

Dominion Road: Option Analysis Outcome

Glossary

Auckland Council	(AC)
Auckland Plan	(AP)
Auckland Transport	(AT)
Benefit Cost Ratio	(BCR)
Cycle Action Auckland	(CAA)
Frequent Transit Network	(FTN)
Integrated Transport Programme	(ITP)
Net Present Value	(NPV)
New Zealand Transport Agency	(NZTA)
Quality Transit Network	(QTN)
Regional Land Transport Programme	(RLTP)

Executive Summary

The Dominion Road team has now completed the option analysis to optimise value for money and identify the proposed preferred option. The previously presented scheme option catered for all key stakeholder requirements and had a cost estimate of \$106m being slightly over that currently budgeted in the LTP.

The analysis shows that, wider bus lanes do not add significant travel time or efficiency benefits that outweigh the incremental cost proposed as part of the previously presented scheme option. The scheme estimate could therefore be reduced by \$53M if the mid-block bus lanes were retained at its current width of 3.0m, rather than widening them to 4.5m.

Not widening the mid-block has further benefits of significantly reduced disruption to businesses along the corridor, reducing the construction period from 3 years to approximately 18 months. The smaller scheme also allows the bus improvements to be in place for the FTN by 2016.

The main negative impact of retaining the 3.0m wide bus lanes is the corridor will not fulfil its function in the regional cycle network. The cycle unfriendly environment along the narrow lanes with heavy traffic is an impediment to cycle uptake, and has also contributed to 3 bus vs cycle and 8 cycle vs car crashes over the last 5 years (none of them fatal¹).

Parallel cycle routes are proposed as part of the scheme to provide options for less confident cyclists, doing shorter trips. These routes address the cycling need in part, but do not serve the need for longer distance commuter cyclists, whom may still choose to cycle along Dominion Road.

However, a balance had to be struck between affordability and strategic need and the project is recommending delaying the mid-block widening beyond the first decade whilst investment in Option 4A (at a cost of \$47M as described in this report) is considered to best balance the impacts sought through this scheme with the economic efficiency the option will deliver.

¹ SKM Scheme Assessment Report - 2008

Extending the bus lane operational hours (by ¹ hour in the morning peak, and two hours in the afternoon peak) would provide some travel time benefits and ensure reliable travel times for a longer period, especially with a new network that relies on intersecting services from other east-west routes on the FTN (see attachment 1). The intention is that this will be considered as part of a region wide review of bus lane operating times outside the scope of this project.

Recommendations

It is recommended that:

- i). The Board receive the report
- ii). The Board approves the progression to detailed design of Option 4A as described in this paper. In brief, the option provides:
 - a. Continuous peak hour bus lanes from SH20 to View Road.
 - b. Introduces 4.5m wide bus lanes south of Mt Albert Road.
 - c. Retains 3m wide bus lanes north of Mt Albert Road but extends the bus lanes through the signalised intersections.
 - d. Introduces parallel cycle routes on less trafficked streets located east and west of Dominion Road.
 - e. Removes the Denbigh Road roundabout and replaces it with signals.
 - f. Improves stormwater management, lighting, footpaths and street crossing opportunities along the entire length of Dominion Road.
 - g. Provide parking mitigation measures along the route.
- iii). Subject to board approval, this paper and associated decisions be made publically available.

Strategic Context

The ITP has identified Dominion Road as a key strategic transport corridor vital for the public transport network as a FTN and to accommodate increased general and commercial traffic serving the growing adjacent land uses signalled by the Auckland Plan.

Dominion Road carries just over 3% of the entire region's public transport trips – that being 2.2 million passenger trips in the period March 2010-March 2011. The strategic traffic model predicts a 30% increase in transport trips along Dominion Road as a result of future land use and other infrastructure improvements in the area. The increase in trips will largely be driven from within the walk-up catchment to Dominion Road.

Bus services on this corridor currently carry an average of 10,000 passenger transport trips per week day and this is predicted to increase to 13,000 passenger transport trips per week day by 2041. Looking specifically at the morning peak hour, observations show buses on Dominion Road already carry more people than cars do. The buses transport up to 1,100 people (in 30 buses) heading towards the city during the peak hour whilst the car lane transport up to 900 people (in 800 cars) over the same period.

There is no capacity in the road network to accommodate the projected growth of 700 trips in the peak hour and as there are similar constraints on all three parallel roads (Sandringham, Dominion or Mt Eden) a PT efficiency based solution is required. The option is therefore to accommodate this growth on the bus network, which also contributes to the Auckland Plan's target to significantly increase the proportion of trips on public transport into the CBD. The additional 700 trips would imply either 20 more buses per hour (to a total 50 buses per hour), or larger buses (potential of double decker) or a combination of both.

The Dominion Road corridor has been included in Auckland's recently proposed FTN network (attachment 1). The Dominion Road Project proposes specific infrastructure investment on the FTN corridor that improves the bus reliability and increases the people carrying capacity of this corridor to enable it to accommodate the expected growth.

A priority area set by the AP is the management of the transport system as a single, integrated system. The AP expects planning and delivery partners to implement principles on land use and transport integration and an issue pertinent along this corridor is the conflict between 'movement' and 'place' function that occurs as the corridor traverses through three village centres. The project therefore has to balance place function through the village centres with movement function of the FTN and sets out to achieve the following specific outcomes:

- Confirm the status of Dominion Road as a FTN route that works as part of a network with other FTN routes within the isthmus.
- Improve the quality of the infrastructure that supports the FTN level of service along Dominion Road by improving the bus travel time reliability and reducing travel times for bus passengers along the corridor.
- Improve the safety for cycling by providing wider shared use bus/bike lanes along Dominion Road and provide parallel cycle routes on less trafficked streets.
- Improve walkability by improving the quality of the footpath surfacing, the frequency of street crossing facilities and maximising footpath width.
- Improve customer satisfaction by providing quality amenity and passenger comfort along the corridor.

Background

The project team presented preliminary options to the AT Board in June 2012 and the Board requested further information on option analysis to identify the balance of costs and benefits.

The methodology proposed for the option analysis is based on the efficiency improvements to the public transport service as critical to achieving the overriding project objective. With this as the backbone objective an incremental option analysis was developed with all options rationalising bus stop locations and providing continuous (peak hour) bus lanes along Dominion Road -between View Road and the SH20 interchange.

A cost estimate, BCR analysis and funding profile was developed for each incremental step between a do minimum scenario and the full scheme. These, together with the impact each change will have on the outcomes the scheme sought are discussed in this paper.

Option discussion

A number of options were developed that progressively remove elements from the previously presented \$106m scheme option until a minimum option of \$30m remains. The consequences of removing these elements were assessed as well as their impact on key stakeholders and these are discussed below. (A tabulated breakdown of the options is also included in Attachment 2).

Option 5

This is the preliminary option presented to the AT Board at the June 2012 Board meeting. In brief, the option provides continuous peak hour bus lanes from SH20 to View Road. To achieve this it introduces 4.5m² wide bus lanes south of Mt Albert Road, widens the 3m bus lanes to 4.5m in the mid-blocks north of Mt Albert Road, extends the bus lanes through the signalised intersections and removes the Denbigh Road roundabout and replaces it with signals. It also improves stormwater management, lighting, footpaths and street crossing opportunities and extends the bus lane operational hours by 30 minutes for each peak.

Quantitative assessment (Costs and benefits): With further design refinements this option is now estimated to cost \$100m. The option delivers travel time and safety benefits at a benefit cost ratio of 2.2, which is considered a 'medium' economic efficiency (i.e. BCR of between 2.0 and 4.0).

Effects on impacts sought through the scheme: The option is designed to deliver the outcomes as mentioned in the strategic context of this report.

Key stakeholder position³: Both local boards are in support of this option and have submitted their support during the RLTP consultation process. The Dominion Road Business Association has welcomed the parking mitigation (electronic signs and additional off street parking at Ewington Street) but has expressed their opposition to the initial 1/2hr extension of the bus lane operations in each peak. NZ Bus has expressed support for the option but has expressed their preference for the full extension to bus lane operational times (1hr in morning and 2 hours in afternoon) by 2016 to ease operations. CAA has expressed their support for the widening of the bus lanes together with the supplementary cycle routes as a pragmatic approach given the width constraints in the village centres. Iwi has expressed the desire to be part of the decision making when tree species are selected and were supportive of the improved stormwater measures as a result of the works.

Option 4

The biggest cost element in option 5 is for widening the bus lanes to 4.5m in the mid-block to meet current standards⁴ for shared-use lanes adding between \$30m and \$53m to the cost of the scheme, depending on the level of investment on the berm.

As the majority of the transport benefits are derived from lengthening the bus lane along the corridor - not increasing its width, Option 4 has been developed to explore this and proposes to still provide continuous peak hour bus lanes from SH20 to View Road. Option 4 achieved this without widening the bus lane north of Mt Albert Road. For this section (Mt Albert to View Road) the bus lanes remain 3m wide but extended through the intersections. The option still improves lighting, footpath and street crossing opportunities.

² Austroads, the Cycle Route Design Guide and ATCOP specify min of 4.2m with preference for 4.5m for a shared bus/cycle lane

³ Stakeholder feedback included as Attachment 3

⁴ Austroads, the Cycle Route Design Guide and ATCOP specify min of 4.2m with preference for 4.5m for a shared bus/cycle lane

Quantitative assessment (Costs and benefits): Three scenarios were considered under this option, all revolving around the key issues of footpath width and undergrounding or otherwise of the overhead power lines. The scenarios were:

- 4C: Don't widen the bus lane in the mid-block but improve lighting and street crossing opportunities and widen the footpaths to utilise designation for the entire length of Dominion Road (including undergrounding of power lines). This is estimated to cost \$70m with a benefit cost ratio of 2.9.
- 4B: Don't widen the bus lane in the mid-block and also limit footpath improvements to current widths but still improve lighting and street crossing opportunities for the entire length of Dominion Road (including undergrounding of power lines). This is estimated to cost \$53m with a benefit cost ratio of 3.8.
- 4A: Same as option 4B above but do not underground the overhead power lines. This is estimated to save a further \$6m (estimated cost \$47m) with a benefit cost ratio of 4.2.

Effects on impacts sought through the scheme: Delaying the widening of the bus lanes will not significantly impact the outcomes relating to bus travel time and reliability as they are mainly achieved through extending the length of the bus lane. It will however only partially improve the outcomes for cycling in the wider corridor area because it will not improve anything for commuter cycling directly on Dominion Road but instead focus on improved cycle infrastructure for less experienced cyclists making shorter trip lengths. (Through the parallel cycle routes).

Key stakeholder position: NZ Bus has requested that the scheme still addresses the mid-block riding quality issue caused by the majority of cesspits being located in the wheel path. CAA has stated that: "...CAA is very concerned about this possibility [not widening bus lanes], which we consider endangers the safety of cyclists, compromises the efficiency of public transport, and would make CAA unable to support the upgrade..."

Option 3

The majority of pedestrian activity and bus boarding occurs in the village centres. Further cost reductions could be considered by providing the lighting, footpath and street crossing improvements only in the village centres. This, together with omitting the mid-block widening has the effect of reducing the cost estimate by \$60m. The only investment in the midblock would be to improve the riding quality through the cesspits in the bus wheel path.

Option 3 provides continuous peak hour bus lanes from SH20 to View Road as per option 4 but will restrict the improvements to lighting, footpaths and street crossing opportunities to the village centre areas. It is also still proposed to remove indented car parks in the village centres, provide additional off street parking in Eden Valley and to provide electronic parking signs to better utilise side street parking spaces.

Quantitative assessment (Costs and benefits): This option is estimated to cost \$40m. The option delivers travel time and safety benefits at a benefit cost ratio of 4.5, which is considered a 'high' economic efficiency.

Effects on impacts sought through the scheme: Similarly to Option 4, the option will reduce outcomes for cycling with the effect of also reducing the impact on walkability to bus stops and along/across the corridor outside the village centres (where the majority of bus stops are located).

Key stakeholder position: The Dominion Road Business association stated that: *“The Committee considered the options and relative benefit cost ratios and came to the conclusion that it wished to support option 3 (Village Centre Amenity) as the minimum option as it would serve to help revitalize the business area and its viability, whilst providing for improved pedestrian amenity and safety”.*

Option 2

The estimate can be reduced with a further \$8m by removing all lighting, footpaths and street crossing improvements from the scheme.

Quantitative assessment (Costs and benefits): This option is estimated to cost \$32m. The option delivers travel time benefits at a benefit cost ratio of 5.3, which is considered a ‘high’ economic efficiency.

Effects on impacts sought through the scheme: The option will reduce the outcomes of the scheme as mentioned for option 3 above, with the further effect of not achieving any pedestrian safety and walkability outcomes along the corridor.

Key stakeholder position: The business association has indicated that as a minimum they support minimum investment that would help revitalize the business area and its viability, whilst providing for improved pedestrian amenity and safety. This option would therefore not meet their drivers.

Option 1

The estimate can be further reduced with \$2m by removing the parallel cycle routes from the scheme.

Quantitative assessment (Costs and benefits): Three scenarios were considered under this option which relates to bus lane operational hours and parking mitigation measures. These were:

- 1C: Provide continuous bus lanes for peak direction, additional off street parking in Eden Valley, electronic traffic signs to improve side street parking utilisation and extend the bus lane operational hours by 1/2hr in each peak direction. This is estimated to cost \$31m with a benefit cost ratio of 4.8.
- 1B: The same as 1C above but excluding any parking mitigation. This is estimated to cost \$30m with a benefit cost ratio of 5.1.
- 1A: The same as above but excluding parking mitigation and extensions to the bus lane operational hours. Extending the bus lane operational hours has a small cost impact but not doing that has the effect of reducing the benefit cost ratio to 4.8.

Effects on impacts sought through the scheme: The option will have similar reductions in outcomes as mentioned for option 2 and in addition not achieve any outcomes for cycling or for pedestrians along this corridor. The main impact would be at signalised intersections where the combination of cars parked in bus lane and queue lengths would prevent buses from ‘jumping the queue’ at the intersection.

Key stakeholder position: All stakeholders were of the opinion that something needs to be done for cycling and has viewed the parallel cycle routes as a minimum provision if no cycle improvements were to be made on Dominion Road, with the exception of CAA which also recommends improvements directly on the Dominion Road as part of the ‘do minimum’. Options to extend the operational hours of the bus lanes without providing parking mitigation measures will have an impact on the business environment along this corridor and would be met with resistance from the business associations.

Summary of considerations

The analysis for the above options are summarised in the table below. Options that meet or partially meet the outcomes can be delivered with a range of investment options between \$40m and \$100m. Only the \$100m investment option (option 5) achieves all of the outcomes but its business case is tempered by achieving a medium economic efficiency rating (BCR of less than 4).

Option 4a and 3 achieve a HHH funding profile (including a high economic efficiency rating) but they only partially meet some of the outcomes.

Options 1 and 2 did not deliver at all against certain outcomes and it is proposed that they are discarded. The table below illustrates the analysis:

Outcomes	Options								
	5	4C	4B	4A	3	2	1C	1B	1A
Confirm the status of Dominion Road as a QTN route (now FTN) that works as part of a network with other QTN routes within the isthmus	Met	Met	Met	Met	Met	Met	Met	Met	Met
Improve the quality of the infrastructure that supports the FTN level of service along Dominion Road by improving the bus travel time reliability and reducing travel times for bus passengers along the corridor	Met	Met	Met	Met	Met	Met	Met	Met	Met
Improve the safety for cycling by providing wider shared use bus/bike lanes along Dominion Road and provide parallel cycle routes on less trafficked streets	Met	Partially met	Partially met	Partially met	Partially met	Partially met	Not met	Not met	Not met
Improve walkability by improving the quality of the footpath surfacing, the frequency of street crossing facilities and maximising footpath width	Met	Met	Met	Met	Partially met	Not met	Not met	Not met	Not met
Improve customer satisfaction by providing quality amenity and passenger comfort along the corridor	Met	Met	Met	Met	Partially met	Not met	Not met	Not met	Not met
Funding profile	HHM	HHM	HHM	HHH	HHH	HMH	HMH	HMH	HMH
Total Estimate (million)	\$100	\$70	\$53	\$47	\$40	\$32	\$30	\$30	\$30

Next Steps

Once an option is approved by the AT Board the project team would communicate it to the wider public through a series of open days.

The draft scheme assessment report will be updated to reflect the board's approved option and this will be submitted to the NZTA for funding approval to proceed to the detailed design and construction phase of the project.

Once approved by the NZTA, the detailed design will be procured allowing commencement of this early in the 2013/14 financial year.

Attachments

Attachment 1 – FTN map

Attachment 2 – Tabulated summary of incremental analysis

Attachment 3 – Key Stakeholder Feedback

WRITTEN BY	Theunis van Schalkwyk Project Director Corridor Improvements	
RECOMMENDED by	Kevin Doherty Chief Infrastructure Officer	
APPROVED FOR SUBMISSION by	David Warburton Chief Executive	

Auckland Frequent Service Network 2016 (proposed)

Proposed network of high frequency all day bus, train and ferry services.
 (Note: lower frequency bus, ferry and train routes are not shown on this map)

Each line represents a service that will operate at least once every fifteen minutes from 7am until 7pm, seven days a week. Many lines will operate at much higher frequencies across the day and evening, especially during the morning and evening peak hours.

Lines will still operate before 7am and after 7pm at lesser minimum frequencies. Some lines will run additional late night services on Friday and Saturday nights to supplement or replace Night Rider services.

The network is service based and not mode dependent. Lines will be operated by bus, train and ferry using a range of vehicle types and infrastructure.

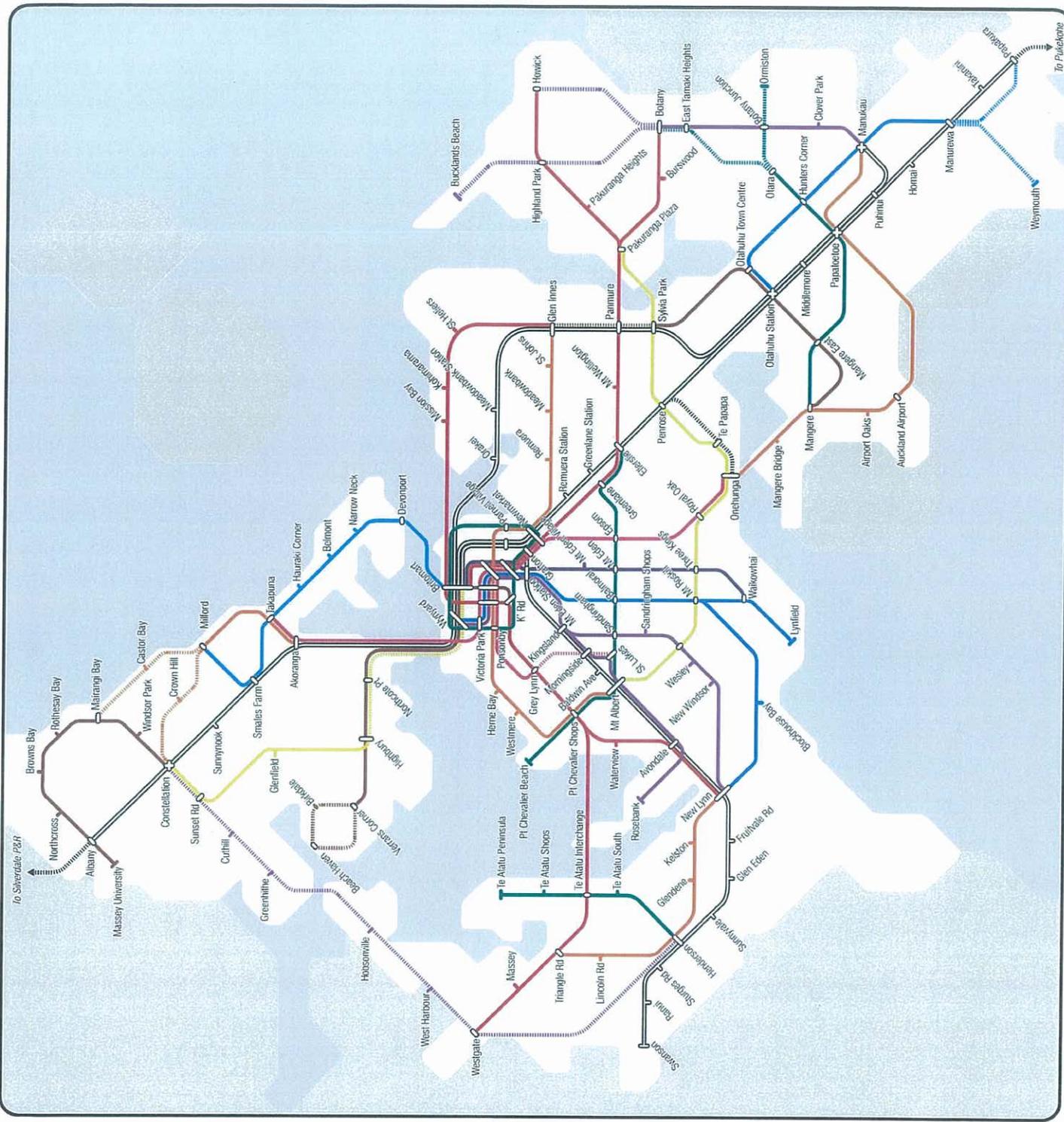
The network has been designed to operate using Auckland's existing public transport resources by utilising the efficiencies of an integrated connective network model. This network can be achieved with broadly the same number of service kilometres that are operated under the current non-integrated network.



Legend:

- Rapid Service (railway and busway)
- Frequent Service
- Reduced frequency extension of Rapid or Frequent Service
- Local centre or suburb
- Connection between lines
- Major interchange point

Note: This map shows only the main suburbs, town centres and stations serviced by each line. Not all stops are shown. Suburb locations are approximate only.



Dominion Road PT Upgrade - Analysis of Incremental Options
 Updated 21 September Version 4

OPTION	OPTION DESCRIPTION	AMENDMENTS	BENEFIT COST ANALYSIS					QUANTITATIVE ASSESSMENT					QUALITATIVE ASSESSMENT	OUTCOMES	
			Construction Cost Million	Project Expected Eit Million	Net Present Value Cost Million	SOURCE OF BENEFITS	Net Present Value Benefit Million	Revised BCR	Strategic Fit	Effectiveness	Economic Efficiency	PROFILE			PRIORITY
5	Full Scheme (as presented to AT Board June 2012) All village centre amenity 4.5m bus lanes for all mid-block sections		\$94.53	\$100	\$70.24	Full benefits claimed	\$154	2.2	H	H	M	H/M	2	Full User benefits	Bus Travel Time Reliability Optimize people carrying capacity Improve corridor safety for all users Economic productivity for businesses Town Centre and Community Viability
Mid-Block Compromises															
4C	Narrow bus lanes north of Mt Albert Rd (Designated land used to widen footpaths)	The same elements as option 5 above, but without widening the bus lanes in the Albert Road from 3.0m to 4.5m. Therefore, significantly reduced pedestrian relocation/accommodation works to be completed. It includes a reduced number of street trees, and provide these at the back of widened footpath where possible	\$52.80	\$71	\$50.21	Remove some bus facility benefits	\$145	2.9	H	H	M	H/M	2	Minus Bus Users: travel time and reliability (minor) Minus Cyclists: safety (medium) Minus Vehicles: safety (minor)	Bus Travel Time Reliability Optimize people carrying capacity Improve corridor safety for pedestrians Economic productivity for businesses Town Centre and Community Viability
4B	Narrow footpaths north of Mt Albert Road (as existing - Designated land not used)	This same elements as option 4c above, but without widening the footpaths. This means that the road width north of Mt Albert Road and also reduce the street amenity further for the road users	\$43.20	\$54	\$37.97	Remove some pedestrian benefits	\$142	3.7	H	H	M	H/M	2	Minus Pedestrians: amenity and safety (major) Minus Businesses: retail viability / vitality (minor)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
4A	Mid-block services as existing	The same elements as option 4b above, but leaving the power lines on their overhead poles rather than undergrounding. As a result the option also reduce the proposed upgrade in street lighting.	\$37.40	\$48	\$33.54	Remove night-time accident benefits	\$137	4.1	H	H	H	H/H	1	Minus Pedestrians: amenity and safety (minor) Minus Vehicles: safety (minor)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
3	Mid-block footpath as existing	The same elements as option 4a above, but without any investment in the mid north of Mt Albert Road. The road is therefore still widened south of Mt Albert Road. All investment north of Mt Albert are contained within the village centres only.	\$20.35	\$41	\$28.93	Remove walking facility benefits: health & enviro	\$127	4.4	H	H	H	H/H	1	Minus Pedestrians: amenity and safety (minor)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
Village Centre Compromises															
2	Village Centres as existing (With Parallel Cycle Routes)	The same elements as option 3 above, but now also removing all lighting upgrades, footpath upgrades, new street trees, new furniture, new pedestrian crossings and raised medians in the village centres as well.	\$21.88	\$33	\$23.40	Remove walking facility benefits: health & enviro	\$121	5.2	H	M	H	H/H	2	Minus Pedestrians: amenity and safety (medium) Minus Businesses: retail viability / vitality (major)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
1C	Village Centres as existing (With ITS Parking Signage)	The same elements as option 2 above, but now removing the parallel cycle routes from the scheme.	\$20.28	\$31	\$22.19	Remove cycle facility benefits: health & enviro	\$108	4.8	H	M	H	H/H	2	Minus Cyclists: safety and liability (medium)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
1B	Village Centres as existing (With increase in bus lane operational lanes)	The same elements as option 1c above, but removing all parking mitigation measures (ITS signage and new Ewington Carpark) from the scheme.	\$19.52	\$30	\$20.95	As above	\$108	5.1	H	M	H	H/H	2	Minus Businesses: parking availability (minor) plus Shoppers: parking information (minor)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
1A	Mt Albert to Danleigh Bus lanes Offense bus lanes and intersections Carriageway Replacement	The same elements as option 1B above, but without any extensions to the bus lane operational hours.	\$19.49	\$30	\$20.83	Remove passenger benefits	\$100	4.8	H	M	H	H/H	2	Minus Bus Users: travel time and reliability (minor)	Bus Travel Time Reliability Optimize people carrying capacity Economic productivity for businesses Town Centre and Community Viability
Do Minimum	Non-pavement Only	No investment in new infrastructure at all, other than required periodic maintenance on surface and street lighting. All these would be done with a 'like for like' replacement once asset failed.	\$6.10	\$8	\$4	Remove bus facility, travel time, accident savings, agglomeration	NA	NA	NA	NA	NA	NA	NA	NA	NA

Manual Revisions included
 Mt1 and Repairs Paving (\$3.5m) included in Option 1A
 Lower NPV Factor for Village Centres (\$2m) included on Option 1A
 NPV Factor Assumed to be 0.79546
 Carparking at Ewington (\$1m) included in Option 1C



[for Cycle Action Auckland
contact details, please
see undersigned]

12 September 2012

Feedback on possible cut-backs to the Dominion Road Upgrade

Cycle Action Auckland ("CAA") would like to comment on potential cutbacks to the scheme to upgrade Dominion Road, as communicated to us in September 2012. We understand that a reduced scheme may not widen the existing bus lanes, retaining them at around 3.0m width, except for a short new section at the south end.

CAA is very concerned about this possibility, which we consider endangers the safety of cyclists, compromises the efficiency of public transport, and would make CAA unable to support the upgrade.

Background to our concerns

When the current "full" scheme for Dominion Road (i.e. including bus lane widening, but without dedicated cycleways) was finalised, this was already a major compromise for CAA - and for cycling this key local and regional cycle route.

The next best alternative to providing dedicated cycle facilities was the proposed widening of bus lanes on most of the corridor, except in some town centre sections.

Research presented to a NZ transport conference has shown that the existing cycle crash record on the narrow Dominion Road bus lanes is twice that which would be expected, based on NZTA's Economic Evaluation Manual - which the researchers consider to be likely due to them being the narrowest bus lanes in the study.¹

At 4.5m width, widened bus lanes would thus at least provide a significant safety gain for cyclists choosing this route, and also reduce the constant and sometimes aggressive conflict between bus drivers and people on bicycles. The widening would also help those people who want to ride to destinations on Dominion Road.

Together with the proposed residential, parallel routes - of use mainly for novice and recreational riders - the bus lane widening offered a two-tier solution for cycling in the Dominion Road area that CAA - reluctantly - chose to support.

With the retention of narrow bus lanes over almost the entire corridor, one of the two remaining legs of this already pared-down strategy would be gone. We do not consider that the residential parallel cycle routes would be able to balance the negatives, thus leading to a severely insufficient outcome for cycling in and around Dominion Road, likely to remain in place for decades to come.

¹ Cycle & motorcycle crash trends on Auckland City bus lane routes, IPENZ Transportation Group Conference Auckland March, 2011

Technical and practical concerns

Our concerns with not widening the bus lanes are manifold. They range from safety and amenity aspects for cyclists, to intimidation of cyclists and also extend to effects that would degrade the corridor's efficiency for bus transport.

Safety risks for cyclists: Overtaking buses

In urban traffic, buses will often catch up with cyclists riding ahead of them - particularly if the cyclist is riding more casually, or has to negotiate an uphill section. To reduce delays in their often very tight schedules, bus drivers will often seek out any possible opportunity to overtake a cyclist.

In a narrow lane, this leads to unsafe manoeuvres, where cyclists are squeezed against the kerb, or against cars in the adjacent general traffic lane. This particularly affects less confident cyclists who - intimidated by the presence of buses behind them - ride along the edge of the lane, even though it would be safer to claim the lane as long as necessary for their safety.

Cyclists thus risk being destabilised or side-swiped, and can also go under the wheels of the bus or any following vehicles should they fall as a result.

Wide bus lanes reduce this by allowing bus drivers to overtake with safe clearance from the cyclist, as already required by the road code.

Safety risks for cyclists: Wider buses

We understand that proposed double-decker buses for the Dominion Road route will also be wider than usual, potentially up to 2.8m with wing mirrors. This further increases the potential for side-swipe incidents in narrow sections.

Wide bus lanes would future-proof the corridor, making wide buses safer.

Safety risks for cyclists: Overtaking cars

At signalised intersections, the bus lanes are generally expected to become standard turning lanes, and drivers will in any case often enter the bus lanes to manoeuvre into side streets and driveways. A narrow 3.0m bus lane is not wide enough to allow even cars to safely overtake cyclists.

Wide bus lanes would ensure that cyclists will not additionally be exposed to car drivers wanting to overtake in such insufficient circumstances.

Safety risks for cyclists: "Dooring" during off-peak

Bus lanes on Dominion Road are intended to continue to serve as parking lanes during the off-peak. Even assuming drivers park hard against the kerb, the width of a car, plus the door opening zone, would be around 2.5-2.8m.

This means that during the off-peak, cyclists in a narrow bus / parking lane are highly exposed to the risk of being doored, or falling under vehicles while avoiding a door suddenly opened into their path. Thus, the potential design change would endanger cyclists both during peak and off-peak conditions.

Wide bus lanes would allow cyclists to ride in a remaining 1.5m width, fully outside of the door zone, during off-peak.

Discouraging cycling: Intimidation factor

CAA in 2010 fought for dedicated cycle facilities on Dominion Road because riding a bicycle near numerous buses is a relatively scary situation for many, even some otherwise confident cyclists. Such large and heavy vehicles - with their drivers often being in a hurry - intimidate most people considering whether to ride a bike on Dominion Road.

The knowledge that their very presence in a narrow bus lane frustrates bus drivers (and their passengers) when they cannot be overtaken is an additional psychological pressure for a cyclist on top of any safety fears. This leads to many people simply choosing not to ride bicycles - not only out of fear for their safety but also out fear of being seen as disruptive and uncaring.

This of course is an outcome that is totally undesirable for Auckland, and will also perpetuate stereotypes about cyclists - as only those few willing to boldly "stand their ground" will continue to cycle on the route, leading to false perceptions about the many Aucklanders who are interested in cycling more.

While not removing the intimidation factor fully, wide bus lanes will ensure that these psychological factors are significantly reduced.

Discouraging cycling: Bus-only bus lanes

We are afraid that if the bus lanes are retained at their narrow widths - while bus services are increased further- calls will be made to ban cyclists from bus lanes (i.e. mark them as bus-only bus lanes). This idea was already floated.

This would lead to the perverse situation where bus drivers will expect cyclists to stay out of their lane, while car drivers expect cyclists to use the bus lane (as they do in most other parts of Auckland). Some drivers are also likely to be at least somewhat more... "casual"... with the safety of cyclists "illegally in their lane" - using this to justify more aggressive overtaking behaviour.

No matter what cyclists choose to do in these circumstances - they will face aggression from other road users. Damned if you do, damned if you don't...

Wide bus lanes will reduce such a perceived need for bus-only lanes.

Discouraging cycling: Delays for cyclists

One of the advantages of cycling is the ability to at least partially avoid / bypass any traffic jams. This is, in our otherwise often cycling-hostile road environment, one of the key advantages of cycling in Auckland.

Narrow bus lanes however can significantly delay cyclists, forcing them to stop behind buses waiting at stops to embark / disembark passengers. Overtaking in the general traffic lane will often not be possible during peak hours, and will require a potentially risky manoeuvre, while having to hope the bus does not proceed from the stop while it is being overtaken.

Wide bus lanes ensure more convenience, and thus encourage cycling.

Issues for bus transport: Delays for buses

Most of the above concentrates on the issues for cyclists. However, there are also significant disadvantages for bus transport. Cyclists not being able to be overtaken safely will mean that bus drivers could be delayed significantly - and multiple times on each trip - by cyclists they cannot overtake safely.

As cycling levels rise further across Auckland (significant gains having been reported for several years in a row now), this issue is likely to increase for Dominion Road, even if cycling were discouraged here, as we fear it would be.

Further, bus drivers in narrow bus lanes will also often face issues with other motor vehicle traffic - drivers that are unable to fully enter the general traffic lane, or fully pull off the carriageway into their driveway in one movement, will often block parts of the bus lane. Similarly, broken-down vehicles or illegally parked vehicles that might be able to be passed (at slow speed) by a bus in a 4.5m wide bus lane will fully block any narrow bus lane.

Wide bus lanes will thus be enormously beneficial for efficiency and reliability of bus transport.

Guidelines and research

We also refer to the following guidelines and research to support our case for wide, shared cycle / bus lanes:

- Table 4.3, Guide to Road Design Part 3: Geometric Design, Austroads 2010: Recommended traffic lane widths on urban arterial roads - "locations where motorists and cyclists use the same lane" - recommends 4.2m to 4.5m width. See also Commentary 7, Page 281.
- Section 4, Fundamentals for Planning & Design for Cycling, V3.2, Land Transport NZ / NZTA-certified course by Via Strada, 2008: Shared bus lanes / lanes widths recommended to allow safe overtaking by cyclists - recommended widths >4.2m.
- Table 4.22 of Austroads 2010g, reprinted as Table 4.3 of Cycling Aspects of Austroads Guidelines, Austroads, 2011: Recommends minimum width of 3.7m for shared bus lanes, though for lower bus / cycle volumes than on Dominion Road - which implies that more width would be required for higher volumes.
- Table 4.20 of Austroads 2010g, reprinted as Table 4.2 of Cycling Aspects of Austroads Guidelines, Austroads, 2011: Wide kerbside lanes, to suit as cycle facilities, recommended as acceptable minimum of 3.7m and desirable minimum of 4.2m (with the desirable minimum considered appropriate here due to the wide buses using the bus lanes on Dominion Road).
- Table 2, Bicycles and bus lanes, Queensland Transport, 2006: While referencing superseded *Austroads 1999 Guide to Traffic Engineering Practice: Part 14*, this guideline clarifies that 3.0m to 3.5m shared bus lanes are inappropriate under most circumstances, and recommends 4.0-4.5m widths.
- Cycle & motorcycle crash trends on Auckland City bus lane routes, IPENZ Transportation Group Conference Auckland March, 2011: Comes to the conclusion of a likely link between bus lane width and cycle crash likelihood, as the crash likelihood in the study of four bus lanes correlated with bus lane widths, and the wider bus lane examples reported fewer cycle crashes.

Thank you for providing us with the opportunity to have this input.

Contact Details

Max Robitzsch
Infrastructure Liaison
Cycle Action Auckland

Mobile: 021 267 1369

Email: max_robitzsch@yahoo.com

Unit 4k, 127 Grafton Road
Grafton
Auckland 1010

Barbara Cuthbert
Chair / Spokesperson
Cycle Action Auckland

Mobile: 0274125824

Phone: 094452223

Email: cuthash@world-net.co.nz

2A St Aubyn Street
Devonport
Auckland 0624

Feedback on the Dominion Road Upgrade Project options

File No.: CP2012/16590

Item 13

Purpose

1. The purpose of this report is for the Puketapapa Local Board to resolve their feedback to Auckland Transport on the options proposed for taking forward the Dominion Road upgrade project.

Executive Summary

2. At the Auckland Transport Board's 18 June 2012 meeting, Auckland Transport officers presented a recommended option for the Dominion Road Upgrade project to the Auckland Transport Board for approval to progress to detailed design phase. The Auckland Transport Board did not approve the progression to detailed design and has requested officers to investigate lower cost options, including a cost-benefit analysis, and staging scenarios. Auckland Transport officers have briefed the Puketapapa Local Board on the investigated options and their benefit-cost ratio and requested that the Puketapapa Local Board provide feedback on these options by the end of September 2012. This report provides the Puketapapa Local Board the opportunity to formally resolve their feedback to Auckland Transport on the recently investigated options for the Dominion Road upgrade project.

Recommendation/s

- a) That the Puketapapa Local Board approves the following feedback to Auckland Transport on the options proposed for taking forward the Dominion Road upgrade project:
 - i. Option 5 (that which was recommended to the Auckland Transport Board on 18 June) is the Puketapapa Local Board's preferred option for progressing the Dominion Road upgrade project;
 - ii. Option 6, which reduces the amenity in the mid blocks is the Puketapapa Local Board's second preferred option;
 - iii. The Puketapapa Local Board supports an alternative option to Option 5 and 6 being investigated, which would see the footpath in the mid-blocks widened to create a shared pathway for pedestrians and cyclists.
 - iv. The Puketapapa Local Board continues to strongly advocate for the Dominion Road upgrade project to be divided into sections and staged, with the section in Mt Roskill from State Highway 20 (SH20) through to Mt Albert Rd including the Mt Roskill village improvements being progressed as a matter of priority and the rest of Dominion Rd north of Mt Roskill village forming the focus of the current review.
 - v. The Puketapapa Local Board provides the following rationale for supporting Option 5 and giving priority to progressing the section of the project from State Highway 20 (SH20) through to Mt Albert Rd including the Mt Roskill village improvements:
 - The works proposed along Dominion Rd from SH20 through to Mt Albert Rd appear in all six of the investigated options (noting that the section within the Mt Roskill village will need to be finalised);
 - There are no bus lanes along Dominion Rd from SH20 through to Mt Albert Rd, so the road widening will be required for all six of the investigated options;
 - It is the Puketapapa Local Board's understanding that all required land

purchases have been undertaken and that this section is not an expensive part of the Dominion Road upgrade project;

- The Puketapapa Local Board (and the former Mt Roskill Community Board) and residents have been waiting for more than six years for improvements to Mt Roskill village to begin, and are concerned that the current review could delay the project considerably once again. On previous advice of Auckland Transport officers, the Puketapapa Local Board has budgeted money to undertake an upgrade of the village in 2012/2013;
- The Puketapapa Local Board's understanding is that the Dominion Road upgrade project was to begin with the section from SH20 through to Mt Albert Rd anyway;
- This is an opportunity for Auckland Transport to get a much needed and awaited project underway;
- The Albert-Eden Local Board has indicated that they support the Dominion Road upgrade project being divided into sections and staged, with the section in Mt Roskill being progressed and the rest of Dominion Rd north of Mt Roskill village forming the focus of the current review;
- The stakeholders along the Mt Roskill section of the planned works have agreed on the plans that formed the recommended option to Auckland Transport.

Discussion

3. At its June 2011 meeting, the Auckland Transport Board resolved:
 - that improvements to the Dominion Road corridor that support the refined existing
 - Quality Transit Network (QTN) level of service be developed, and socialised with stakeholders;
 - that land purchases which enable the refinement of the existing QTN be completed as soon as practicable; and
 - the sale of non-strategic property.
4. Following on from this decision, Auckland Transport officers have met with the Puketapapa Local Board on three separate occasions: 14 July 2011, 19 October 2011 and 12 March 2012 to seek the Board's feedback on the options for the Dominion Road Upgrade Project as they have developed. Auckland Transport officers have also held consultation events within Mt Roskill and consulted with the Mt Roskill Business and Community Group Association and Puketapapa/Roskill Residents Association.
5. At the 12 March 2012 briefing, the Puketapapa Local Board was presented a preferred option for the Dominion Road upgrade project by Auckland Transport officers. The Board indicated support for this option and were advised that the next steps were to present the preferred option to the Mt Roskill Business and Community Group Association and Puketapapa/Roskill Residents Association for feedback and then to present a recommended option to the Auckland Transport Board for approval to progress to the detailed design phase. The recommended option was presented to the Auckland Transport Board's 18 June 2012 meeting. The Auckland Transport Board did not approve the progression to detailed design and has requested officers to investigate lower cost options, including a cost-benefit analysis, and staging scenarios.
6. Following on from the decision made by Auckland Transport at its 18 June 2012 meeting, the Puketapapa Local Board has received a briefing from Auckland Transport officers about the six investigated options and their benefit-cost ratios (Attachment A). Auckland Transport

officers have requested that the Puketapapa Local Board provide feedback on these options by the end of September 2012.

7. From this meeting, the Puketapapa Local Board has determined that Option 5 is their preferred option – this is the option that was recommended to the Auckland Transport Board on 18 June, with Option 6, which reduces the amenity in the mid blocks as their second preferred option. The Puketapapa Local Board has also indicated support for an alternative option to Option 5 and 6 being investigated, which would see the footpath in the mid-blocks widened to create a shared pathway for pedestrians and cyclists.
8. In parallel with the process outlined above, since Auckland Transport's decision on 18 June 2012 meeting, the Puketapapa Local Board has actively advocated through a deputation to the Auckland Transport Committee (1 August) and a deputation directly to the Auckland Transport (20 August) for Auckland Transport to commence work on the Dominion Rd upgrade project from State Highway 20 (SH20) through to Mt Albert Rd including the Mt Roskill village improvements as a matter of priority. The rationale for this advocacy is:
 - The works proposed along Dominion Rd from SH20 through to Mt Albert Rd appear in all six of the investigated options (noting that the section within the Mt Roskill village will need to be finalised);
 - There are no bus lanes along Dominion Rd from SH20 through to Mt Albert Rd, so the road widening will be required for all six of the investigated options;
 - It is the Puketapapa Local Board's understanding that all required land purchases have been undertaken and that this section is not an expensive part of the Dominion Road upgrade project;
 - The Puketapapa Local Board (and the former Mt Roskill Community Board) and residents have been waiting for more than six years for improvements to Mt Roskill village to begin, and are concerned that the current review could delay the project considerably once again. On previous advice of Auckland Transport officers, the Puketapapa Local Board has budgeted money to undertake an upgrade of the village in 2012/2013;
 - The Puketapapa Local Board's understanding is that the Dominion Road upgrade project was to begin with the section from SH20 through to Mt Albert Rd anyway;
 - This is an opportunity for Auckland Transport to get a much needed and awaited project underway;
 - The Albert-Eden Local Board has indicated that they support the Dominion Road upgrade project being divided into sections and staged, with the section in Mt Roskill being progressed and the rest of Dominion Rd north of Mt Roskill village forming the focus of the current review
 - The stakeholders along the Mt Roskill section of the planned works have agreed on the plans that formed the recommended option to Auckland Transport.

Consideration

Local Board Views

9. This report outlines the views of the Puketapapa Local Board and provides the opportunity for the Board to formally resolve their feedback to Auckland Transport on the recently investigated options for the Dominion Road upgrade project.

Maori Impact Statement

10. This is not a significant decision for Maori and no consultation has been undertaken specifically with Maori.

General

11. In formulating its position on the options that have been investigated for progressing the Dominion Road upgrade project, the Puketapapa Local Board has consulted with the Albert-Eden Local Board as well as the Puketapapa Transport Forum which consists of representatives from transport-related or interested organisations (such as NZ Bus, Cycle Action Auckland, Campaign for Better Transport, NZTA, Mt Roskill Business and Community Group Association and Roskill/Puketapapa Residents Association) and interested residents.

Significance

12. This is not a significant decision under Council's Significance Policy.

Implementation Issues

13. The Puketapapa Local Board's feedback on the options that have been investigated for progressing the Dominion Road upgrade project will be forwarded to Ben Stallworthy, Auckland Transport Elected Member Liaison to ensure that this feedback is captured and reported to the Auckland Transport Board

Attachments

No.	Title	Page
A	Dominion Road Public Transport Upgrade Project options benefit-cost ratio analysis	23

Signatories

Authors	Kerri Foote - Senior Local Board Advisor
Authorisers	Teresa Turner, Relationship Manager – Maungakiekie-Tamaki, Puketapapa



20 September 2012

Theunis van Schalkwyk
Project Director Corridor Improvements
Auckland Transport
Private Bag 92250,
Auckland 1142

Dear Theunis,

Feedback on Dominion Rd Corridor Improvements

Further to your recent meeting with our Executive Committee, we write to provide feedback on your presentation on the further options relating to the Dominion Rd corridor improvements.

The Committee considered the options and relative benefit cost ratios and came to the conclusion that it wished to support option 3 (Village Centre Amenity) as the minimum option as it would serve to help revitalize the business area and its viability, whilst providing for improved pedestrian amenity and safety.

We acknowledge that this option will have impacts on our members during the construction period and wish to signal to Auckland Transport that we wish to be fully engaged on decisions about the timing and methods for this work to ensure that we minimise any potential disruption.

The Committee further considered the question of the proposed bus lane operating hours and requested that Auckland Transport be advised that we support operating hours at completion of the project of 7am – 9am (inbound) and 4pm – 6.30pm (outbound). At this stage we can see no rationale for increasing the AM peak past 9am or starting the PM peak any earlier than 4pm, although we acknowledge that the PM end time needs to be lengthened.

Any time extensions beyond this should only be implemented once agreed measures have been agreed (ie: bus patronage numbers) between Auckland Transport and the Business Association and the relevant thresholds met.

The Committee has also asked Auckland Transport to consider establishing the proposed new car park on Ewington Ave and the electronic signage ahead of the actual construction phase and wishes to have further dialogue on the placement of proposed bustops.

We thank you for the opportunity to have this input and look forward to working with you on the important transport project for the benefit of all parties.

Yours faithfully,

Dominion Rd Business Association

Gary Holmes
Manager

Feedback on the Dominion Road PT Upgrade Project

From: Albert-Eden Local Board

Date: 24-Sep-2012

The feedback is based on the incremental analysis dated 13-August-2012, Version 10 provided to the Albert-Eden and Puketapapa Local Boards.

1. Notes

1. **Mid-blocks:** Ideally these should be widened but the Board does note the large costs involved and the assumption of a 50% cost share with the undergrounding of power lines.
2. **Cycle route on Dominion Road:** The Board notes that Dominion Road will remain an attractive route for some cyclists. However this poses safety issues for cyclists and issues for buses during co-habitation of operational bus lanes. Designs need to factor such use in.
3. **Alternate Cycle Routes:** In general terms, cyclists take the shortest and flattest route and neither of these options seems optimal, especially north of Balmoral Road to the east and west of Dominion Road.
4. **Bus Stops:** The project includes a rationalisation of bus stops. This initiative requires careful consideration before implementing.
5. **Bus Stages:** A key consideration will be the optimisation of bus fare zone boundaries and the Board is pleased this is a consideration as part of the optimisation of the bus operations. Such initiatives could be implemented as soon as practicable if generally supported.
6. **Project Approach:** This project has already endured significant delays and the Board is keen to see a clear direction set as soon as possible, and combined with an approach that enables enhancements to be delivered as soon as practicable.
7. **Construction:** The timing of construction is critical and especially when businesses are relying on foot-traffic patronage are severely impacted.

2. Suggested Approach

The board suggests this approach (values in \$Mil).

New Option	Orig Option	Each Phase	Total Spend	Description
1	1A	13.39	33.35	Widen kerb to allow bus lanes between Mt Albert & Denbigh including Denbigh traffic signalisation
2	1A		33.35	Connect bus lanes & optimise bus stops along entire route Cost included in 1A
3	3 1C	8.59	41.94	Mt Roskill, Balmoral & Eden Valley Village amenity upgrades as detailed. Include parking upgrades, ITS.
4	1B	0.03	41.97	Increase Bus lane operational times
5	2	1.72	43.69	Parallel cycle routes - can be phased in at any suitable time
6	4A 4B 5 6			Mid blocks - scope dependent

3. Board Recommendations

The Board recommends that:

Recommendation	New Option	Original Option
1. The works between Mt Albert Road to SH20 including the signalisation at Denbigh Ave should be commenced as soon as possible. This project should not be constrained by other initiatives relating to the Dominion Road PT upgrade project.	1	1A
2. That the improvements to parking in the villages be completed before implementing changes to the bus lane operational times. This may require the detailed planning for these village upgrades to be completed first, but wherever possible, enhancements to parking in part or full be implemented as soon as possible to benefit the local businesses that have already suffered from the delays to this project.	3	1C
3. That further work on alternate cycle routes is undertaken with the possible use of Sandringham Road as a prime western route. This work must include detailing the infrastructure and specific road treatments required to enhance safety for all road users. Such design should include consultation with local cyclists and/or advocacy groups. Any work on alternative cycle routes can be commenced when appropriate.	5	2
4. The supports the widening of Dominion Road in the mid-blocks but it is re-evaluated at the time there is a commitment by the other service providers to contribute related assets renewals to the project, or other incentives exist. When/if the undergrounding of power lines proceeds without the road widening component, the Board recommends that this is performed with consideration for possible future road widening.	6	4A 4B 5 6
5. That increases in bus lane operational times are extended: <ol style="list-style-type: none"> a. After the parking enhancements have been implemented b. After critical criteria for extending these times have been created and substantiated. c. When they do not negatively impact the length of time necessary to complete these village upgrades. 	4	1B
6. That stakeholder engagement plans to work through the detail design and subsequent implementation is discussed and approved by the relevant Local Board, and where possible relevant stakeholders meet together with AT staff to help set common expectations.		

1 RM and MH presented the option breakdown and incremental analysis.

2 Option 1 Feedback

- Denbigh improvements and provision of bus lane between Denbigh and Mt Albert Rd was strongly supported by NZ Bus.

- Resurfacing and replacing / re-levelling catchpits is seen by NZ Bus as absolutely necessary – particularly if bus lanes were not widened to 4.5m.

- Connecting bus lanes throughout the corridor and opportunities to interchange at major cross roads was strongly supported by NZ Bus.

- Optimising the number of bus stops and consolidating infrastructure was strongly supported by NZ Bus.

- Further benefits for bus reliability in Option 1 would be straightening the kerb-line through village centres and providing good quality in-line bus stops at appropriate locations.

- Discussion did not favour indented bus bays unless well designed. High quality in-line stops and the use of Kassel kerbs was viewed more favourably than indented bus bays.

3 Option 1B Feedback

- NZ Bus strongly support any extension to the operational time of bus lanes. MH explained the challenge to proving this was the alleged business impacts by restricting kerb-side parking. However, mitigation measures can be provided (as per Option 1C).

NZ Bus would like to see operational time of bus lanes extended in line with the new PT Network. At the least NZ Bus would like to see the extension of bus lane hours proposed for 2026 (am inbound 7am – 10am; pm outbound 3pm – 7pm) brought forward to the 2016 opening.

NZ Bus supports "B- light" traffic signals.

4 Option 2 Feedback

- NZ Bus support any option that ~~removes sharing of bus lanes with cyclists.~~ caters for the needs of both buses and cyclists.

- It was generally agreed that Dominion Road would remain the most attractive direct route for cyclists and that other methods to minimise conflict and therefore improve travel time and reliability would be supported by NZ Bus.

NZ Bus support options that provide separation between buses and cyclists to ensure the safety of cyclists, bus drivers and passengers.

MH to look at other opportunities to reduce bus / cyclist conflict.

5 Option 3 Feedback

- Improvements to bus stop and surrounds amenity seen as positive.

- Kerb-straightening in Village Centres also seen as essential (refer comments under Option 1).

NZ Bus support extending footpaths past canopy line to avoid damage to both the canopy and buses.

6 No real feedback provided on Option 4A, 4B and 4C, as no real benefit for bus users.

7 Option 5 Feedback

- The main benefit of Option 5 was seen to be the widened bus lanes to 4.5m.

- MH explained the lack of evidence, both local and international, to support wider bus lanes from an operational and safety perspective.

- ~~While NZ Bus support the 4.5m wide bus lanes, the negative impact was seen to be the route attracting more cyclists.~~ NZ Bus support 4.5m bus lanes in preference to 3m bus lanes, with separation of cyclists/buses within the 4.5m bus lanes.

- If bus lanes were not widened along the corridor, then the other design aspects supported in Option 1, 2 and 3 therefore become more critical.

8 Other points to note

- Training may be required for using the new bus stops and lanes.

- PTOM applies to Dominion Road by July 2014

- Dominion Road would be a potential test for no cash on buses, and on street ticketing.

- Blue stones damage bus tyres, therefore Kassel kerbs are preferred.

- The bus lanes need to be operational for special events. MH outlined the request from Business Associations that the signage for TMP's clearly display parking restriction times.

9 Summary of main points

NZ Bus preferred option is Option 5 incorporating 4.5m bus lanes.

1. NZ Bus supports wider bus lanes . NZ Bus also believe that ~~in general however accept other priorities for Dominion Road and believe that~~ other design aspects such as connected bus lanes, improved ride quality, extension of operational times and ~~not attracting cyclists to Dominion Road as more critical.~~ catering for the needs of both buses and cyclists are important.
2. NZ Bus strongly supports an extension to bus lane operational times.
3. NZ Bus strongly support resurfacing of the bus lanes, upgraded catch-pits and any improvement to ride quality.
4. If 3.0m cycle lanes remain AT to investigate other options to reduce bus / cyclist conflict, such as wider bus lanes for up-hill grades.
5. NZ Bus supports the inclusion of kerb straightening and building out kerb past the canopy line to avoid damage to ~~infrastructure & buses~~ in the Village Centres in any preferred option.
6. NZ Bus supports the use of Kassel kerbs within bus stops.
7. NZ Bus support an integrated network designed for multi-modal travel.

10. Request to NZ Bus to provide written feedback on Options presented or a response to meeting minutes. NZ Bus 21 Sept 2012