

# Newmarket Level Crossing Removal

## Recommendations

It is recommended that the Board:

- i. Receives the report
- ii. Approves the recommended preferred option (Cowie Street overbridge) to progress to design phase.

## Executive Summary

The removal of the Newmarket rail level crossing (Crossing) connecting Sarawia Street to Laxon Terrace has been identified as necessary to allow peak-period frequency improvements to the rail passenger service timetable and for safety improvement reasons. These improvements are planned for early 2015 following the introduction of EMU services.

The purpose of this report is to recommend progression of the Cowie Street road over rail bridge (Option 1) as the preferred option to replace the level crossing. This option would allow closure of the Crossing and would maintain vehicle, cycling and pedestrian access from Parnell Road to residences in Laxon Terrace and Youngs Lane, including pedestrian and cycle access to the northern area of Newmarket Park. The project has funding of \$5.72m allocated in the LTP for 2013/14 and 2014/15 for facilitating closure of the Crossing. This funding is considered sufficient to deliver this option including a 10% contingency.

A detailed Scheme Assessment Report has been prepared substantiating the recommendation.

## Background

The Crossing provides the only vehicular access route to the dwellings on Laxon Terrace and Youngs Lane. It needs to be removed in order to improve operational resilience and to support planned frequency improvements to the rail timetable following the introduction of EMU services. In addition, the Crossing's removal increases safety for road and pedestrian users in the area. Completion of an alternative means of access is required prior to any decommissioning of the Crossing.

The Crossing has the highest volume of rail movements of any crossing in New Zealand and is the most complex, involving 12 different train approaches and 3 platform interactions.

Four options have been subject to detailed analysis and are considered to feasibly allow closure of the Crossing whilst providing alternative vehicle, cycling and pedestrian access to Laxon Terrace, Youngs Lane and Newmarket Park:

- **Option 1:** Removal of the Crossing and construction of a two-lane road bridge from Cowie Street to Laxon Terrace.
- **Option 2:** Replacement of the Crossing with a pedestrian/cycle bridge located at Cowie or Sarawia Street and accommodating vehicle traffic to/from Laxon Terrace by expanding an existing walkway to a double (Option 2a) or single (Option 2b) lane road connecting to Furneaux Way, a private road.

- **Option 3:** Replacement of the Crossing with a pedestrian/cycle bridge located at Cowie or Sarawia Street and construction of a two-lane road from Laxon Terrace through Newmarket Park to Ayr Street
- **Option 4:** Replacement of the Crossing with a two-lane underpass running from Sarawia Street to Laxon Terrace.

An update paper was previously provided to the Board for the May 2013 meeting. This update detailed the operational reasons requiring the Crossing's closure, a description of the short-listed options allowing closure of the Crossing and the results of a resident survey and public engagement process.



## Strategic Context

Removing the Crossing is important to the future improvement of Auckland's metro rail network. The Crossing has been identified as a significant restriction on current rail operational performance and will be a constraint on the planned timetable frequency improvements following the introduction of full EMU services in 2015.

If the Crossing remains and a higher frequency timetable introduced as planned, this timetable will have little operational resilience to recover from delays and maintaining reliable services will be unlikely during the morning and evening peak periods.

Currently the Crossing provides pedestrian and cycle access to Newmarket Park from the north, via Sarawia Street. Removal of the Crossing would see this access lost and feedback from the Local Board and public has placed a high importance on the preferred option retaining pedestrian access to Newmarket Park from the north.

In addition to the pedestrian use, access to the park is important for cyclists. Although currently there are few recognised cycle ways in the immediate vicinity, recreational cyclists make use of the current crossing to access the park. Retention of cross-rail corridor access to the park supports proposed future cycleway initiatives, particularly the Greenway cycle and walking link, an important project for the Local Board.

## Options Analysis

### Benefit-Cost Analysis

A SAR has been prepared describing the full range of options considered, including previous investigations initiated by Auckland City Council, ARTA and KiwiRail. Included within the report is a preliminary business case, consistent with NZTA's Economic Evaluation Manual, and which determines the BCR of the short-listed alternative access options.

Figure 2 identifies the short-listed options that are considered feasible and have been developed further:

**Figure 2:** Developed Options, BCR and Estimated Costs

Option	Estimated Cost	Base Cost BCR
<b>Option 1: Cowie Street Bridge</b>	\$5.72M	1.8
<b>Option 2a: Furneaux Way – Double Lane + Ped/Cycle Bridge</b>	\$6.53M	1.3
<b>Option 2b: Furneaux Way – Single Lane + Ped/Cycle Bridge</b>	\$3.24M	3.2
<b>Option 3: Newmarket Park through Road + Ped/Cycle Bridge</b>	\$3.70M	3.0
<b>Option 4: Underpass Alignment 2</b>	\$7.51M	1.3

Appendix 6 of the SAR provides the concept designs for each option short-listed for consideration. Attachment 1 summarises the BCR results for each option, detailing the present value benefits, dis-benefits and costs assumed for each option, with the full business case, including sensitivity testing, provided in Appendix 7 of the SAR.

## Community Impact Evaluation

As a result of the stakeholder engagement process and as a product of the investigation process the following (non-cost) community impact factors have been identified and assessed. These factors are not included within the BCR calculation and are detailed in Attachment 2.

### Summary

Options	Non Cost Evaluation Score
Option 1: Cowie Street Bridge	41
Option 2a: Furneaux Way Double Lane Separated Space	Not progressed (see text)
Option 2b: Furneaux Way Single Lane Shared Space	32
Option 3: Newmarket Park Road	Not progressed (see text)
Option 4: Sarawia Street Underpass	32

### Option 1: Cowie Street Bridge

#### Non-Cost Evaluation Score of 41

- Solution combines vehicle and pedestrian/cycle access in one location.
- Good links to proposed Greenway cycle link.
- Redirected Laxon/Youngs traffic similar to current traffic flows.
- Most visually intrusive option (3D images are included in Appendix 6 of the SAR).
- Could impact on property prices for adjacent Cowie Street properties.
- Small amount of land acquisition from 9 Cowie Street required.
- CPTED principles adhered to.

### Option 2a: Furneaux Way Double Lane Separated Space

#### Non-Cost Evaluation Score - not included due to poor BCR

- Significant change in character and impact on Furneaux Way residents as the no-exit way currently has very low traffic volumes.
- Redirected Laxon/Youngs traffic exits onto Middleton Road rather than Parnell Road. Low impact on existing congestion but dis-benefits for residents travelling towards Parnell.
- Would require conversion of Furneaux Way from private to public ownership, and following feedback from the Broadway Park Residents' Society would be opposed. This will therefore likely require use of the Local Government or Public Works Act and the process for resolving this could be protracted and jeopardise the project delivery date of March 2015.
- Requires a separate pedestrian/cycle bridge solution at either Sarawia or (preferred) Cowie Streets, affecting two sets of resident stakeholders.
- Land acquisition expensive and would require demolition/intrusive physical works.

- CPTED principles adhered to.

### **Option 2b: Furneaux Way Single Lane Shared Space**

#### **Non-Cost Evaluation Score of 32**

- Least visually intrusive option with least construction disruption.
- Significant change in character and impact on Furneaux Way residents as the no-exit way currently has very low traffic volumes.
- Redirected Laxon/Youngs traffic exits onto Middleton Road rather than Parnell Road. Low impact on existing congestion but dis-benefits for residents travelling towards Parnell.
- Would require conversion of Furneaux Way from private to public ownership, and following feedback from the Broadway Park Residents' Society would be opposed. This would likely require use of the Local Government or Public Works Act and the process for resolving this could be protracted and jeopardise the project delivery date of March 2015.
- Requires a separate pedestrian/cycle bridge solution at either Sarawia or (preferred) Cowie Streets, affecting two sets of resident stakeholders.
- Provides a lower level of amenity compared to other options, providing a single-lane solution only. While considered adequate for the volumes of traffic entering/existing Laxon Terrace, there are traffic safety issues around traffic right of way, visibility and managing safe shared use of the connection between vehicles, cyclists and pedestrians.
- Some minor land acquisition may be required to facilitate driveway access to a property adjacent to the walkway.
- The narrow road width means that in the event of a traffic accident in the shared space area vehicle access into and out of Laxon Terrace and Youngs Lane is likely to be blocked or restricted.
- CPTED principles adhered to.

### **Option 3: Newmarket Park Road**

#### **Non-Cost Evaluation Score – Removed from evaluation following Local Board opposition to Option**

- Opposed by the Local Board, delegated authority holders for decisions affecting the Park's use.
- Complicated consenting issues.
- Negative effects on a wider group of stakeholders, affecting park recreational users and changing the character of affected areas of the Park.
- Geotechnical issues related to land stability introduces cost/viability risk.
- Would require gates to park to remain open at all times, increasing risk of loitering or criminal/anti-social activity in the park during night hours.
- Requires a separate pedestrian/cycle bridge solution at either Sarawia or (preferred) Cowie Streets, affecting two sets of resident stakeholders.

- Redirected Laxon/Youngs traffic exits onto Ayr Street rather than Parnell Road. Minor impact on existing congestion but dis-benefits for residents travelling towards Broadway.
- Not considered in the CPTED review.

#### **Option 4: Sarawia Street Underpass**

##### **Non-Cost Evaluation Score of 32**

- Solution combines vehicle and pedestrian/cycle access in one location.
- Redirected Laxon/Youngs traffic unchanged from current traffic flows.
- Either no or minor private land acquisition involved.
- Property and access issues to resolve with KiwiRail around use of land used for service road to Newmarket triangle.
- CPTED principles are not met by the option.
- Geotechnical issues related to land stability introduces cost/viability risk.
- Completion of critical phase in rail corridor over a 4 week Christmas block of line will prove challenging if technical risks transpire.
- Will require relocation of an overhead electrification traction mast and redesign of the overhead line arrangement in the affected stretch of track.
- CPTED principles are not met by the option.
- Traffic safety review highlighted visibility and safety issues with the configuration.
- The tight corners and constrained area within the underpass means that in the event of a traffic accident in the shared space area vehicle access into and out of Laxon Terrace and Youngs Lane is likely to be blocked or restricted.

## Stakeholder Engagement

Auckland Transport began engagement with residents and community groups in November 2012, including a public forum held at the Parnell Community Centre in December 2012. Auckland Transport shared the short-listed options with affected stakeholders and solicited their views via a survey form circulated at the meeting and available on the Auckland Transport website.

Auckland Transport arranged two letter drops to residents, the first inviting their attendance at the December 2012 public forum and the second on 3 April 2013 advising residents of updated information available on the Auckland Transport website and encouraging responses to the survey. This phase of public engagement formally concluded on 24 April 2013, although the survey results continue to be updated as subsequent responses are received. Full results from the feedback and a copy of the Auckland Transport survey form can be found in Appendix 3 of the SAR and survey results are summarised in Attachment 2. The survey results are inconclusive for the most part, with residents generally opposed to the option in closest geographical proximity to their properties.

Auckland Transport has met with or presented to community group representatives including the Local Board, Newmarket Community Association, Parnell Community Committee and the Broadway Park Residents Society and the feedback received has informed the recommendation. The conclusion is that Option 1 or Option 2b are feasible and favourable with sections of the local community. All options surveyed faced significant opposition from at least one sizable section of residents and community groups.

A Stakeholder Engagement Communications Plan (Attachment 5) has been prepared for the project and will continue to be updated over subsequent project phases.

## Funding

Funding of \$5.72M has been allocated in the LTP for FYR 2013/14 and 2014/15 for facilitating closure of the Crossing. This is believed to be sufficient to deliver any of the options short-listed with the exception of Option 2a (base estimate \$6.53M) and Option 4 (base estimate of \$7.51M). All option estimates include a contingency of 10%.

### Funding Sensitivities

All option estimates include a contingency of 10%. At this early stage of analysis there is a risk that further funding is required for the preferred Option 1 should this contingency prove insufficient.

- If a 20% contingency sensitivity is applied to the concept Design costs for Option 1 increase to \$6.23M, meaning \$0.51M further funding would be required.
- If a 40% contingency sensitivity is applied, the cost estimate for Option 1 increases to \$7.48M, meaning a shortfall of \$1.76M.

Options to seek NZTA funding support will be investigated.



## Recommendation and Preferred Options Analysis

### Recommended Preferred Option: Option 1 Cowie Street Road over Rail Bridge

The recommended preferred option for alternative access to Laxon Terrace and Youngs Lane is the development of a road (over rail) bridge from Cowie Street to the northern end of Laxon Terrace (Option 1).

This option provides a comprehensive vehicle, cycle and pedestrian link from Parnell Road through to Laxon Terrace with a single construction site, retaining a similar traffic flow pattern to that currently in place. It scored the highest in the non-cost evaluation assessment but has a lower BCR than both Furneaux Way single lane shared space (Option 2b) and Newmarket Park road (Option 3).

There will be some impact to local stakeholders, with the bridge being visible from the end of Cowie Street and where it joins Laxon Terrace at the bottom of Sarawia Street but because the bridge will project from Cowie Street horizontally before curving downward to Laxon Terrace it will have low visual impact for most Cowie Street residents and those overlooking Newmarket Park from apartments located at the park access road to Ayr Street.

Resident surveys indicated strong opposition to Option 1 from Cowie Street residents, with a mixed response elsewhere. However, no option surveyed elicited a positive response from all groups and opposition is lower than that to Newmarket Park (Option 3) and Furneaux Way (Option 2b).

A small amount of land acquisition is required from 9 Cowie Street and initial contact indicates that acquisition of the land is feasible for a negotiated price.

The bridge option is consistent with CPTED principles and is well positioned for integration with the proposed Greenway cycling/walking link supported by the Local Board.

Option 1 has a BCR of 1.8 and an estimated capital cost of \$5.72M including design, land acquisition and consenting costs. The developed design phase would begin in the first half of FYR 2013/14, with construction commencing next year and carrying on through to late FYR 2014/15 to take advantage of any rail block of line over the December 2014 Christmas/New Year period.

### Non-Preferred Option: Option 2 Furneaux Way Road Connection

The strongest alternative to Option 1 is the Furneaux Way single lane shared space (Option 2b). This provides a lower level of amenity, but the single lane would be wide enough for emergency and service vehicles to access Laxon Terrace. After discussion with the Local Board and other stakeholders, retaining pedestrian and cycle access from Parnell Road to Newmarket Park is considered highly desirable and would be retained by constructing a pedestrian/cycle bridge from Cowie Street to Laxon Terrace. Although this is similar to Option 1 in alignment, the bridge would be visually less intrusive and none of the traffic noise or thoroughfare associated with the road bridge would occur in Cowie Street.

The main advantage of the option is the comparative low cost, with a BCR of 3.2, and it can be constructed quickly with limited disruption to the community. It is consistent with CPTED principles in both the pedestrian/cycle bridge and in improving the crime risk at the Furneaux Way walkway.

However, it does raise traffic safety concerns around visibility and the safety of pedestrians in a shared space environment and would require a means to control and manage the one-way traffic flow, whether priority direction signage such as found on narrow bridges or via traffic signals. Should a traffic accident occur within the single-lane area this will have consequences for the resilience of the network as vehicle access into and out of Laxon

Terrace and Youngs Lane could be blocked for an extended period, with the single-lane link acting as a chokepoint for traffic flow.

Most significantly, Furneaux Way is a private road and conversion of the road from private to public is strongly opposed by Furneaux Way residents and the governing body corporate Broadway Park Residents' Society. The character of the quiet road would change significantly as current traffic volumes are extremely low and residents have expressed concerns on the effect the changed traffic flow patterns will have on congestion around Middleton and Remuera Roads. Traffic analysis indicates that the low volume of additional traffic will not make a significant impact to current wait times for vehicles entering Remuera Road from Middleton Road and will be noticeable predominantly within Furneaux Way and adjoining streets such as James Cook Crescent.

In order to change Furneaux Way from private to public legal road the project would need to use either the Public Works Act 1981 or s349 of the Local Government Act 1974. This is highly likely to be challenged by the Broadway Park Residents' Association, involving associated legal action. This would be an expensive and lengthy process with no certainty on the outcome. While the base BCR does include an allowance for legal costs, the length of time to resolve such a challenge is likely to result in failure to deliver the project by the delivery date of March 2015. If the legal challenge to AT was to be successful then we would then need to pursue an alternative option, adding cost and considerable time to delivery of the project.

Accordingly, it is not recommended that Option 2b be progressed further.

Option 2a, the Furneaux Way double lane separated space option, is similar to Option 2b but delivers a greater level of amenity, reducing or removing the traffic safety concerns. However, the costs are significantly greater due to the amount of land acquisition involved and the same stakeholder opposition to the added traffic volumes and use of the private road remain. It has a BCR of 1.3 and considerable uncertainty around costs due to volatility in property prices and variables around whether and how protracted a legal challenge might be.

It is not recommended that Option 2a be progressed further.

#### **Non-Preferred Option: Option 3 Newmarket Park Road**

Option 3 Newmarket Park Road has a BCR of 3.0 but was the least preferred in surveys of residents and further development of the option was discontinued following the Local Board decision to oppose the option under their delegated authority from Auckland Council.

#### **Non-Preferred Option: Option 4 Sarawia Street Underpass**

Option 4 Sarawia Street underpass is a variation on an earlier concept ruled out due to high cost and technical difficulties achieving an acceptable road gradient over the length of Sarawia Street. The Parnell Community Committee approached Auckland Transport with an alternative suggestion with a road alignment running alongside the rail corridor before cutting under the track so that the gradient issue is addressed and Auckland Transport has undertaken further investigation into this option.

The option has the advantages of only affecting those residents currently in close proximity to the level crossing so the wider stakeholder issues are removed, requires a single work site only and does not change the traffic flows from their current movements. However, there are significant construction complexities involved in completing the work during the Christmas 2014/15 block of line and considerable geotechnical risks which could add cost and time to delivery of the option. It will involve relocation of a traction mast supporting the overhead electrification line and associated redesign of the overhead line arrangement at that section. Providing retention of KiwiRail access to the Newmarket triangle after removing sections of the existing service road would also need further consideration and discussion

with KiwiRail. There are significant traffic safety and CPTED concerns with Option 4 and it has a BCR of 1.3 for the lowest-cost alignment investigated.

It is not recommended that this option be progressed further.

Based on the conclusions drawn above, it is recommended that the Cowie Street road (over rail) bridge (Option 1) be selected as the preferred option to progress to design phase.





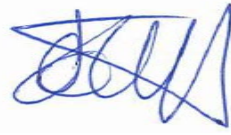

## Next Steps

- Engage design consultant to produce concept and detailed designs of the preferred option
- Engage with residents and stakeholders on the specifics of the preferred option design.
- Acquire land necessary for the preferred option
- Obtain resource consent(s)
- Begin physical works

## Attachments

Number	Description
1	Benefit Cost Analysis and Assumptions
2	Community Impact Evaluation
3	Results of Community Engagement Survey
4	Project Scheme Assessment Report
5	Communications Plan

## Document Ownership

<b>Prepared by</b>	Nick Seymour <b>Project Director, Passenger Transport Capital Improvements</b>	
<b>Recommended by</b>	Rick Walden <b>Group Manager, Key Agency Initiatives</b> Mark Lambert <b>Group Manager, Public Transport</b> Greg Edmonds <b>Chief Operations Officer</b> Claire Stewart <b>Chief Development Officer</b>	   
<b>Approved for Submission</b>	David Warburton <b>Chief Executive</b>	

## Glossary

Acronym	Description
Board	Auckland Transport Board
BCR	Benefit Cost Ratio
CPTED	Crime Prevention Through Environmental Design
EMU	Electric Multiple Unit
Crossing	Sarawia Street Level Crossing
FYR	Financial Year
Local Board	Waitemata Local Board
LTP	Long Term Plan
NZTA	New Zealand Transport Agency
PV	Present Value
PT	Public Transport
SAR	Scheme Assessment Report

## Attachment 1 – Benefit Cost Analysis and Assumptions

### Benefit / Cost Analysis

A benefit and cost analysis for the options is highlighted in Table 1 below. The BCR results vary primarily as a result of the cost of each solution, as the benefits for each option are similarly dominated by the significant savings in time for rail passengers, which is the same across all options.

**Table 1: Option Analysis - Benefits and Dis-Benefits**

Item	Option 1: Cowie St Bridge	Option 2a: Furneaux Way Double Lane	Option 2b: Furneaux Way Single Lane	Option 3: Newmarket Park through Road	Option 4: Underpass Alignment 2
Benefits 2016: Reduced delays to rail passengers and	\$612,620	\$612,620	\$612,620	612,620	\$612,620
Benefits 2016: Remove delays to level crossing users	\$6,040	\$6,040	\$6,040	\$6,040	\$6,040
Dis-benefits 2016: Delays to road traffic	\$6,460	\$113,040	\$113,040	\$38,760	\$0
Present value of benefits, \$m	\$7.74	\$7.74	\$7.74	\$7.74	\$7.74
Present value of dis-benefits, \$m	\$0.07	\$1.22	\$1.22	\$0.42	\$0
<b>Present value of net benefits, \$m</b>	<b>\$7.67</b>	<b>\$6.52</b>	<b>\$6.52</b>	<b>\$7.32</b>	<b>\$7.74</b>
<b>Present value of net costs, \$m</b>	<b>\$4.21</b>	<b>\$4.87</b>	<b>\$2.05</b>	<b>\$2.46</b>	<b>\$5.74</b>
<b>Total BCR</b>	<b>1.8</b>	<b>1.3</b>	<b>3.2</b>	<b>3.0</b>	<b>1.3</b>

### Assumptions

For each of the options, the analysis has measured the distances by road to Laxon Terrace from two locations:

- South: the junction Broadway/Remuera Rd
- North: the junction Ayr St /Parnell Rd.

It has been assumed that of traffic entering or leaving Laxon Terrace, 60% would be to /from the north (CBD) and the remainder, the south (Newmarket and beyond). These have been used in the evaluation of car user impacts.

The distances have been converted into times using an average car speed of 30kph and the extra times have then been monetised and included in the benefit calculation, as described in section 7 of the Business Case report. The full Business Case report can be found in Appendix section 7 of the SAR, including a range of sensitivities performed on each option.

For pedestrians, the situation is different. Pedestrians to - from the south (Broadway /Remuera Road) are likely to be already using Furneaux Way so any changes at the crossing will be immaterial. For pedestrians to /from the north (Parnell Road – e.g. to catch a bus into town) the new Cowie or Sarawia Street bridge would allow pedestrians to avoid the delays at the crossing. In the light of this it has been assumed that with all the options there would be no delay to pedestrians.

The PV Costs used in the BCR analysis consist of the most likely capital cost estimate to construct and maintenance/renewal cost estimates over a 30 year period for each option, as per NZTA's Economic Evaluation Manual.

## Attachment 2 – Community Impact Evaluation

As a result of the stakeholder engagement process and as a product of the investigation process the following non-cost factors have been identified and assessed. These factors are not included within the BCR calculation and are detailed in Figure 22 of the SAR. This evaluation is necessarily subjective and Auckland Transport has endeavoured to balance the considerations of each stakeholder group when conducting the non-cost evaluation.

In order to evaluate the non-cost benefits of the shortlisted options the table below has been created, comparing the associated level of non-cost benefits from each option which have not otherwise been captured in the BCR evaluation. For this reason, rail operational benefits and extra vehicle journey time dis-benefits have not been included in the non-cost evaluation.

Each option has been ranked in comparison to the other options shortlisted for consideration, between 1 (worst) and 3 (best) to provide a comparative assessment of non-cost aspects. Where options are ranked equally highly, a score of 3 has been applied to reflect that the criterion has been fully met.

These values have then been weighted according to three prioritisation categories reflecting the importance of the criterion both from Auckland Transport priorities (e.g. traffic safety) and from stakeholder feedback (e.g. low priority on vehicle queuing times).

- **Priority 1: Critical importance** – criterion represents an essential component for successful delivery of Project outcomes. Weighting factor 3.
- **Priority 2: High importance** – criterion represents a highly desirable component for successful delivery of Project outcomes. Weighting factor 2.
- **Priority 3: Moderate importance** – criterion represents either a ‘nice to have’ or transitional component for successful delivery of Project outcomes, whose impact will be temporary only. Weighting factor 1.

### Explanation of Criteria and Scoring

#### Priority 1 Criteria

- **Rail Safety:** Likelihood of a road/rail or pedestrian/rail collision. All options provide for complete segregation of the Crossing.
- **Traffic Safety:** Visibility and sight lines, likelihood of a vehicle/pedestrian collision. Option 1 is the most successful in this regard, with Option 2b next due to the need to improve visibility and safely managed use of the shared space. Option 4 is least successful due to visibility limitations, space and road alignment constraints and a steeper than ideal gradient.
- **Crime Prevention:** As assessed against CPTED principles. Options 1 and 2b both comply with CPTED principles, Option 4 demonstrates some significant failings (refer to Appendix 5 of the SAR for the CPTED report).

#### Priority 2 Criteria

- **Environmental/Aesthetic Impact:** How noticeable the option will be to local residents and stakeholders, for example visually or in terms of noise. Option 1 is the most visually intrusive; Option 2b will negatively impact residents in Furneaux Way with higher noise levels and traffic movements. Option 4 is strongest in this regard, only impacting residents living near the underpass openings.

- **Impact for Wider Community:** Impact of the option on residents and stakeholders outside of the immediate area around the Crossing (Sarawia Street, Laxon Terrace, Youngs Lane). Option 4 is strongest, restricting the impact to those already affected. Option 1 impacts residents in Cowie Street, turning the no-exit road into access to Laxon Terrace and Youngs Lane and Option 2b has the greatest negative impact, changing traffic flows from existing and affecting a greater number of residents outside of the immediate Crossing area.
- **Vehicle Amenity/Queuing:** The quality of the connection for road and cycle users, including adequate road widths, acceptable gradients and removal of queuing. Option 1 provides the greatest level of amenity with a two-lane access and separated pedestrian and cycle area and no queuing is expected at either Cowie Street or Laxon Terrace. Option 4 has good two-lane access, a narrower pedestrian separated area not suitable to share with cyclists and some vehicle queuing is possible at peak periods as a means to manage visibility issues for traffic entering the underpass. Gradient is acceptable for road vehicles but could present difficulties for disabled users due to the 1:10 gradient. Option 2b will have no or minimal pedestrian and cyclist separation and the rise of the connection will restrict visibility to a degree. Some queuing is likely at peak travel periods and one-way traffic flow will need to be managed through right of way signage or traffic signals.

### Priority 3 Criteria

- **Construction Disruption:** The impact of the option's construction on traffic flows and affected stakeholders. Option 2b could be constructed quickly and with minimal disruption to road users and residents. Measures would be needed to maintain pedestrian and cycle access throughout the construction period, although an alternative through Sarawia Street is possible. Option 1 will involve construction vehicles and noise for approximately 6 months, mostly affecting residents at the end of Cowie Street and top of Laxon Terrace. Option 4 will involve construction vehicles and noise for approximately 6 months and could disrupt efficient use of the Crossing at critical phases of construction. Residents at the bottom of Sarawia Street and top half of Laxon Terrace and Youngs Lane would be affected.



**Table 1: Community Impact Scoring**

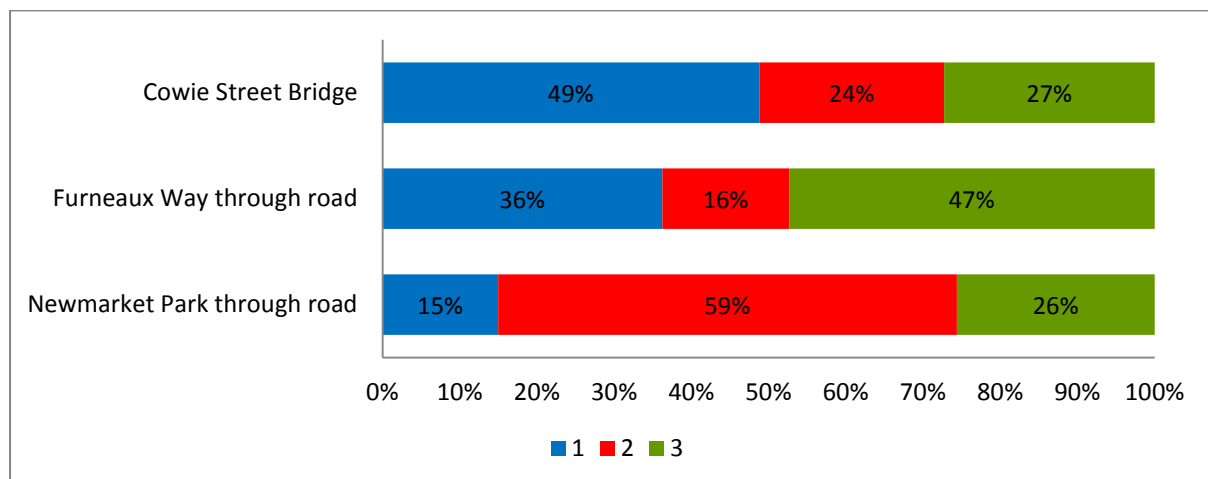
	<b>Option 1: Cowie Street Bridge</b>	<b>Option 2b: Furneaux Way Access</b>	<b>Option 4: Underpass Alignment 2</b>
<b>Priority 1 Component (weighting factor of 3)</b>			
Rail Safety	9	9	9
Traffic Safety	9	6	3
Crime Prevention (CPTED)	9	6	3
<b>Priority 2 Component (weighting factor of 2)</b>			
Environmental/Aesthetic Impact	2	4	6
Impact for Wider Community	4	2	6
Vehicle Amenity/Queuing	6	2	4
<b>Priority 3 Component (weighting factor of 1)</b>			
Construction Disruption	2	3	1
<b>TOTAL</b>	<b>41</b>	<b>32</b>	<b>32</b>

## Attachment 3 – Results of Community Engagement Survey

220 survey forms have been received and collated. Residents and other interested parties were asked to rank the three options in order of preference. Note that not all survey forms provided an option preference, some were simply responding in order to be on ATs information distribution list, and others just included comments they wanted to make in relation to the project.

### Overall Survey Responses

	1 <sup>st</sup> Preference	2 <sup>nd</sup> Preference	3 <sup>rd</sup> Preference	Total
<b>Cowie Street Bridge Option 1</b>	102	50	57	209
	49%	24%	27%	100%
<b>Furneaux Way through road Options 2a, 2b</b>	75	34	98	207
	36%	16%	47%	100%
<b>Newmarket Park through road Option 3</b>	31	123	53	207
	15%	59%	26%	100%



Where 49% of respondents selected Cowie Street Bridge (Option 1) as their preferred option, 36% selected Furneaux Way (Options 2a and 2b) and 15% selected Newmarket Park (Option 3). Although Option 3 was unpopular as a first preference, it is a popular second preference.

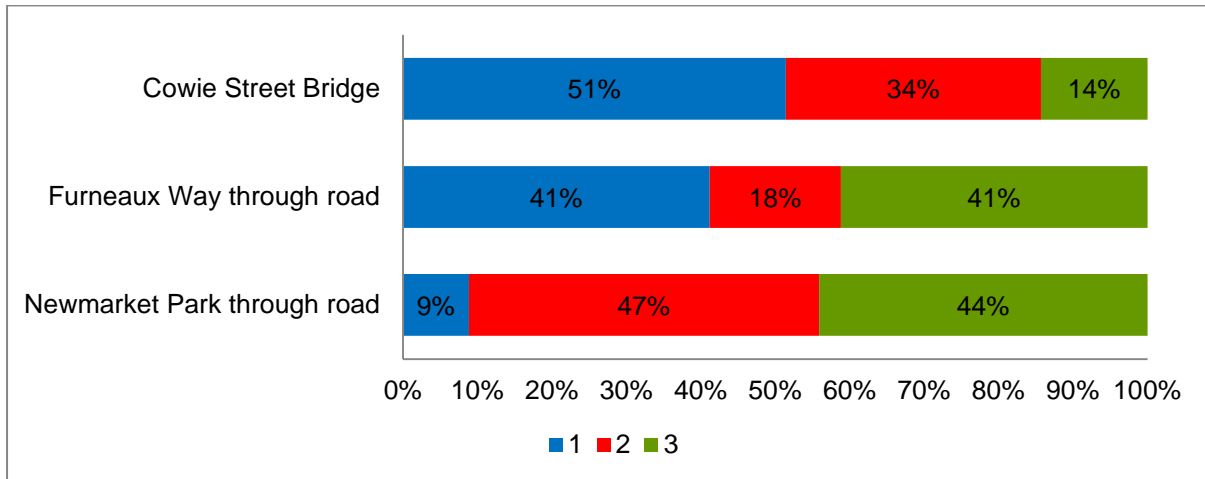
The 220 responses were received from:

- Residences in roads adjacent to the crossing: 18.2%
- Residences south of Laxon Terrace: 49.5%
- Residences north of Laxon Terrace excluding Sarawia St: 24.5%
- Residences east of Laxon Terrace: 7.8%

To a great extent, the survey results reflect the geographical location of respondents, with Broadway Park residents (residences south of Laxon Terrace) opposed to Options 2a and 2b, Ayr St residents (east of Laxon Terrace) opposed to Option 3 and Cowie Street residents (north of Laxon Terrace) opposed to Option 1.

The high proportion of responses from residences south of Laxon Terrace (50%), predominantly within the Broadway Park complex and surrounding roads, has led to overall results favouring Option 1 over all others.

Residences living in streets adjacent to the Crossing (Laxon Terrace, Sarawia Street, Youngs Lane) are arguably the most affected by the Project and their survey response consists of:



This shows a more even split between Options 1 and Options 2a and 2b as a first preference. Option 3 is a distant third preference, and even as a second preference is similar to those preferring Option 1.

## Attachment 4 – Project Scheme Assessment Report

Refer to separate document at

<http://cp.aucklandtransport.govt.nz/infra/sslcu/Project%20Reporting/Forms/AllItems.aspx>

## Attachment 5 – Project Communications Plan

**CONFIDENTIAL**

### Communications Plan

# Newmarket Level Crossing Removal

Prepared by: Sonya Leahy, Team Leader, Communications

4 June 2013

Updated by: Adrian Price, Project Leader, PT Capital Developments

9 September 2013

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## 1.0 PURPOSE

The purpose of this document is to outline a recommended approach to communicating Auckland Transport's decision to close the level crossing connecting Sarawia Street and Laxon Terrace in Newmarket and its preferred option for providing alternative vehicle, pedestrian and cycle access.

## 2.0 BACKGROUND

Auckland Transport has identified the need to close the level crossing at Sarawia Street in Newmarket to facilitate planned improvements in rail frequency following the introduction of new electric trains into passenger service.

The crossing is the busiest and most complicated level crossing in New Zealand in terms of rail movements and is a significant factor in constraining future rail timetable frequency improvements on the Auckland network and contributes to service disruption and delays to current rail services. This constraint has previously been identified by other organisations and investigations into closing the crossing and providing alternative access to Laxon Terrace and Youngs Lane, both of which rely upon the level crossing for vehicle access, have been undertaken.

The constraint on current and future rail service reliability is the primary reason for investigating closure of the crossing and this issue cannot be solved by improvements to the safety elements of the level crossing. Auckland Transport and KiwiRail discussed options that would allow retention of the crossing in some form and deliver the required rail operational performance benefits but these have been confirmed as unfeasible.

The secondary benefit to closing the crossing is to remove the safety risks associated with a level crossing in general. Although the pedestrian and road traffic volumes using the crossing is low compared to some crossings in the Auckland network, it is within the top 10 level crossings identified for closure or grade separation as part of an Auckland Transport March 2012 report on Level Crossing Grade Separation. Its removal also supports Auckland Transport's policy to grade separate or otherwise remove existing level crossings where possible.

In 2010-11 KiwiRail investigated the closure of the crossing and prepared concept designs for a bridge linking Cowie Street to Laxon Terrace. Auckland Transport's investigation into the feasibility of closing the crossing consisted of looking at two other alternatives initially considered by ARTA in 2007 and developing concept designs for these alternatives to a common standard to allow comparison with an updated version of the bridge design option developed by KiwiRail. Auckland Transport also considered options to retain convenient pedestrian and cycling access to the Newmarket Park area.

### 2.1 Options identified

Three feasible options were identified, with a fourth added in July 2013:

1. Construction of a road bridge from Cowie Street to Laxon Terrace
2. Conversion of an existing pedestrian walkway linking Laxon Terrace to Furneaux Way to a road link and construction of a pedestrian/cycle bridge from Sarawia or Cowie Street to Laxon Terrace.
3. Construction of a road through Newmarket Park to link Laxon Terrace to Ayr Street and construction of a pedestrian/cycle bridge from Sarawia or Cowie Street to Laxon Terrace.
4. Construction of an underpass linking Sarawia Street to Laxon Terrace

## 2.2 Engagement background

Auckland Transport began engagement with residents and community groups in November 2012. This included a well-attended public forum at the Parnell Community Centre in December 2012, where about 100 attendees were asked for their views (via a survey form circulated at the meeting and available on Auckland Transport's website) on a preferred option to progress.

Auckland Transport arranged two letter drops to residents - the first inviting their attendance at the December public forum and the second in early April 2013 advising residents of updated information available on the Auckland Transport website and encouraging responses to the survey form which was attached to the letter. This phase of public engagement concluded on 24 April 2013 with 220 responses.

Recurring themes from the survey form comments received include:

- the need to keep pedestrian and cycling access to Parnell, Newmarket and Newmarket Park
- concern over the removal of the crossing and questioning the need for its removal
- concern on the impact of a Newmarket Park road considering that the park has been recently redeveloped and improved
- mixed response on the safety impact for Newmarket Park users should a road be introduced, some commenting that increased public presence makes the park safer while others believe there will be an increase in loitering and anti-social behaviour in the park
- concern over the effect of Laxon Terrace/Youngs Lane traffic being redirected into Furneaux Way and how this may interact with new developments in the Broadway Park area
- concern that a Cowie Street bridge will affect Cowie Street property prices and be visually imposing
- concern that the community consultation did not extend widely enough to include residents further afield and that not all residents received the Auckland Transport letter and survey response form circulated to residents in early April

- comments on the methodology used by Auckland Transport to produce a benefit-cost analysis of the economic case for the various options

Where able, Auckland Transport has sought to respond to these comments and concerns and have used the Auckland Transport website as the primary means of disseminating further detail and information on the proposals. This includes a set of 'frequently asked questions' and a background document from KiwiRail explaining the constraints imposed by the crossing on rail operations. A Scheme Assessment Report is being drafted and a revised appraisal of the economic case for each of the options has been completed following alterations to the cost estimates of options.

These alterations are primarily a result of including a pedestrian/cycle bridge on two options instead of the pedestrian/cycle-only level crossing originally included in the base assumptions. This change follows KiwiRail clarification that they would not be able to approve relaxation of current signalling safety restrictions needed to achieve the sought rail operational benefits if a pedestrian maze crossing were to replace the current vehicle crossing. In order to preserve pedestrian and cycle connectivity to Newmarket Park and Laxon Terrace/Youngs Lane from Parnell Road, Auckland Transport has included a pedestrian/cycle overbridge in the benefit-cost calculations for the Furneaux Way and Newmarket Park road options.

The benefit-cost analysis is consistent with NZTA's Economic Evaluation Manual and factors in travel time benefits associated with improved passenger rail performance and negatives associated with the added travel distance for pedestrians and vehicles. The net result is compared to the cost estimates for each option. Safety benefits of removing the crossing are not included in the economic calculation.

Revised benefit cost ratios (BCRs) for each option are as follows:

- Cowie Street bridge: 1.6
- Furneaux Way road link – single lane: 2.8
- Furneaux Way road link – dual lane: 1.2
- Newmarket Park link road: 2.6
- Sarawia Street underpass: 1.2

The BCR represents the return in monetised benefits for each dollar invested and provides a robust and widely-accepted method for comparing the relative economic merits of different options before selecting a preferred option to progress. However, the economic assessment is not the sole deciding factor as it does not readily address other non-monetised factors such as community concerns, safety benefits and wider strategic considerations.

A meeting was held with the Waitemata Local Board chair and two members of the transport portfolio on 4 June 2013 and an update given at the Local Board's formal meeting on 11 June to provide detailed reasons for why the crossing has to be closed, the options Auckland Transport is considering and the results of the survey. During the meeting, Auckland Transport requested the Local Board's formal feedback.



Auckland Transport met with representatives of a number of community and resident interest groups, including the Newmarket Community Association, Parnell Community Committee and Broadway Park Residents Society.

A recommendation paper and supporting Scheme Assessment Report is currently being prepared to put to the Auckland Transport Board in September 2013 to develop a preferred option to detailed design.

### 3.0 NEXT STEPS

A preferred option will be presented to the Auckland Transport Board for approval in September 2013, with the intention of beginning further detailed design work in October 2013 on the preferred option. This will involve further engagement with affected members of the community to inform the design development.

Auckland Transport is working toward the preferred option being operational by the first quarter of 2015.

Based on the investigation work to date:

- the Cowie Street bridge option is a contender for preferred option status due to:
  - minimising change to the overall traffic network
  - providing a superior quality of unimpeded access compared to the Furneaux Way single lane option
  - requiring a single work site, restricting construction disruption to the community.
- the Furneaux Way dual lane road link not be progressed due to low economic benefits.
- the Furneaux Way single lane road link is a contender for preferred option status due to its higher BCR value. However, the option faces strong opposition from Broadway Park residents, changes existing vehicle travel patterns substantially and has the lower amenity and safety features of a single-lane one-way controlled road make this a less desirable solution.
- the Newmarket Park road link not be progressed due to opposition from the Waitemata Local Board, delegated authority holders for the park from Auckland Council.
- the Sarawia Street underpass not be progressed due to low economic benefits.

Although all options have been opposed to some degree by groups of affected residents, Auckland Transport has endeavoured to balance the concerns of local residents and the wider community, including users of Newmarket Park, the Waitemata Local Board, rail

patrons and Auckland's strategic public transport objectives to arrive at a preferred option most acceptable to all concerned.

#### **4.0 STRATEGY**

Auckland Transport will be proactive in its communications on the preferred option to ensure directly-affected individuals and groups (and other interested parties) are well informed about the chosen option, the benefits of that option over others, what will happen from here and how they can continue to be involved in the design process.

It is recommended that a separate communications plan be written for the construction phase of the project, once a methodology has been agreed and the expected impacts known.

#### **5.0 COMMUNICATION OBJECTIVES**

- Be proactive in our communications to the media and public wherever possible
- Clarify any misinformation that may exist
- Instil public confidence in Auckland Transport as a capable manager of Auckland's public transport network and a financially responsible organisation
- Protect and enhance Auckland Transport's reputation in relation to its decision and the quality of its communications

#### **6.0 TARGET AUDIENCES**

- Waitemata Local Board – chairperson and transport portfolio leads
- Newmarket Community Association
- Parnell Community Committee
- Broadway Park Residents Society (body corporate)
- Directly affected residents and owners
- Local community – wider catchment area
- Mayor & Deputy Mayor
- Auckland Council Parks (for Newmarket Park)

## 7.0 KEY MESSAGES

- Auckland Transport has announced its preferred option for reconnecting residential Newmarket streets once it closes the Sarawia Street/Laxon Terrace level crossing.
- After ten months of engagement with residents and community groups on possible options, Auckland Transport has decided to proceed with [Preferred Option and reasons selected]
- Auckland Transport has endeavoured to balance the concerns of local residents and the wider community to arrive at a preferred option most acceptable to all concerned.
- Auckland Transport will now enter a detailed design phase for the preferred option and engage with affected members of the community to inform the design development.
- Auckland Transport expects the crossing to be removed and the new vehicle link to be open by mid-2015.

## 7.1 Supporting messages (around the necessary closure of the level crossing)

- Residents in Laxon Terrace, Youngs Lane and lower Sarawia Street will no longer be disturbed by warning bell noise from the crossing.
- The Sarawia Street level crossing is the busiest and most complex crossing in New Zealand in terms of rail movements and removing it allows for a more frequent rail timetable.
- Level crossings are identified as a safety concern and Auckland Transport and KiwiRail have a policy of removing these where feasible.
- Removing the crossing allows KiwiRail to relax rails safety restrictions currently in place that prohibit trains from advancing to the signals adjacent to the crossing while they wait for the signals ahead to clear. Because of the steep grade leading from Newmarket Station to the crossing, there is a risk that a train attempting to stop for the crossing will overrun and collide with a vehicle using the level crossing, so trains are held at Newmarket Station until the level crossing barrier arms have again been lowered. If the crossing were removed and this safety restriction lifted, then the additional capacity to have a train depart the station and wait at the signals by the crossing is equivalent to adding another platform to Newmarket Station.

- Currently, should there be any delay to trains in and around Newmarket, there is limited capacity to recover from the delay. This situation will worsen when more frequent services are introduced to the point that reliable services cannot be maintained.
- The closure will benefit rail passengers who will experience fewer and shorter delays and, with timetable improvements and more frequent passenger services. Considering the number of people using the rail system and passing through Newmarket and Britomart, and forecast increases in rail patronage, this amounts to a significant overall benefit.

## 8.0 COMMUNICATION CHANNELS

### Local board discussions

The level crossing falls within the catchment of the Waitemata Local Board. Following an advisory to the local board, it would be advisable to schedule a special meeting as soon as possible to go over the preferred proposal, so they can be prepared to answer questions posed by their local community.

We should ensure answers to frequently asked questions are up-to-date, as they are a useful online resource and could be useful for Local Board members.

### Media

A media response should be prepared in anticipation of enquiries

### Online

The webpage should be updated with information on the preferred option, why it was selected and what will happen from here. FAQs should also be updated online.

### Email

Send an email update to interested people who have registered on our database to be kept informed of progress and updates

### Letter drop

A letter/flyer drop could be made to local catchment, outlining the decision and the process from here.

**Face-to-face**

Suggest a meeting with residents directly affected by the chosen option

**9.0 COMMUNICATIONS ACTION PLAN**

<b>Date</b>	<b>Tactic</b>	<b>Actions</b>	<b>Responsible</b>
Early October	Political briefings	<ul style="list-style-type: none"> <li>- Organise briefing with local boards &amp; relevant councillors, MPs</li> <li>- FAQs for elected members</li> </ul>	Alan Howard-Smith (AHS) Lorna Stewart (LS) Adrian Price (AP) Nick Seymour (NS)
Early October	Letter drop/email to database	To residents of directly affected street, inviting them to a meeting with Auckland Transport to discuss the decision and process from here	Sonya Leahy (SL) – write AP/Sharon Hunter (SH) – sign off Yasmin Sait (YS) – distribute
Early October	Letter drop/email to database	To residents of other streets, outlining the decision and process from here.	SL – write SH/AP – sign off YS – distribute
Early October	Media response	Prepare media response ahead of announcement	SL – write AP/SH/Mark Lambert (ML)/Greg Edmonds (GE) - sign off
Early October	Web and FAQs	Update web copy and FAQs	SL – write AP – sign off
Late October	Meeting	With residents of affected street only	YS/SL – organise AP – present
Late October	Internal comms	An article on Auckland Transport intranet site that outlines the decision and rationale	SL – write AP/SH – sign off

## 10.0 COMMUNICATION RISKS AND PROPOSED MITIGATIONS

Risks	Proposed mitigations/responses
<p>If Auckland Transport's decision on a preferred option is not communicated in a timely manner, misinformation or a lack of information may cause undue concern to affected parties and also hamper the ability of local politicians to disseminate accurate and timely information/updates to their community</p>	<ul style="list-style-type: none"> <li>• <i>Prioritise proactive communications</i></li> <li>• <i>Inform the public and politicians quickly</i></li> <li>• <i>Support the role of Auckland Transport's elected member liaison to provide useful, accurate and timely information and respond quickly to any queries.</i></li> <li>• <i>Ensure local board transport leads in particular have the facts they need to be able to talk to the media and public about the decision from an informed perspective.</i></li> <li>• <i>Provide FAQs so they have ready answers to hand</i></li> <li>• <i>Ensure the media have useful Auckland Transport information to balance their articles with</i></li> </ul>
<p>Members of the public believe that they were not genuinely consulted and/or listened to</p>	<ul style="list-style-type: none"> <li>• <i>Demonstrate that Auckland Transport listened to all public feedback (both online and in a number of community meetings) on the issues and options and selected the one it felt would provide the most benefit, be the most straight-forward to build and have the least impact on the surrounding area.</i></li> </ul>

## 11. SPOKESPEOPLE

**Media spokesperson:** Mark Lambert, Public Transport Operations Manager

**Alternative spokespersons:** Wally Thomas, General Manager, Communications  
 Sharon Hunter, Communications Manager