



AGENDA NO.  
**5.2**

## BOARD PAPER

<b>Paper no:</b>	<b>16/08/1053</b>
<b>Meeting date:</b>	12 August 2016
<b>Prepared by:</b>	s9(2)(a)
<b>Recommended by:</b>	
<b>Board function:</b>	Significant planning and operational matters
<b>Subject:</b>	<b>SkyPath</b>

## We recommend that the NZ Transport Agency Board ...

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- **Agrees** that the NZ Transport Agency will engage with Auckland Council to consider alternative options for funding, delivery and operation of a walking/cycling link across the Auckland Harbour Bridge to address the risks with the currently-proposed hybrid Public Private Partnerships model and to better manage the allocation of risk for both the Transport Agency and Auckland Council
- **Agrees** that the Transport Agency will continue to engage with the Auckland Council on the development of a memorandum of understanding and licence to occupy the Auckland Harbour Bridge required for the SkyPath project

# A pedestrian and cycle link across the Waitematā Harbour is important for Auckland

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- The proposed Auckland Cycle Network (see next page) is a key component of our plan with Auckland Transport to improve travel options and increase reliability across Auckland's transport network
- An 'active mode' link across the Waitematā Harbour (project 7 on the following map) is of high strategic importance to complete the Auckland Cycle Network
- In addition to transport benefits, this link would have significant recreational and tourism benefits

# Proposed Auckland Cycle Network



# We have been working with the AHB Pathway Trust and Auckland Council on the proposed link

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- The AHB Pathway Trust (the Trust) was formed to promote the development of a walking and cycling facility across the Waitematā Harbour
- Since 2011, we have worked with Auckland Council and the Trust to understand the feasibility of constructing and operating a walking and cycling facility on the Auckland Harbour Bridge (the Bridge)
- A number of design options have been considered in recent years
- The Trust has estimated that such a facility would be used about 780,000 times in year 1, with this figure growing to more than 2,130,000 trips annually by year 20

# The Auckland Council has agreed to a PPP for a shared path facility

- The Trust's current proposal for SkyPath is a shared path facility to provide walking and cycling access across the Bridge
- This would be supported from the eastern extension of the Bridge (the eastern 'clip-on'), with approach structures at the north and south which would comprise independent bridges with substructures separate from the main Bridge
- The SkyPath project would not include any Bridge strengthening and the current concept for the SkyPath would not include any independent support structure
- The main 1.1km long section of SkyPath would be an underslung walkway/ cycleway suspended from the extension bridge (see Attachments A and B)
- The Trust was granted a resource consent in July 2015 for its conceptual design for the SkyPath, which was subsequently appealed to the Environment Court
- An Environment Court hearing is likely to occur in October/November 2016 unless the appeal is resolved prior
- Auckland Council recently agreed to proceed with the SkyPath project, as currently proposed, using a hybrid Public Private Partnership (PPP) model, subject to the Transport Agency granting a licence to occupy the Bridge (we discuss this proposed hybrid model below)

# Our role and engagement in walking and cycling options has changed

- Over the last 2 years our role in enabling cycling as part of an integrated transport system has changed considerably
- Cycling is now the fastest growing mode of transport in several New Zealand cities and towns, and making urban cycling a safer and more attractive transport choice has been established as a key priority for the Transport Agency
- Through our leadership of the Urban Cycleways Programme, with key projects such as the Nelson Street Cycleway/'the LightPath' in Auckland, we play a central role in the planning, delivery and optimisation of investment for cycling across a range of funding sources
- We are committed to supporting the provision of a pedestrian and cycling link across the Waitematā Harbour
- Acknowledging our greater focus on supporting cycling and walking connections, we are concerned about the risks inherent with the SkyPath hybrid PPP proposal as it stands – which we detail later in this paper
- We note that there are alternative delivery options that may better manage the risk for the Transport Agency and Auckland Council
- We propose to assess these options in more detail, alongside ongoing work in response to the current proposal

## We are re-assessing the wider strategic context for a walking and cycling link across the Bridge

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- Together with Auckland Transport and Auckland Council, we are joint partners in the delivery of Auckland's cycling programme.
- The principal design approach for that programme is to develop a connected network that works outwards from the CBD
- The three agencies are working collaboratively to plan, promote and deliver cycling across Auckland (through the implementation of the Auckland Cycle Network)
- This includes the current delivery of several packages of projects (the 'City centre', 'Eastern Connections' and 'Western Connections' programmes) which are all part of the Government's \$333 million Urban Cycleways Programme
- The 'Northern connection' from the CBD is primarily made up by SkyPath and SeaPath - these would enable connections from the CBD to Takapuna
- The SeaPath project is a proposed cycling and walking path linking Esmonde Road with Northcote Point on the lower North Shore (shown as a blue line on the map above)



# Design and timing for SkyPath and SeaPath need to be considered jointly

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- While the SkyPath and SeaPath projects could each be completed independently, completion of the Auckland Cycle Network's northern connection would require both
- In May 2016 we completed public consultation on the SeaPath project
- An indicative business case has been developed for SeaPath, and the project is set to proceed to the detailed business case stage in late 2016
- The current estimated capital cost for SeaPath is approximately \$33 million
- The investment profile for SeaPath is High strategic fit, Medium effectiveness, with a benefit cost ratio of 1.34 (with SkyPath in place)
- It is currently proposed that the SeaPath and SkyPath projects would connect at Northcote Point
- We have publicly committed that SeaPath will be open by the time SkyPath is completed

# We need to ensure that SkyPath is appropriately prioritised alongside other projects

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- Based on the concept designs, the current estimate of costs for completing the cycling corridor from the CBD to Takapuna (ie SkyPath, SeaPath, and Bridge strengthening) is approximately \$100 million (see Attachment D for the preliminary costs, programme and timing) These costs are likely to be revised during the detailed design stage
- These costs would need to be met through both National Land Transport Fund and local share, or from third-party funders and users
- This has implications for funding availability for other cycling projects, both regionally and nationally, over the next 3 year National Land Transport Programme period
- The funding approach for not only SkyPath, but the whole corridor, needs to be carefully considered

## We also need to ensure we have the right funding model for SkyPath

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- The funding model for SkyPath, as currently proposed, is a hybrid PPP model between Auckland Council, the Trust and H R L Morrison & Co's Public Infrastructure Partnership Fund (the PIP Fund)
- Typically PPP's are run as either a 'concession' PPP where end-users pay for the service fully, or an 'availability' PPP where the public-entity pays for the service
- Under the proposed hybrid model for SkyPath Auckland Council would underwrite or 'top-up' actual revenues to a pre-agreed dollar amount, and have a share of upside profits above a specific threshold
- The PIP Fund would finance the design, construction, maintenance and operation of the SkyPath for 25 years, after which it would 'revert' to Council ownership
- The Auckland Council expects the Transport Agency to contribute funding towards the on-Bridge strengthening costs through the National Land Transport Fund
- We would ensure that we complied with our procurement procedures in procuring any Bridge strengthening works – this could potentially, but would not necessarily, result in the PPP consortium undertaking those works

## We also need to ensure we have the right funding model for SkyPath continued

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- The proposed model for funding and operating SkyPath represents a unique situation whereby a third party (Auckland Council) would be responsible for the establishment and implementation of a PPP which utilised one of the State highway network's most significant assets (the Auckland Harbour Bridge)
- While Auckland Council has not entered into any binding commercial/ legal agreements with respect to the proposed PPP, it has negotiated a comprehensive 'key terms' document with the Trust and PIP Fund
- We are not a party to these documents

# We see potential risks around the funding model as currently proposed

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- Auckland Council is proposing that our role as both the asset owner (on behalf of the Crown) and the operator of the State highway would be determined through the development of a memorandum of understanding and licence to occupy the Bridge structure
- The detail of these documents and their status within any binding commercial/legal agreements between Auckland Council and the PIP Fund has yet to be determined
- Our involvement in the delivery and operation of the SkyPath would be limited by the proposed agreements
- This would present challenges for our ability to manage risks - particularly with respect to the long-term operation of the Bridge and the wider transport system

# The potential loading of the Auckland Harbour Bridge is a key risk

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- The Bridge is of national importance and a critical transport link, with approximately 165,000 vehicles crossing it daily
- It has shaped Auckland's visual landscape and is a lifeline for people, goods and services connecting the narrow isthmus and north and south
- In 2010 a significant bridge strengthening project was undertaken which focussed on strengthening the Bridge clip-ons to their maximum global capacity, enabling 50MAX vehicles to operate over the Bridge without any restrictions
- Since the SkyPath project was first promoted, we have focussed on its structural implications for the Bridge

# The potential loading of the Auckland Harbour Bridge is a key risk continued

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- In 2014 the Auckland Harbour Bridge Alliance carried out a structural load assessment of the concept design for the SkyPath to assess the load effects on the Bridge structure
- The preliminary assessment of the load effects of the SkyPath itself, in combination with traffic loading, showed that the standard load combination exceeded the capacity of the Bridge in the critical navigation span
- In May 2016, wind tunnel testing and an assessment of wind load effects were completed which confirmed the feasibility of supporting SkyPath on the Bridge from a structural engineering perspective, although it was noted localised strengthening would be required
- This has been a fundamental hold point for the SkyPath project to date

## A pedestrian control system would not be sufficient to mitigate 'live' load risks

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- In response to these Bridge loading concerns, the Trust has proposed a pedestrian control system to limit the number of people on the Bridge at any one time
- This would require a departure from standards for a reduction in pedestrian loading
- However, a pedestrian control system would be difficult to manage practically:
  - If peak traffic load grew, the maximum number of people permitted on the SkyPath would need to be reduced
  - We anticipate that the maximum number of SkyPath users might need to be halved in the next 15 years in response to estimated growth in traffic loads
  - If traffic load grew at a higher rate than expected, it might be necessary to further restrict SkyPath users or prevent heavy vehicles from using the south-bound extension (see the graph included as Attachment C)



## In summary, SkyPath is feasible but we would need to tightly control its construction and operations...

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- In July 2016 our structural engineers considered and endorsed a departure from the Transport Agency Bridge Manual for SkyPath subject to the live load being managed 'to ensure that the actual design load is never exceeded'
- While the SkyPath structure is feasible, there are risks to the Bridge structure and Bridge users that would need to be managed through construction
- With respect to the SkyPath's operation, any pedestrian control system would need to be carefully managed to ensure the Bridge is not impacted from an operational or safety perspective
- A number of other operational and safety issues would also need to be resolved, these include:
  - emergency evacuation procedures
  - fire/ life systems
  - maintenance
  - user safety - including 24/7 monitoring

# We think it's timely to consider alternative options

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- We have begun work to identify alternative funding, design and delivery options for a walking/cycling connection across the Bridge to address the risks with the currently-proposed hybrid PPP model – and to better manage the allocation of risk for both the Transport Agency and Auckland Council
- Two alternative approaches are:
  - a) Joint delivery between the Transport Agency and Auckland Council**

Under this option we would partner with Auckland Council with respect to the design, construction, operation and funding of the SkyPath and any subsequent decisions or agreements entered into
  - b) The Transport Agency taking responsibility for the delivery of the SkyPath**

Under this option we would take responsibility for the detailed design, construction operation and funding of the SkyPath as part of the larger cycle route between Takapuna and the CBD

# We propose to engage with Auckland Council and Auckland Transport on alternative options

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- We need to canvass this revised approach with Auckland Council soon, so that we can reassess the need for, and timing of, decisions on:
  - any memorandum of understanding and licence to occupy the Bridge (to be agreed by the Transport Agency and Auckland Council)
  - Auckland Council's entry into a binding legal agreement with the PIP Fund
- We will need to remain engaged in the Environment Court appeal on the current design proposal for the SkyPath (scheduled to be heard in October or November)
- We will also continue to progress testing of loading, strengthening, and other operational considerations for a walking/cycling link across the Bridge

# We will need to manage risks around this change in approach

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## There are reputational and relationship risks ...

- Given Auckland Council's recent announcement that the SkyPath project will be funded through a hybrid PPP (subject to our granting of a licence to occupy the Bridge), we would need to manage external communications and our relationship with the Council in relation to our proposal to reassess this approach
- However, we think that the Council will be open to working on alternative approaches that would bring the Transport Agency closer to managing (and potentially co-funding) the design, build and operation of a walking/cycling link across the Harbour

# We will need to manage risks around this change in approach continued

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## ... and financial risks

- A revised approach might see us taking on increased costs
- These costs are as yet unknown, and have not yet been programmed or forecast
- We would need to consider the impact on the National Land Transport Fund and National Land Transport Programme when a preferred option has been developed
- There is also a risk that current funding offers (from the Trust, the PIP Fund or the Council) would be withdrawn, or might not be available, under a revised funding model and that we would be expected to 'pick up the tab'
- We would need to manage expectations with our partners and the community around this

# We will report back to you on our discussion with the Council, and detailed next steps

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- If you agree to the revised approach proposed in this paper, we will engage with the Auckland Council and report back to you on how this is received
- We would then provide a detailed proposal on how we can proceed
- We would also update the Minister on this revised approach

## Attachments

There are four attachments:

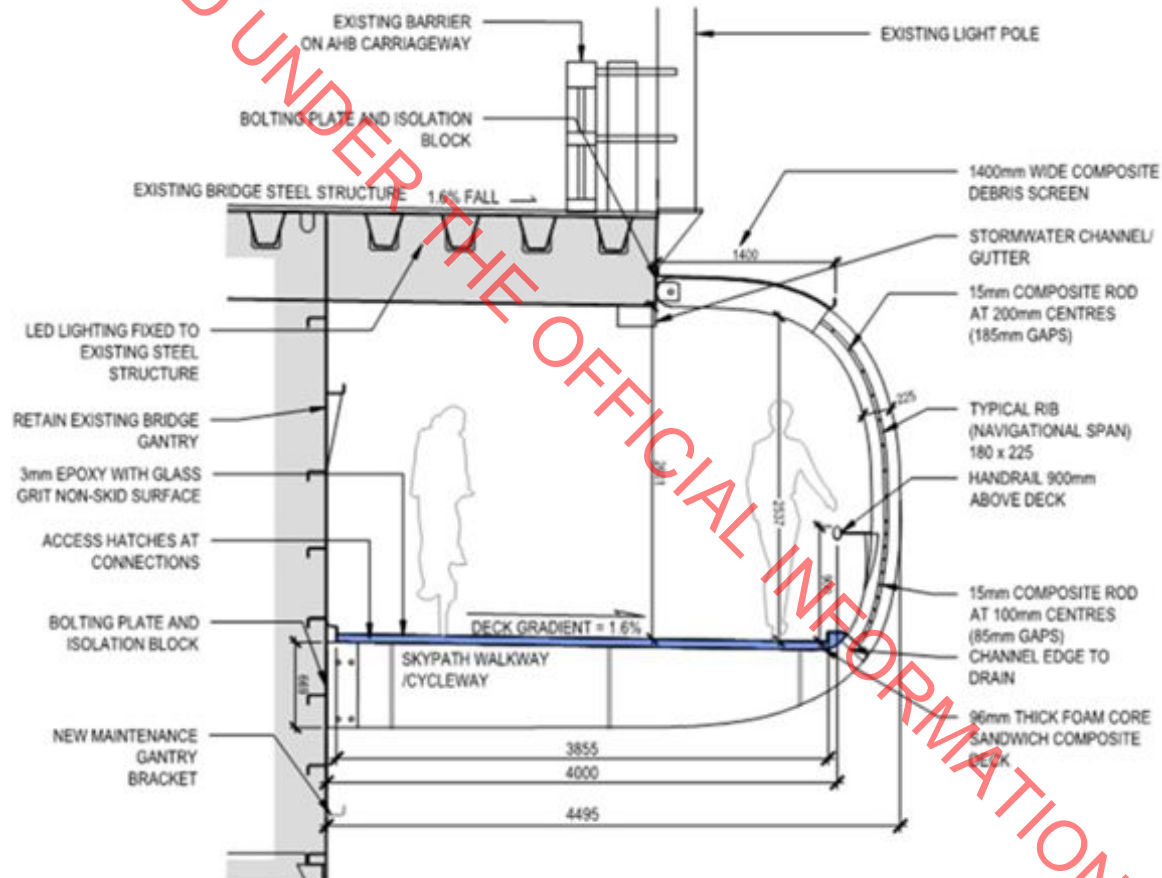
- Attachment A - SkyPath concept drawing
- Attachment B - SkyPath cross-section
- Attachment C - SkyPath projected user limitations
- Attachment D – Estimated project costs and timing

# Attachment A: SkyPath Concept Drawing

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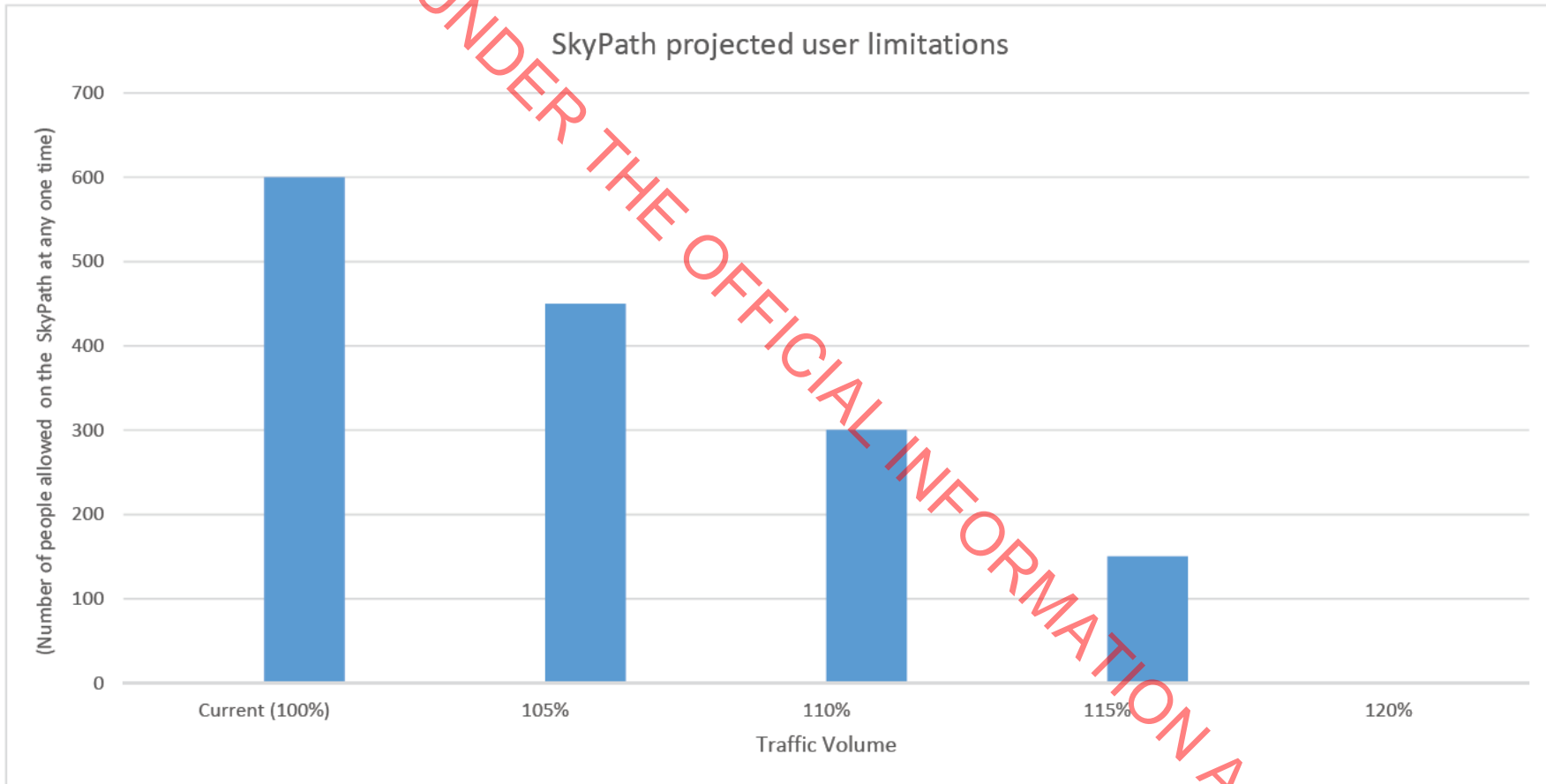


# Attachment B: SkyPath cross-section





# Attachment C: SkyPath project user limitations



# Attachment D: Estimated Project Costs & Timing

## Costs

SkyPath construction estimate - \$40-52M (source: AHB Pathway Trust)

AHB strengthening costs (to accommodate SkyPath) - \$10-14M (source: AHBA 2011 Structural Assessment )

SeaPath expected estimate (preferred route) - \$33M (source: Draft SeaPath Indicative Business Case)

## Programme

### **SeaPath – estimated programme**

SeaPath Detailed Business Case – 12 months (Sept 16 – Sept 17)

Pre-implementation – 12 months (Oct 17 – Sept 18)

Construction – 12 months (Oct 18 – Sept 19)

### **SkyPath – estimated programme**

Detailed design – 6 months following settlement of Environment Court appeal (Jan 17 – Jun 17)

Assessment of effects of SkyPath on Auckland Harbour Bridge (AHB) – 6 months (Jul 17 – Dec 17)

Design of AHB strengthening works, technical review and licence to occupy – 6 months (Jan 18 – Jun 18)

AHB strengthening first stage – 12 months (Jul 18 – Jun 19)

SkyPath construction – 12 months (Oct 18 – Sept 19)