

CONFIDENTIAL

North West Rapid Transit Corridor Indicative Business Case

Recommendations

That the Board:

- i. Endorses the strategic intent set out in the 2017 North West Rapid Transit (NWRT) Corridor Indicative Business Case (IBC).
- ii. Endorses the commencement of work with the NZ Transport Agency (NZTA) to quantify and confirm the early deliverables for bus infrastructure and operational changes and at a later stage identify future rapid transit corridor requirements.
- iii. Notes that the early deliverables relating to bus interchanges at Westgate and Te Atatu, supported by extensions to bus shoulder lanes and the work required beyond this to deliver the full rapid transit corridor are not currently funded in the 2018 – 2028 Regional Land Transport Programme (RLTP), consideration for reprioritisation in both the current and the 2021-2031 RLTP will be required.

Executive summary

1. Auckland's North West region is experiencing strong growth, with an anticipated 30,000 new homes and 13,000 new jobs in the next 30 years.
2. This is putting significant pressure on the North West motorway, and existing public transport infrastructure and services, in an area that already has a comparably low public transport mode share.
3. To address these issues, in 2017, Auckland Transport (AT) completed the IBC. This quantified and validated the extent of the issue that needed to be addressed. These were:
 - a. Accelerated growth and rising travel demand will exceed the North Western corridor capacity, undermining access to homes, jobs, education and the attractiveness of growth areas;
 - b. Absence of competitive public transport to/from the North West growth area restricts public transport choices; and
 - c. An inefficient public transport network and lack of interchanges limit the ability to lift service standards for corridor users.
4. The IBC recommended a Bus Rapid Transit route alongside SH16 (as the long term solution) to improve travel times and reliability for customers, translating into better access to and from employment from the North West.
5. This IBC was not, however presented to the AT Board, as its conclusions were impacted by revisions of ATAP and the GPS which introduced an expectation that NZTA would deliver light rail in the North West corridor.

CONFIDENTIAL

6. There has been no progress on this to date, and the continuing growth in the area is putting increasing pressure on the infrastructure and services, resulting in increasingly poorer customer experiences. It is becoming increasingly urgent to take action in this corridor.
7. Ahead of any future decision or delivery of light rail, AT and NZTA propose:
 - a. A series of early deliverables (1 -5 years), that focus on interim bus interchanges at Westgate and Te Atatu, supported by extensions to bus shoulder lanes; and
 - b. Future bus rapid transit that is focussed on further bus interchange development, including park and ride and busway development (5 – 10 years), in a manner that does not preclude conversion to light rail.
8. Funding for the early deliverables or the future bus rapid transit is not in the 2018-2021 RLTP. When more detail is understood about the extent of the early deliverables, the cost can be confirmed, and consideration can be given to how they can be funded in the current and 2021-2031 RLTP. Funding for the development of the future bus rapid transit system will need to be prioritised in the 2021-2031 National Land Transport Programme (NLTP) by NZTA alongside other competing demands on the fund.
9. The Board's endorsement of the strategic intent of the 2017 Indicative Business Case is sought, along with approval to commence the work to identify early deliverables (bus infrastructure and operational interventions) that can be implemented to serve strong ongoing bus patronage growth. The Board's endorsement is also sought to commence work with NZTA to identify future bus rapid transit corridor requirements, in a manner that does not preclude conversion to light rail. An equivalent paper is being taken to NZTA Board in December.

Background

10. The Government Policy Statement on Land Transport 2018-28 was released in June 2018. This gave a mandate to NZTA to take a lead role in delivery (plan, fund, design, supervise, construct and maintain RTNs) of a new Rapid Transit Funding Activity Class. The ATAP revision in 2018 substituted Light Rail for the North Western Busway that had been in ATAP 2016 and 2017, and brought it forward a decade to support substantial growth. As a consequence, the IBC was not presented to the Board for approval.
11. Public transport patronage in the North West continues to grow following the roll out of the new bus network. In the past 12 months to July 2019, passenger trips have increased by 8.3% to 9.9 million trips (as shown in attachment 1), and there also continues to be significant further residential development in the North West growth areas, in addition to the ongoing development at Westgate.
12. At present no active work is underway and bus patronage continues to grow. With no investment in improved bus infrastructure and operations, the efficiency and customer experience of bus services will decline. AT and NZTA recognise that it is increasingly urgent to develop early infrastructure and operational interventions for bus customers that can be implemented ahead of any future decision or delivery of light rail.

CONFIDENTIAL

The opportunity and long-term solution

13. AT completed the Indicative Business Case (IBC) in 2017, which identified:

- The lack of bus interchanges along the North Western motorway (and therefore lack of transfer opportunities), results in an inefficient bus network and poor customer experience, which suppresses patronage and increases bus volumes in the city centre;
- The discontinuous bus shoulder lanes along the North Western motorway creates poor and unreliable bus journey times; and
- Strong population growth in the North West is not being matched by the development of a Rapid Transit Network (RTN) service and an accompanying feeder bus network, which undermines transport options for population growth and contributes to congestion.

14. The key problems identified in the IBC in 2017 are still relevant today:

- a. Accelerated growth and rising travel demand will exceed the North Western corridor capacity, undermining access to homes, jobs, education and the attractiveness of growth areas;
- b. Absence of competitive public transport to/from the North West growth areas restricts public transport choices; and
- c. Inefficient public transport network and lack of interchanges limit the ability to lift service standards for corridor users.

15. The IBC recommended a preferred option for a project that would:

- a. Substantially improve connections to and from the North West;
- b. Make public transport a realistic option for the majority of journeys to and from the North West; and
- c. Increase the efficiency of public transport to and from the North West.

16. The IBC assessed a range of rapid transit options and concluded that while light rail is the “best” option in achieving transport outcomes, the high passenger demands for it may not manifest for some time and it has many risks that bus-based options can avoid, particularly the need to build new structures across the causeway.

17. For this reason, the final IBC recommendation was for a busway solution comprising a number of components to be delivered in stages:

- a. Busway from the North and North East to Westgate;
- b. A new station at Westgate town centre;
- c. Separated busway on SH16 between Westgate and Lincoln Road;
- d. Separated busway on SH16 between Lincoln Road and Te Atatu;
- e. Using shoulder bus lanes on SH16 between Te Atatu and Waterview Interchange (the causeway);

CONFIDENTIAL

- f. Separated busway on SH16 between Waterview interchange and the end of the Newton Road off ramp; and
 - g. Use of a bus only lane on Newton Road to connect the busway to Karangahape Road.
18. Buses operating on a busway were found to provide the right performance capacity to match the needs of the corridor, while being the most affordable option to build and easiest to deliver in stages.
19. Buses were found to offer flexibility as they can easily move on and off the busway, and also use the motorway, bus lanes and regular streets.
20. This was considered to enable a staged implementation where critical parts of the busway could be delivered relatively quickly and cheaply and therefore provide higher benefits early. This would make it easier to get the busway running sooner, but also allows the costs of adding more capacity to be spread over time as the North West grows.
21. The IBC also noted that light rail may be required sooner should higher growth eventuate, or some other factor such as increased public transport demand. With this in mind, all aspects of the Corridor were recommended to be future proofed for conversion to light rail.
22. The IBC recommended option of a staged busway would ultimately deliver benefits including:
- a. Access to jobs: Brings 320,000 jobs within a 45-minute public transport journey of Westgate in 2046, compared to 120,000 with the Do-Minimum;
 - b. Catchment for the North West: Creates a population catchment of 580,000 people within a 45-minute public transport trip of employers in Westgate compared to 300,000 with the Do-Minimum;
 - c. Corridor throughput: Increases the person throughput on the North Western Motorway (all modes) at Waterview from 11,000/hour in the Do-Minimum to 16,000/hour. Expected demand for travel in 2046 is 13,000/hour;
 - d. Mode share: Increases bus passengers entering the city centre from the North West from 6,800 in the Do-Minimum to 9,300 in 2046. It does this with the same number of buses entering the city centre with higher occupancy;
 - e. Travel time: Creates a journey time by bus from Westgate to the city centre of 32 minutes in the peak compared to an expected journey time of 50 minutes with the Do-Minimum; and
 - f. Public transport catchment: Enables 40,000 people to live within walking distance of a rapid transit service on the North West corridor compared to 23,000 with the Do-Minimum.
23. In addition, in sections where a separated busway was to be built an opportunity would arise to re-purpose the existing bus shoulder lanes on SH16. This could provide for high occupancy vehicle lanes, freight lanes or other purposes that may improve the throughput and effectiveness of the state highway.

CONFIDENTIAL

Proposed early deliverables

24. Attachment 2 outlines the concept of a staged approach to developing the infrastructure and operational improvements required to support patronage growth ahead of any rapid transit intervention. To support this, it will be necessary to update current and future passenger demands, determine preferred bus interchange locations and concept designs, land requirements, bus network service changes, estimates of capital and operating costs as well as further work to optimise bus priority on the North Western Motorway. It is planned to carry out this work through an early-deliverables Single Stage Business Case (SSBC).
25. At this stage it is expected that the SSBC will also need to assess localised pedestrian access and safety improvements at the proposed Te Atatu Road interchange (associated with the potential use of non-operational land within NZTA's corridor), and the location options for improvements at Westgate
26. Additional unplanned funding from AT and NZTA will be required to deliver the improvements outlined in Attachment 2. This is estimated to be in the order of \$20 - \$40 million in the coming three years and will be confirmed through the SSBC.

Proposed future bus rapid transit

27. Given the likely time required to complete a business case, progress to route protection and complete necessary property acquisition for the future rapid transit solution, NZTA and AT will commence investigating further developments to support the future bus rapid transit intervention (see attachment 3), alongside the early-deliverables SSBC.
28. The scope of this future bus rapid transit corridor work will include further development of the earlier delivered interchange facilities at Westgate and Te Atatu to include rapid transit access, identify and design preferred bus interchange locations, identify land and accessibility requirements for Lincoln Road, Royal Road and Brigham Creek Road interchanges (including park and ride), segregated busway development, bus network changes and estimates of capital and operating costs.
29. It will be critical to co-ordinate with NZTA teams working on light rail delivery due to the significant interdependencies between the projects.

Stakeholder views

30. As part of the IBC development key stakeholders were engaged, including the NZTA, Auckland Council, Mana Whenua, Local Boards within the project area. This highlighted strong interest from Mana Whenua in any intervention which would impact upon the causeway. There has been strong support within Auckland Council to provide improved public transport for the West and North West.
31. Wider Public consultation on the proposals in the IBC (including early engagement with potentially impacted property owners), was planned to be undertaken jointly with NZTA in mid-2017, however, due to the changing strategic environment this did not proceed.

CONFIDENTIAL

Next steps

32. Commence work on an early deliverables Single Stage Business Case (SSBC). It is expected that recommendations of the SSBC will be reported to the Board early 2020 for approval.
33. Commence investigations to support a future bus rapid transit intervention. It is expected that recommendations of this work will be reported to the Board mid-late 2020 for approval.

CONFIDENTIAL

Attachments

Attachment Number	Description
1	Growth in New Network rollout for West Auckland
2	Proposed Early Deliverables Alignment and Staging Map
3	Proposed Future Rapid Transit Corridor Alignment and Staging Map

Document ownership

Submitted by	Chris Morgan Group Manager Strategic Projects	
Recommended by	Jenny Chetwynd Executive General Manager Planning & Investment	
	Mark Lambert Executive General Manager Integrated Networks	
	Mark Laing Executive General Manager Finance	
Approved for submission	Shane Ellison Chief Executive	

CONFIDENTIAL

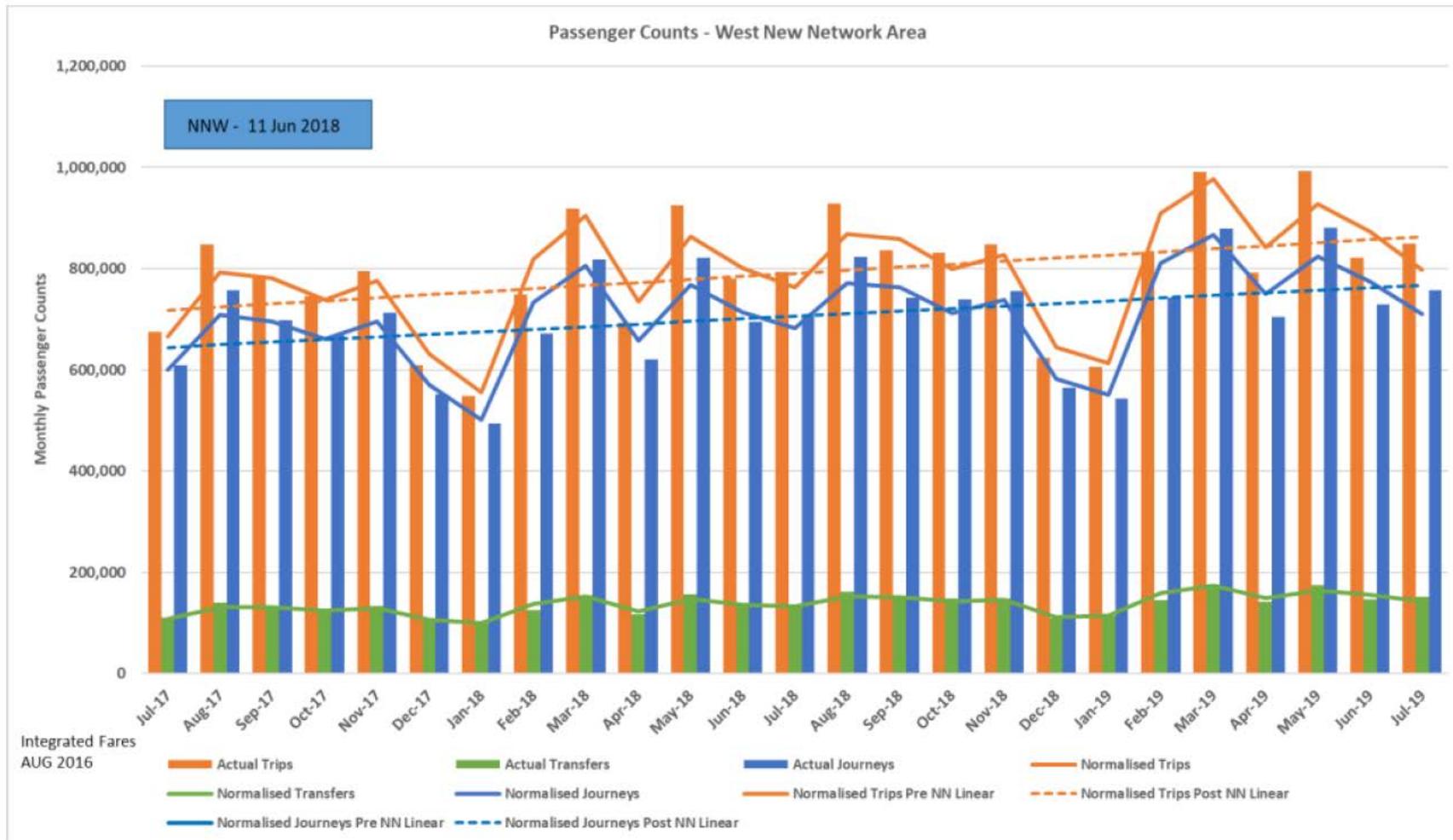
Glossary

Acronym	Description
ATAP	Auckland Transport Alignment Project
IBC	Indicative Business Case
NLTP	National Land Transport Programme
NWRTC	North West Rapid Transit Corridor
NZTA	New Zealand Transport Agency
RTN	Rapid Transit Network
SH16	State Highway 16
SSBC	Single Stage Business Case

CONFIDENTIAL

Attachment 1

Growth in New Network rollout for West Auckland



CONFIDENTIAL

Attachment 2 - Proposed Early Deliverables Alignment and Staging Map

STEP 1: Northwestern Bus Improvements Short-term



Immediate improvements for northwestern buses
 AT has developed an integrated bus network plan to support the northwest including high frequency buses.



Issues

- Northwest Auckland, in 30 years, is anticipated to have 30,000 new houses, 13,000 new jobs and triple the amount of people travelling along the Northwestern Motorway
- Northwest Auckland suffers from low public transport mode share
- There has been little recent work on the Northwest public transport network. There is an urgent need to make improvements, while decisions are being made on light rail and before it can be delivered.

Proposal

- There are a range of short and medium term interventions that AT can undertake to urgently and necessarily improve bus services
- These focus on delivering bus interchange facilities linking local and motorway services, and with the NZTA's help, creating extensive bus priority along the motorway
- The proposed investment will not preclude future rapid transit network (RTN) work
- Provides for short-term bus travel demand prior to full RTN, enhancing RTN business case and success.

Way forward

- Delivering these short and medium term interventions will require additional unplanned funding for AT and the NZTA
- AT are proposing a pragmatic approach to business casing – progressing lower cost/ lower risk projects ahead of comprehensive RTN planning (which will require more in-depth investigation and time-consuming business casing)
- There are a number of stages to AT's proposals, each building upon the last, e.g. lower cost bus shelters initially, with larger more comprehensive facilities built as adjacent sites are bought and developed
- AT will also require the NZTA to accommodate innovative arrangements to enable quick delivery (e.g. allowing nonstandard facilities to progress as trials)
- AT may require the NZTA to make available non-operational NZTA land in key locations.



CONFIDENTIAL

Attachment 3 - Proposed Future Rapid Transit Corridor Alignment and Staging Map

STEP 2: Northwestern Bus Improvements Medium-term



Interim improvements for northwestern buses

Building on the short-term (1-5 year) improvements

As a stepping-stone to future long-term light rail (10-15 years), an improved and supported bus network with future-proofing for light rail requirements, would deliver the benefits of RTN along the Northwestern corridor. This would be relatively low-cost and with limited sunk-cost, with bus interchanges that could be used for light rail in the future.



BRIGHAM CREEK RD BUS STATION and PARK N RIDE

- ✓ Increased and rapid transit access between growth areas and the city centre
- ✓ Potential rapid transit connections to/from Upper Harbour
- ✓ Further increased frequency/patronage growth
- 🔄 Busway development alongside Northwestern motorway
- 📄 Land purchase
- 📄 Planning process
- 📄 NZTA collaboration

\$\$\$ 1

BUSWAY DEVELOPMENT

- ✓ Segregated busway corridor provides safer and higher speed buses
- ✓ Enables easy full interchange with local and regional services
- ✓ Full bus priority, reliability and patronage growth
- ✓ Future-proof for LRT
- ✓ Builds passengers and demand for LRT business case success

\$\$\$ 3

WESTGATE BUS INTERCHANGE DEVELOPMENT TO INCLUDE RAPID TRANSIT ACCESS

- ✓ Increased and rapid transit access between growth areas and the city centre
- ✓ Potential rapid transit connections to/from Upper Harbour and Henderson
- ✓ Further increased frequency/patronage growth
- 🔄 Busway development alongside Northwestern motorway
- 📄 Land purchase
- 📄 Planning process
- 📄 NZTA collaboration

\$\$\$ 2

TE ATATU / ROYAL / LINCOLN ROAD INTERCHANGE

- ✓ Consolidated interchange for better local and regional bus services better connections
- ✓ Further increased frequency/patronage growth
- ✓ Further reduced City Centre bus congestion
- 🔄 Busway development on the southern side
- 📄 Land purchase
- 📄 NZTA collaboration

\$\$\$ 4

- 🚏 Proposed stations (exact location TBC)
- 🚏 Potential busway (exact location TBC)
- 🚏 Potential bus lanes
- 🚏 Supporting bus network
- 🚏 Rail
- 🚏 Ferry

NOTES:

- Also require NZTA agreement to expedite business case process (if applying for Govt funding)
- Westgate proposals are dependent on successful land negotiation, planning processes for compulsory land purchase will otherwise take time
- The project shown on the map should not be considered final and is subject to further refinement. Information is accurate as at 20 September 2019.

STEP 3: LRT (10-15 years)