI (ID#) ¹²	Method	Time of measurement ¹³	Baseline	Expected Result
<i>Traffic counts on key 20Connect routes</i>	6, 7, 8, 10	Measure the volume and types of traffic serviced on key Waka Kotahi routes – SH20, 20A and 20B – compared to historical measures prior to SWGP implementation.	Ongoing	Measures for traffic volumes and mode breakdown for SH20/20A/20B ¹⁵	As per intended outcomes of the 20Connect SSBC, traffic volumes on the SH20 network should increase above baseline 2048 forecasts without negatively impacting overall travel times. Avoidance of 'rat-running': Percentage of medium to heavy commercial vehicles as a portion of total traffic moving outside of the Strategic Freight Network routes reduces.
<i>Length / volume / capacity of priority lanes</i>	8	Measure the added capacity of priority vehicle lanes over time, compared to the baseline SH20 network. Also measure the productivity of the network compared to a base case (i.e. non-priority scenario).	Post project implementation, then annually	Existing size / number of priority lanes on the SH20 network. Actual productivity versus theoretical modelled productivity	The Preferred Option for 20Connect project and SH20B Early Improvements Business Case includes potential provision for priority lanes (public transport, as well as high occupancy vehicles and freight). As these interventions are potentially timed for later decades, this expected outcome should be monitored and updated as pertinent.
<i>Population / jobs within 30 min drive from the Airport</i>	11,12	Measure the physical catchment of the population living within a measured 30min drive boundary from the airport (GIS mapping) for the existing network, and compare that with the forecast (desired preferred option outcome) and actual (implemented and measured) outcome.	Immediate (for current and forecast), and post implementation – then regularly (annual)	See catchment maps for an example – Appendix C ¹⁶ .	30min catchment increases (and population within that catchment increasing) over time compared to base case projections due to decreased travel times, increased population density and accelerated growth.

¹⁵ See here for latest data. Baseline year at time of writing – 2019. <https://www.nzta.govt.nz/resources/state-highway-traffic-volumes/>

¹⁶ These should be updated as the baseline with latest data prior to implementation.



Measure	Linked KPI (ID#) ¹²	Method	Time of measurement ¹³	Baseline	Expected Result
<i>Vehicle emissions within airport precinct area</i>	15, 16, 21	<p>Baseline environmental measurements from key locations along the route and other areas of influence as identified in the 20Connect SSBC, including but not limited to:</p> <ul style="list-style-type: none"> Air, water, land, biodiversity, greenhouse gas emissions impacts; Cultural and heritage site impacts; Community engagements. <p>Once baseline quantitative data is gathered, implement monitoring plan to regularly measure changes in key indicators over the life of the project.</p>	Immediate (baseline), regularly post implementation ¹⁷ (suggested annual frequency)	To be measured.	Difficult to hypothesise at time of writing. Emissions are expected to be proportional to vehicle volumes, as well as other external factors such as changes in vehicle technology and age of the fleet. Distinguishing between changes directly attributable to the 20Connect project are expected to be difficult – instead this measure should be monitored within government regulated levels and actively managed as necessary.
<i>Environmental measures (pre-implementation baseline vs post implementation ongoing monitoring)</i>	15, 16, 17, 18, 19, 20, 21	<p>Refer to the same methodology per the <i>Vehicle emissions within airport precinct area</i> measure (above), with the addition:</p> <p>Regularly engage with the community throughout staged implementation and post-implementation to monitor impacts and perceptions of the community.</p> <p>Potential for the Waka Kotahi to investigate environmental monitoring techniques (i.e. internet of things (IoT)) to measure pre- and post-implementation environmental conditions.</p>	Immediate (baseline), regularly post implementation ¹⁸ (suggested annual frequency)	To be measured.	Difficult to hypothesise at time of writing. Emissions are expected to be proportional to vehicle volumes, as well as other external factors such as changes in vehicle technology and age of the fleet. Distinguishing between changes directly attributable to the 20Connect project are expected to be difficult – instead this measure should be monitored within government regulated levels and actively managed as necessary.

¹⁷ In line with relevant Waka Kotahi environmental monitoring requirements which are set outside the scope of this document

¹⁸ In line with relevant Waka Kotahi environmental monitoring requirements which are set outside the scope of this document



Measure	Linked KPI (ID#) ¹²	Method	Time of measurement ¹³	Baseline	Expected Result
<i>Changes in number / severity of walking / cycling incidents</i>	24, 25	Measure the number and severity of active mode incidents recorded on the network within scope (including vehicle-to-person incidents). Monitor trends in incidents over time and compare measurements to other baselines and industry standards for analysis and commentary purposes. Programme should aim for zero harm (i.e. no incidents).	Post implementation, then regularly inline with Waka Kotahi incident measurement methodologies (i.e. monthly)	To be measured.	<p>There are expected to be some active mode incidents on the network over its life. Provision of a share use path in the preferred option should significantly reduce person-to-vehicle incidents compared to the do-minimum case (without a shared use path).</p> <p>As a majority of active mode infrastructure in the preferred option is new, commuters may take time to assimilate – in which case, higher crash frequencies <i>may be</i> measured in the earlier years post implementation at intersections. Over time, as the community is better exposed and educated as to the use of active modes, injury frequency (weighted to volume of active mode traffic to account for growth) should reduce.</p>

Section 6 provides information on the next steps and suggested actions / measures to be taken to ensure this BRP remains up to date.

5 Investment Management Approach (IMA)

As discussed in the SWGP Staging Technical Note (Staging Strategy), the complex nature of the SWGP has necessitated a staged approach to delivery. This staged approach is split across five Horizons (refer to the Staging Strategy for further detail) which are summarised below and illustrated in Figure 5-1 and Figure 5-2.

- **Horizon 1 (2021)** – Short-term Airport Access Improvements (STAAI) and SH20B Early Improvements, including the Puhinui Interchange upgrades and early bus priority interventions on SH20B, Puhinui Road and Lambie Dr, and the introduction of an 'AirportLink' bus service between the airport and Manukau. These works are considered part of the do-minimum for this SSBC.
- **Horizon 2 (2025)** – A2B medium term premium bus service – a premium pre-rapid transit connection supported by relatively low capital-investment bus priority interventions, particularly between Manukau and Botany, to extend the 'AirportLink' bus service from Airport to Botany, with stations established at their long term locations prior to their upgrading and completion in Horizon 4
- **Horizon 3 (2030)** – Opening of the A2B rapid transit service - targeted infrastructure upgrades on SH20B and SH20 south of SH20B to Manukau, including a four-lane expressway, a dedicated side and centre-running busway on SH20B, a shared path along SH20B, a new southbound SH20B to SH20 connection, a bridge for A2B over the rail lines at Puhinui, and ultimate A2B busway infrastructure and two stations in Manukau City Centre to support central and local government urban regeneration initiatives. Horizon 3 also includes Botany Station Stage 2.
- **Horizon 4 (2035)** – Full A2B rapid transit service and infrastructure. Centre-running BRT between SH20/SH20B interchange and Botany. Establishment of new A2B stations between Manukau and Botany and at Lambie Drive. Walking and cycling facilities extended to Botany.
- **Horizon 5 (2040)** – SWGP final implementation – completion of the SH20 and SH20A upgrades, which involves highway widening and a new southbound SH20A to SH20 connection. Shared path alongside SH20, between Māngere Bridge and SH20B.

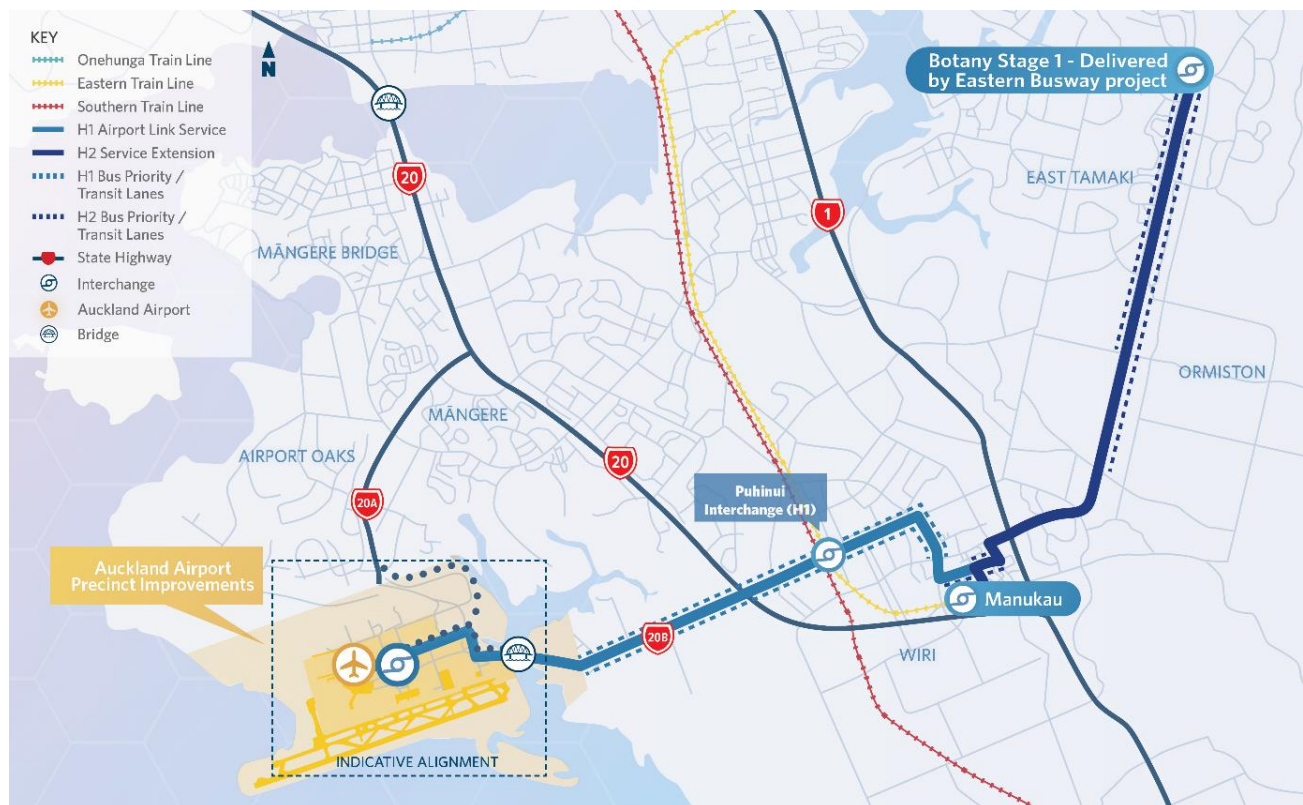


Figure 5-1: H1 and H2 service and infrastructure interventions

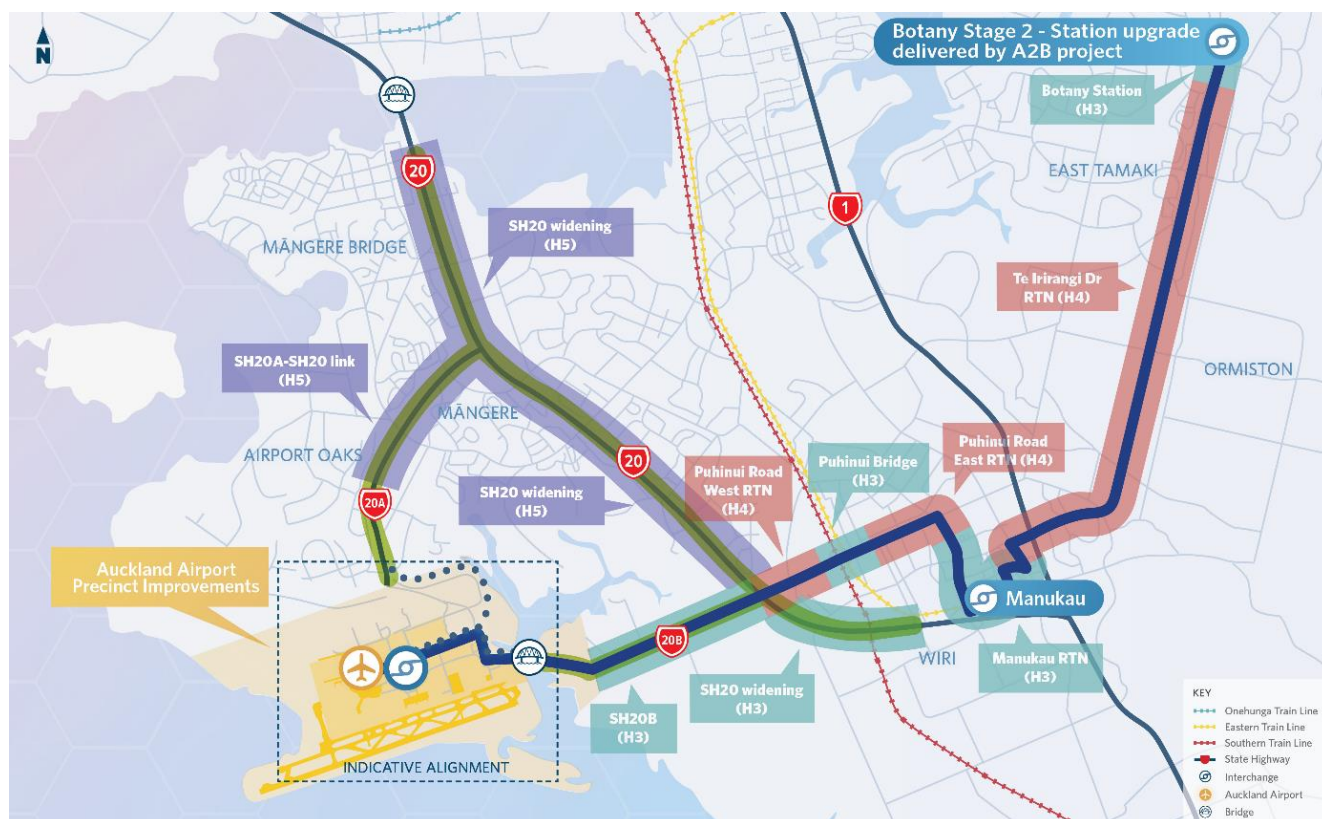


Figure 5-2: Indicative staged delivery of the SWGP infrastructure elements (eg H3 = Horizon 3)

While the Staging Strategy shows indicative timelines for implementation of each Horizon, a set of Gateway Reviews are proposed to review stages prior to investment, as detailed in the Management Case of the A2B Rapid Transit and 20Connect Single Stage Business Case. An indicative long-term programme including Gateway Reviews is shown in Figure 5-3. This ensures that the outcomes of each preceding Horizon, as well as the environment and assumptions used to develop the SSBC and the Staging Strategy, are measured and factored into the assessment of the next stage of development of the programme. The evidence to support a Gateway Review will be documented through an Implementation Business Case, generally consistent with the Treasury business case model.

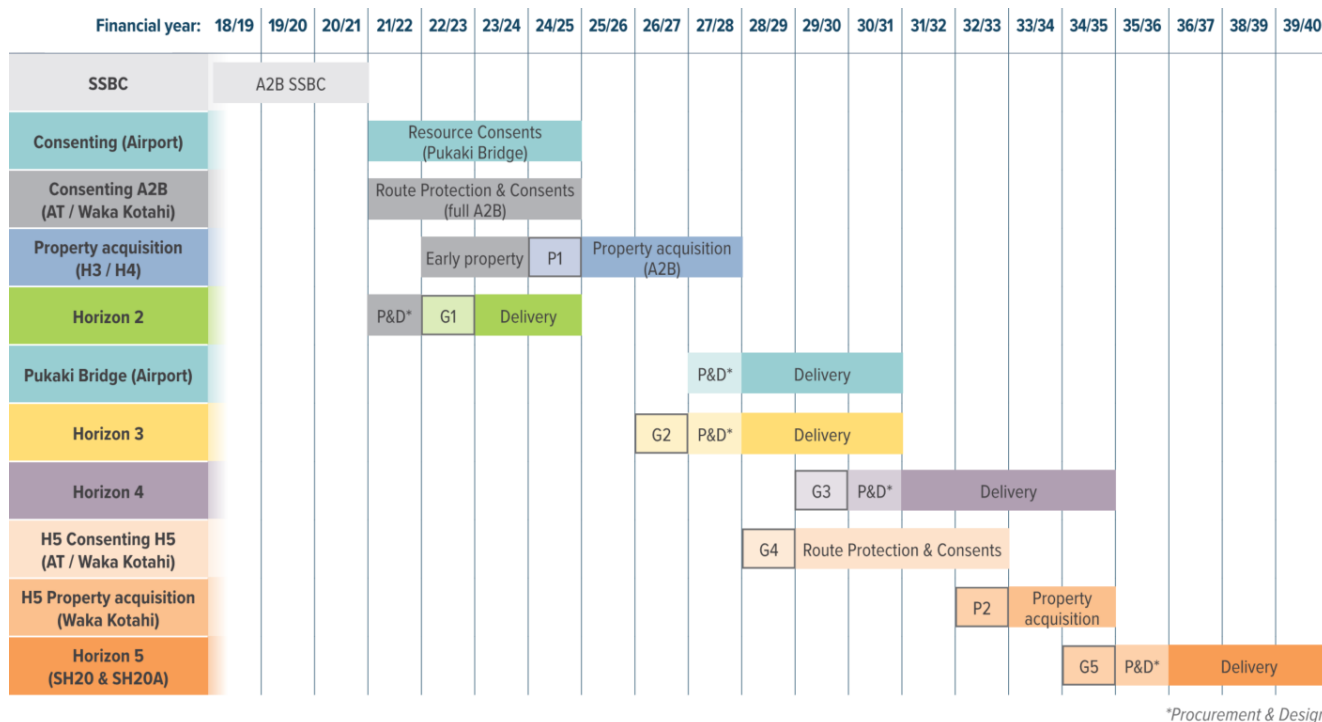


Figure 5-3: Proposed long term programme including gateway reviews



A series of 'Investment Drivers' have been identified which will be monitored and reported on within the Gateway Reviews and over time to manage the timing of future investment and to manage investment risk. These include the policy and strategic environment, forecasts, performance trends of prior implemented stages, programme dependencies and underlying conditions.

Of the Investment Drivers, the performance trends relate directly to this Benefit Realisation Plan. These performance trends overlap and synergise with several of the performance measures outlined in Section 4. The performance trend KPI's and measures are listed in Table 5-1.

Table 5-1: Performance trend KPIs and measures

KPI	Measure	Agency	Notes
Usage	Ridership	AT	A2B service. Monitor trends. Is ridership growing generally in line with expectations?
	Traffic volumes	WK	Selected links. Including local network Change in volumes from base (to identify redistribution)
Network performance	Journey time reliability (traffic)	WK/AT	Selected, indicative links or journeys – identify early stages of issues and potential responses
	Service reliability	AT	A2B service – identify early stages of issues and potential responses
	Customer feedback	AT	Public Transport focus (but could be all modes)
Safety	Safety assessment (forward looking)	AT/WK	Takes into account planned changes in network conditions. Intent is to be forward looking
	Safety perception (PT)	AT	Focus on personal safety – assessments and/or surveys
	Crashes/incidents	AT/WK	Crashes and personal security incidents

The measures for all of the performance trend measures identified in Table 5-1 should be taken annually as a minimum (as part of the annual monitoring report back to programme governance), or if incorporated into an existing performance measure, per the measurement timeline of that performance measure, whichever is more frequent.

After approval of the SSBC and prior to completion of the route protection and resource consents phase¹⁹ of the programme, these performance trend measures should be assessed and added to performance measures that provide adequate coverage of the measurement of the performance trend (where appropriate to minimise double measurement), and baselines should be investigated and set for each funding gateway.

For more detail on the Investment Management Approach refer to Section 20.5 (and wider Management Case) of the A2B Rapid Transit and 20Connect SSBC.

¹⁹ Refer A2B/20Connect SSBC for further detail on timing and activities associated with the Route Protection and Resource Consents Phase.

6 Next steps – benefits management and monitoring

This BRP identifies several performance measures and baseline data (or suggested methods to gather required data) to enable the effective operational monitoring of the SWGP projects (A2B and 20Connect) in line with the SWGP investment objectives. Per the SWGP proposed staging strategy (refer to the SSBC for more information on the staging approach), the A2B project (including SH20B 20Connect component) will be implemented before the remaining 20Connect interventions, and as such it is likely that A2B performance measures will be quantified / actioned sooner than that of 20Connect.

This BRP is a live document, and as per Treasury guidelines should be monitored and revisited “whenever there are changes in scope, timing or cost as these will have an impact on the approved benefits”²⁰. This would include, for example, transitioning between each of the proposed delivery Horizons of the SWGP. Further examples of these natural reviews / updates are summarised in Table 6-1²¹.

Table 6-1: Example BRP review points

Review point	Derived From	Period / Date
Construction start (or prior to) – review ownership of the outcomes of this BRP and ensure clear governance.	Managing Benefits from Projects and Programmes: Guide for Practitioners, Page 30	Prior to construction start.
Construction start (or Pre-implementation) – determine all outstanding (or update existing) baseline measures.	Managing Benefits from Projects and Programmes: Guide for Practitioners, Page 30	As required for the proposed measures.
Report back to relevant authority on the actual level of benefits achieved compared with those outlined in the approved investment document (i.e. SSBC).	Managing Benefits from Projects and Programmes: Guide for Practitioners, Page 3	Within 12 months after the in-service date.
Revisit the benefits whenever there are material changes in scope, timing or cost as these will have an impact on the approved benefits.	Managing Benefits from Projects and Programmes: Guide for Practitioners, Page 30	As required.
Updates to approach to benefits management: Should benefits management be the subject of updated thinking and approaches; this benefits management plan should be updated to reflect the latest thinking.	Good benefits management practice	As required.
A new GPS for Transport is released: A review should be completed if significant changes occur in the government policy environment. This may result in additional benefits being identified to demonstrate that the SWGP will contribute to other new strategic objectives. This may result in the identification of additional benefits that have greater strategic priorities.	GPS strategic priorities as a key driver for the benefits of the project.	As required.

To ensure effective management of the benefits realisation monitoring process, benefits management should be included in the governance and delivery management plans of the A2B Rapid Transit and 20Connect SSBC. Table 6-2 summarises who is responsible for each horizon and the associated BRP review and update.

Table 6-2: Programme partner responsible for each horizon and associated BRP review/update

Horizon	Programme partner
Horizon 1	Auckland Transport / Waka Kotahi
Horizon 2	Auckland Transport
Horizon 3	Auckland Transport / Waka Kotahi
Horizon 4	Auckland Transport
Horizon 5	Waka Kotahi

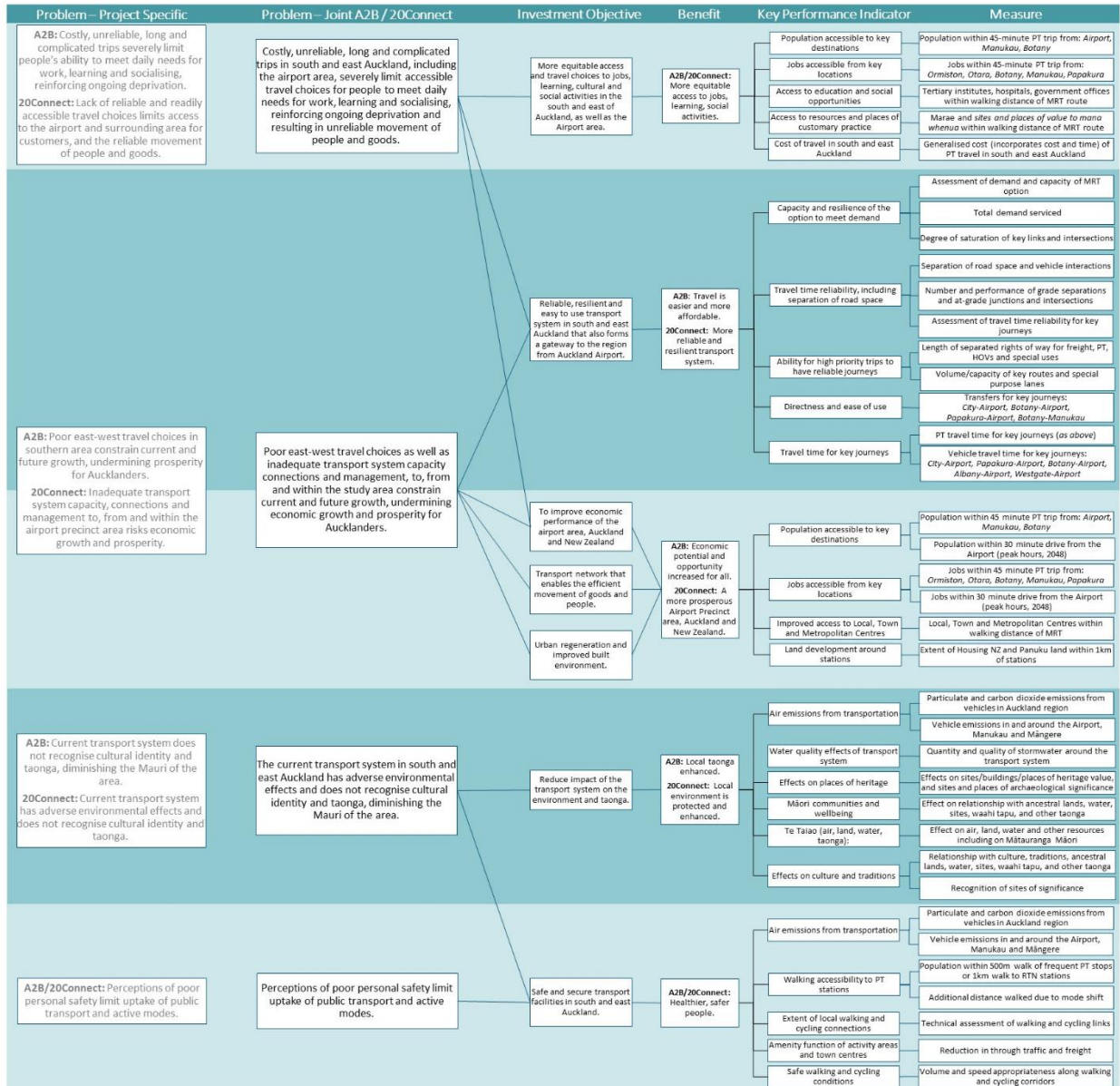
²⁰ Refer to page 30 of [Managing Benefits from Projects and Programmes: Guide for Practitioners \(the Treasury, 2017\)](#)

²¹ This list is not exhaustive, and is for information only – the BRP should be actively managed by Auckland Transport and Waka Kotahi throughout the lives of the Airport to Botany and 20Connect projects.



Appendices

Appendix A – Combined ILM with preliminary measure identified

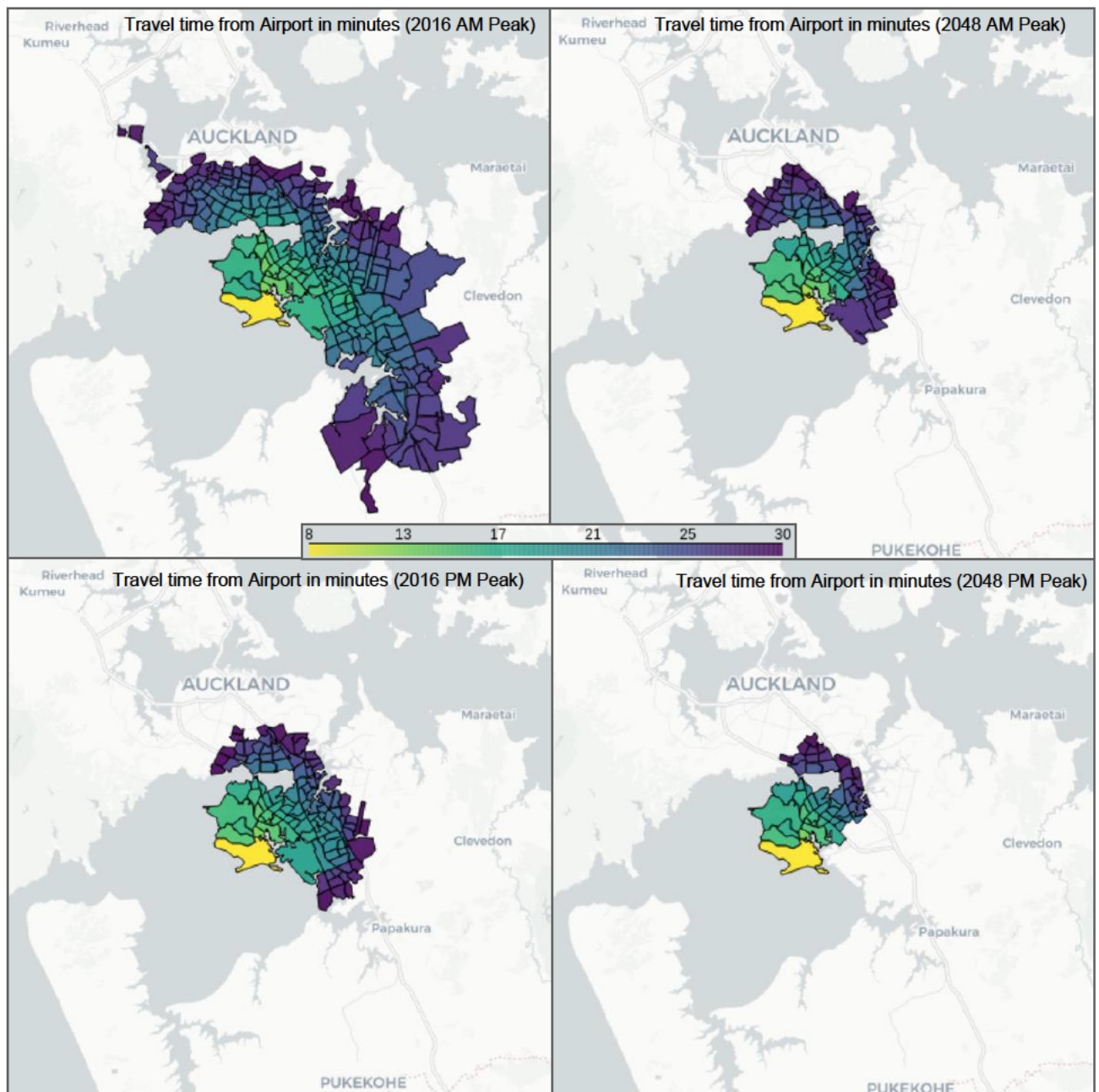


Appendix B – Example Baseline Network Travel Times SH20, 20A, 20B

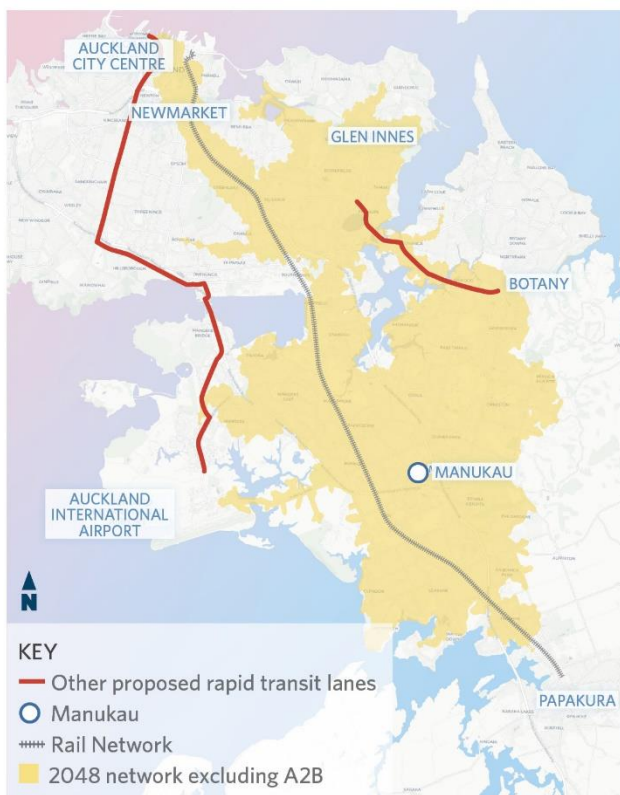
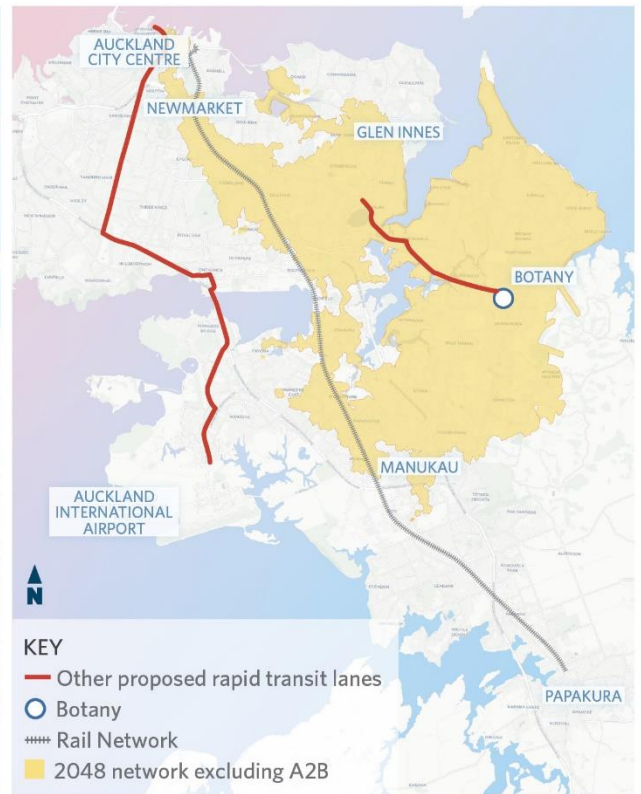
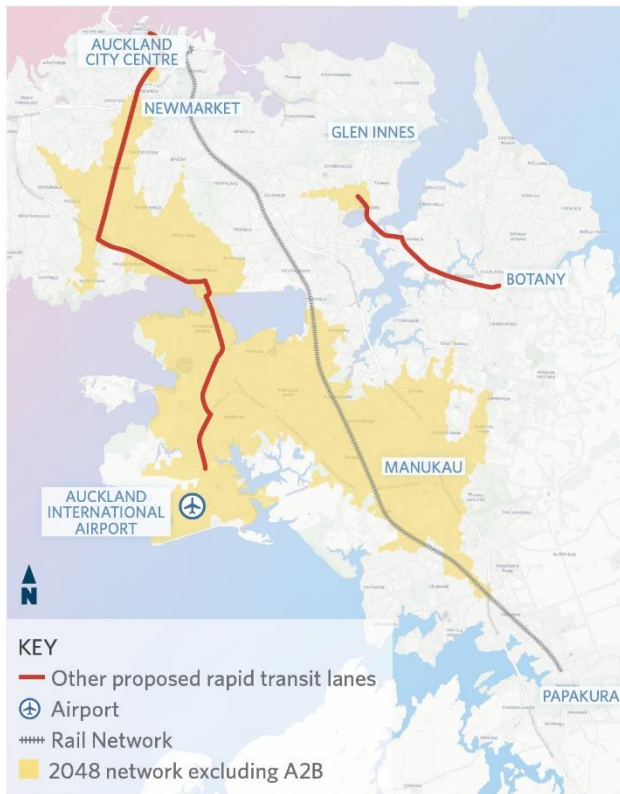
SH20A Corridor	Direction	Time	Base Case Current (2017)
Average Travel Times (MM:SS) <i>Between John Goulter Drive and SH20 Interchange</i>	Northbound	AM Peak	05:35
		PM Peak	05:05
		Inter-peak	04:40
	Southbound	AM Peak	10:50
		PM Peak	04:25
		Inter-peak	06:40
Volumes <i>Between Nixon Road and Landing Drive (arrival flows)</i>	Northbound	AM Peak	1250
		PM Peak	2300
		Inter-peak	1850
	Southbound	AM Peak	1700
		PM Peak	1400
		Inter-peak	1300
SH20B Corridor	Direction	Time	Base Case Current (2017)
Average Travel Times (MM:SS) <i>Between Tom Pearce Drive and SH20 Interchange</i>	Eastbound	AM Peak	06:05
		PM Peak	07:20
		Inter-peak	06:05
	Westbound	AM Peak	09:50
		PM Peak	06:55
		Inter-peak	07:30
Volumes <i>At Pūkaki Creek Crossing (arrival flows)</i>	Eastbound	AM Peak	850
		PM Peak	1150
		Inter-peak	800
	Westbound	AM Peak	1300
		PM Peak	700
		Inter-peak	900

Appendix C – Example Baseline Catchment Maps

20Connect 30min car travel catchment maps. See the A2B/20Connect SSBC for more detailed forecasts.



A2B 45min public transport catchment to the key activity centres, 2048 do-min network. See the A2B/20Connect SSBC for more detailed forecasts.





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