

# Auckland Harbour Bridge Pathway

## Glossary

Auckland Council	(AC)
Auckland Transport	(AT)
Auckland Harbour Bridge	(AHB)
AHB Pathway Technical Steering Group	(Steering Group)
AHB Pathway Trust	(The Trust)
Auckland Tourism Events and Economic Development	(ATEED)
New Zealand Transport Agency	(NZTA)
Public Private Partnership	(PPP)

## Executive Summary

Since August 2011, AT has worked alongside the AC led Steering Group, which was supported by a resolution of AC's Transport Committee, to determine if there is a feasible option for the delivery of an AHB Pathway facility.

As part of AT's Regional Cycle Network, a crossing over the harbour bridge has been identified as a strategic link in the cycle network of off-road routes.

NZTA undertook to carry out a structural feasibility study on the harbour bridge to determine the available load capacity to support the proposed pathway. While a summary report has been tabled by NZTA at the Steering Group, the final report is yet to be issued. The summary indicates that live loading would be limited to 600 persons in 2012 reducing to 350 persons by 2026.

The Trust's business case is based on a PPP scheme with implementation costs offset by toll revenue and naming rights revenue. NZTA has made it clear that there is no funding available from the NLTP for this project. The Trust's business case results appear extremely positive claiming a net surplus of \$59m over 20 years. However, while AC would be required to underwrite the revenue, AC would benefit from the identified net surplus.

AT has identified that to progress the project to the next stage would require investment of approximately \$150k to implement further feasibility, economic analysis and testing.

The first step would be to commission the development of the financial model based on current patronage information and to test the market through direct approach. The purpose of this work is that it would better equip AT in understanding what risks would shift back to AC under the provision of any underwriting liability. This work is expected to cost \$30k to around \$60k. The next steps would include further patronage modelling and cost security and the assessment of sponsorship opportunities.

The capital cost in the Trust's business case has been assumed at \$30m. However, additional infrastructure would be required to support the Regional Cycle Network to yield the uptake assumptions made in the business case and for this reason a more conservative cost estimate of \$40m is considered appropriate by AT.

The business case assumes 849,000 users per annum at a \$2 toll per trip which would generate \$1.7m of revenue per year. Potential naming rights may add \$100k per annum bringing the total revenue to \$1.8m per annum.

If AC was to underwrite the scheme based on a \$40m construction loan, the interest per year would be \$2.4m and maintenance and operations cost estimated at \$2m per year yield a total annual cost of \$4.4m. Comparing this to the potential revenue of \$1.8m it would appear that AC could potentially be liable for an underwriting cost of \$2.6m per annum in addition to any upfront investment. It is unclear why this does not compare to the Trust's business case claim of \$59m net surplus over 20 years (\$3.0m per year) although it appears the Trust's business case is very sensitive to tourist numbers and that these customers are expected to pay \$8 per visit rather than the \$2 for commuters.

If AC elects to proceed, AT would recommend that the assumptions made in the Trust's business case should be independently assessed and verified by an experienced professional prior to committing to the scheme. As an interim position, a line item with "zeroed" cost is proposed in the Long Term Plan 2012-22 to reflect a proposed privately funded scheme.

## Recommendations

It is recommended that the AT Board:

- i). Receives the report.
- ii). Approves the commissioning of the development of a financial model, market testing and project viability at an estimated cost of \$60k

## Strategic Context

As part of AT's Regional Cycle Network, a crossing over the harbour bridge has been identified as a strategic link in the cycle network of off-road routes. Delivering a connected strategic network of cycle and walking facilities across the region is a core outcome of the Regional Cycle Network. Currently the priority for the delivery of strategic links is focused around SH16, SH20 and the Central Motorway Junction. An additional \$20m is identified over the next 10 years in delivering a connected network along these corridors with a focus on SH16 and SH20. Further stages of the cycle network along SH1 North have been linked to the delivery of the Additional Waitemata Harbour Crossing.

## Background

Since August 2011, AT has worked alongside the AC led AHB Pathway Technical Steering Group, which was supported by a resolution of AC's Transport Committee, to determine if there is a feasible option for the delivery of an AHB Pathway facility. This Steering Group comprises AC, AT, NZTA and the Trust, which is a private group that proposed a privately funded walking and cycling facility on the harbour bridge.

### Structural Feasibility Study by NZTA

NZTA undertook to carry out a structural feasibility study on the harbour bridge to determine the available load capacity to support the proposed pathway. NZTA worked collaboratively with the Trust on the study to provide a joint report on the available load capacity of the harbour bridge. A summary report has been tabled at the Steering Group by NZTA subject to conditions. However, the final report is yet to be issued.

During the past 10 months, the Steering Group spent the majority of its time with negotiations between NZTA and the Trust's engineers to determine if a pathway can in fact be attached to the bridge structure safely and without reducing the longevity of the bridge. In late April, AT received preliminary notification from the NZTA that a structural solution is possible, however this was heavily caveated including the need to get a departure from the NZTA Bridge Manual. One other caveat was that live loading would be limited to 600 persons now reducing to 350 persons in 2026. While this appears significant, it would likely only be an issue where there is a major event or in peak periods as at other times this level of patronage would unlikely be reached. To address this, the Trust has proposed the use of managed control gates. Further wind tunnel testing and analysis would also be required before final approval would be provided by NZTA.

### **AHB Pathway Trust's Business Case**

With NZTA's recent indication of a likely structural solution, the focus has moved to the Trust's business case, which relies on a PPP scheme for procurement. If this project was to progress as a PPP, an open and robust tender process would be required and the following provides an overarching summary of the Trust's business case as an indicator of the likely success or otherwise of such a scheme.

NZTA has made it clear that there is no funding available from the NLTP for this project, so the Trust's suggested PPP would be the most appropriate delivery mechanism with implementation costs; offset by toll revenue and naming rights revenue.

The results provided in the Trust's business case appear extremely positive claiming a net surplus of \$59m over 20 years. Within their proposed model, AC would be required to underwrite the revenue; however AC would also be the beneficiary of the identified net surplus.

AT has identified that to progress the project to the next stage would require an estimated OPEX investment of \$150k to implement further feasibility, economic analysis and testing. At this stage AT has not committed to this expenditure as the uncertainty around the structural feasibility has only recently been resolved.

In terms of the business case assumptions, the capital cost has been assumed to be \$30m. This has been reviewed by AT and is appropriate for the structure and approaches. However, there remains concern as to what additional infrastructure would be required to support the Regional Cycle Network to yield the uptake assumptions made in the Trust's business case. For this reason a more conservative cost estimate of \$40m is considered appropriate.

The Trust's business case assumes commuters (1000 – 1800 per day), visitors (90 – 420 per day) and tourists (2100 – 2400 per day) to provide the patronage for the toll revenue. The daily patronage levels for tourists identified by ATEED (up to 2400) and commuters of 1000 – 1800 per day can be identified on the medium to high side from previous transportation studies. Currently, approximately 400 cycle trips a day catch the ferry across Waitemata Harbour with an additional 100 cyclists parking at ferry locations. A high percentage of these cycle users use the Devonport ferry where it is anticipated there will be a lower transfer rate to the Harbour Bridge facility. It is likely that a split of cyclists using the bridge would come from the existing ferry, bus and car users. Currently the highest-use cycle routes in Auckland are Tamaki Drive which has up to 1500 users a day and the North-Western cycleway which has 700 users a day.

A key component to generate the projected uptake of 1000 users a day will be providing high quality connection on the North Shore to the bridge to capture the potential users. If this link is not provided then potential users would be restricted to using local streets which have steep hills and are not direct.

## **Infrastructure Connectivity**

A connection would need to be built from Akoranga bus station adjacent to the motorway to the Harbour Bridge. Feasibility investigations conducted in 2009 identified that this would cost \$4-5m for 2.5km of cycleway with a Benefit/Cost of 1.25.

On the Auckland CBD side, good base connections exist from the bridge to the CBD and Ponsonby. These would be supplemented by dedicated facilities particularly on Westhaven Drive (a private road owned by the Waterfront Agency) which is narrow for a mixture of cyclists and boat trailers. The Waterfront Agency has identified a \$10m cycle/walkway connection adjacent to Westhaven Drive.

In addition to the above connections, additional on-street cycle facilities would be provided on Curran Street, St Mary's Bay Queen Street and Lake Road Northcote to provide local cycle connections. These would cost in the region of \$1m.

Therefore to provide a high level of accessibility, the pathway project would require additional investment in the region of \$6m-\$16m to achieve the high patronage levels required to support the scheme. This is currently not identified in the first 3 years of the RLTP and would require identified projects to be replaced.

## **Patronage and Revenue**

The total base patronage assumption of 849,000 users per annum consists of 369,000 commuters with the remainder made up of recreational users and tourists, which can be accommodated within the indicated load limits provided by NZTA. To put this in perspective, the Sydney Harbour Bridge patronage is currently 1.4 million per annum. However, this is not tolled and Sydney has a much larger population and land use catchments adjacent to the bridge. This would suggest a degree of optimism in the patronage forecast. However, taken on face value and with a \$2 toll proposed per trip, this would generate \$1.7m of revenue per year. This does not account for the possibility of charging tourists a higher amount.

The Business Case also claims \$450K - \$500k per annum for naming rights. Comparing this with other market values and considering uncertainty about on-going sponsorship in the present economy, a more realistic figure might be \$100k per annum bringing the total revenue to \$1.8m per annum.

## **Business Case – Preliminary Review by AT**

AT peer reviewed the financial analysis that the Trust presented to support their business case. The business case presents a scheme where the construction costs will be borrowed from a third party and the proceeds from tolling are expected to both refund the loan, pay for operational costs, and potentially provide a dividend to AT.

The results of the peer review were that some of the key assumptions in the financial analysis were found to be optimistic (e.g. patronage figures, build cost, discount rate, sponsorship revenue).

A financial analysis is conducted from the point of view of a firm or organisation and focuses only on financial cash-flows. Conversely, an economic analysis would be done from the point of view of a region or a country and includes the financial cash-flows, but also includes non-financial benefits and costs that have been monetised (e.g. travel time savings, environmental benefits etc.). An economic analysis has not yet been conducted on the scheme.

## Financial Risks

Council Underwrite: If AC was to underwrite the scheme based on a \$40m construction loan, the interest per year would be \$2.4m and maintenance and operations cost estimated at \$2m per year yield a total annual cost of \$4.4m. Comparing this to the potential revenue of \$1.8m it would appear that AC could potentially be liable for an underwriting cost of \$2.6m per annum in addition to any upfront investment. It is unclear why this does not compare to the Trust's business case claim of \$59m net surplus over 20 years (\$3.0m per year) although it appears the Trust's business case is very sensitive to tourist numbers and that these customers are expected to pay \$8 per visit rather than the \$2 for commuters.

From a financial point of view, some of the data in the financial analysis is not yet confirmed (e.g. the loan costs) and more certain estimates would need to be provided to provide assurance to AC about the purported financial benefits of the scheme.

A key risk to AC would be that if private funding could not be secured then the sunk costs to that date would be lost. For this reason, all assumptions made in the business case would need thorough review and validation by way of an independent economic analysis.

## Local Boards

The Kaipatiki, Waitemata and Devonport and Takapuna Local Boards have passed resolutions and voiced support for a pedestrian and cycle connection across the Waitemata Harbour.

## Next Steps

From this overview alone AT is not in a position to recommend investment by AC in this project. However, for the project to proceed, it would be prudent to conduct an economic analysis to verify the claims made in the AHB Trust's business case to better understand the underlying assumptions and provide sensitivity testing. As an interim position, a line item with "zeroed" cost is proposed in the Long Term Plan 2012-22 to reflect a proposed privately funded PPP scheme, as it would be deemed to be self-funding and therefore not require further CAPEX investment from AC.

If AC were to invest in the AHB Pathway scheme, then it would require certainty over the financial impacts to the organisation, and also the economic impacts including transport outcomes for the region. This would require an economic analysis by economists who have expertise in economic evaluation techniques. The estimated cost to carry out such an analysis is up to \$150k OPEX, beyond which the project would be deemed to be self-funding under a PPP scheme proposed by the AHB Pathway Trust.

Other options to be examined include writing to central government to determine if this project can be included in the National Cycleway programme and to examine possible future sponsorship opportunities (through ATEED).

## Attachment

**Attachment 1** Auckland Harbor Bridge Pathway Business Plan – Version 17 April 2012,  
by the AHB Pathway Trust (copyright)

<b>WRITTEN BY</b>	John Schermbrucker <b>Manager Investigation and Design</b>	
<b>RECOMMENDED by</b>	Kevin Doherty <b>Chief Infrastructure Officer</b>	
<b>APPROVED FOR SUBMISSION by</b>	David Warburton <b>Chief Executive</b>	