

8.15. Sydney Harbour Bridge Cycling Infrastructure

AUTHOR: Nigel Turner, Senior Strategic Transport Planner

ENDORSED BY: Joseph Hill, Director City Strategy

ATTACHMENTS: Nil

PURPOSE:

This report analyses the two options for a *Bradfield Park Bike Ramp* currently being exhibited by Transport for New South Wales for community comment. It finds compelling reasons to reject these options in favour of the development of an *Eastern Harbour City: Sydney Harbour Bridge Access* project that addresses current cycling infrastructure design guidance and accommodates future cycling growth without impacting open space and heritage outcomes in North Sydney.

EXECUTIVE SUMMARY:

Since 1932, the Sydney Harbour Bridge (SHB) has been the most important piece of transport infrastructure in Sydney. As well as performing a critical role in Sydney's arterial road network, it also accommodates an important walking link and is the main public transport link between the North Shore and the Sydney CBD. In addition, it is also the single most important link in TfNSW's Principal Bicycle Network.

Since 1962, cycling on SHB has been accommodated on what was originally designed as the SHB's western footpath. This footpath was never designed to be a "cycleway" and is compromised both by its width and by the 55 steps at its northern end. These steps were identified as a key barrier to the uptake of cycling on the north shore in North Sydney Council's *Integrated Cycling Strategy*.

TfNSW has identified two options for a *Bradfield Park Bike Ramp* to provide step-free access to the SHB. These are currently being exhibited for comment until 27 June, 2021.

While Council is fully supportive of the overarching objective of providing step-free access for cyclists across SHB, the issues listed below as raised by Council in 2017, have not been addressed during further development of TfNSW's *Sydney Harbour Bridge Cycleway Access Program (Bradfield Park Bike Ramps)*.

1. Open Space

Large parts of Bradfield Park are compromised by the introduction of either of the proposed ramp options in an LGA that has very low levels of per capita provision of public open space.

2. Heritage Impacts

Proposed ramps obscure views of heritage listed bridge abutments, Milsons Point Station's western entrance and/or views between Bradfield Park and Sydney Harbour.

3. Transport Network Integration

The 2.4m width of the SHB "cycleway" does not address current cycling design guidelines. A 4-5m width is required to adequately address bi-directional flows, provide additional width for overtaking cyclists, and provide adequate (0.5m) separations from adjoining high fences. In addition, limited consideration has been given to how proposed facilities will address missing links and connect to the surrounding bike network, particularly in and around the North Sydney CBD.

As part of Council's negotiations with TfNSW's *North Sydney Integrated Transport Program* and *Western Harbour Tunnel* project teams, key missing links in North Sydney's cycling network have been identified for inclusion and delivery as part of these State Significant Infrastructure projects. Combined with Council's current Route 2 and Ridge Street cycling facilities, these new cycle links provide a framework for the *Western Harbour Tunnel: Active Transport Network Review* required by the Department of Planning as part of the *Western Harbour Tunnel* planning approval (conditions E195 and E196).

Given the opportunity to meaningfully integrate the Sydney Harbour Bridge Cycling Access project with the Western Harbour Tunnel project and to capitalise on the traffic reducing benefits of the *Western Harbour Tunnel*, it is unclear why the pre-conceived *Bradfield Park Bike Ramp* proposals are still being treated as stand-alone projects instead of as a key deliverable of a more holistic *Eastern Harbour City: Sydney Harbour Bridge Access* project.

FINANCIAL IMPLICATIONS:

Cycling provides significant cost savings for individuals, both in terms of up-front transport savings and longer-term health savings. It increases local spending and stimulates business activity. Because bikes are lighter and, therefore, cause less damage to infrastructure, more cycling also results in reduced infrastructure maintenance costs.

RECOMMENDATION:

1.THAT Council make a submission to Transport for New South Wales that the currently exhibited *Sydney Harbour Bridge Cycling Access* options be rejected for the reasons contained within this report and previously outlined by Council at its meeting on 24 May 2021.

2.THAT Council engages with TfNSW to recommend inception of an *Eastern Harbour City: Sydney Harbour Bridge Access* project.

3.THAT Council requests TfNSW to establish a project control group (PCG) to provide oversight of the *Eastern Harbour City: Sydney Harbour Bridge Access* and that this PCG include representatives of both North Sydney and City of Sydney Councils.

4.THAT an early output of the *Eastern Harbour City: Sydney Harbour Bridge Access* project be the delivery of a *Sydney Harbour Bridge Cycling Infrastructure Design Competition*.

5.THAT the proposed design competition uses the design objectives detailed in section 3.3. as the basis for the design competition brief.

6.THAT the top 3 submissions to the *Sydney Harbour Bridge Cycling Infrastructure Design Competition* be developed as options for consideration as part of the development of the *Western Harbour Tunnel Active Transport Network Review* required under condition E195 of the *Western Harbour Tunnel* planning approval.

LINK TO COMMUNITY STRATEGIC PLAN

The relationship with the Community Strategic Plan is as follows:

1. Our Living Environment

- 1.1 Protected and enhanced natural environment and biodiversity
- 1.2 North Sydney is sustainable and resilient
- 1.3 Quality urban greenspaces
- 1.4 Public open space and recreation facilities and services meet community needs

2. Our Built Infrastructure

- 2.1 Infrastructure and assets meet community needs
- 2.2 Vibrant centres, public domain, villages and streetscapes
- 2.3 Sustainable transport is encouraged

3. Our Future Planning

- 3.3 North Sydney is smart and innovative
- 3.4 North Sydney is distinctive with a sense of place and quality design

4. Our Social Vitality

- 4.1 North Sydney is connected, inclusive, healthy and safe
- 4.2 North Sydney is creative and home to popular events
- 4.4 North Sydney's history is preserved and recognised

5. Our Civic Leadership

- 5.1 Council leads the strategic direction of North Sydney

BACKGROUND

While cyclists were originally allowed to cycle on the Sydney Harbour Bridge (SHB) bridge deck, increasing traffic demand and safety concerns resulted in relegation of cyclists to the western SHB footpath in 1962. This footpath was never designed to be a "cycleway" and, at approximately 2.4m wide, it does not meet current AustRoads, TfNSW or Bicycle NSW infrastructure design guidelines.

In 2017, the northern steps to the SHB "cycleway" were identified as a key barrier to the uptake of cycling on the north shore in Council's *Integrated Cycling Strategy*. TfNSW presented Council with a number of *Bradfield Park Bike Ramp* options, designed to provide stair-free access to the existing SHB "cycleway", also in 2017.

In response to these proposals, Council provided feedback to TfNSW, highlighting that the provision of stair-free cycling access across the SHB must not come at the expense of open space and heritage outcomes in North Sydney.

Council also noted that the current SHB “cycleway” is substandard in width, allowing no scope to increase cycling participation as per TfNSW’s *Future Transport 2056* aspirations, and that the proposed ramps do not help to overcome significant missing links in the North Sydney CBD cycling network. It is worth noting that the *Integrated Cycling Strategy* lists “Implement priority routes to address key gaps in the network” more highly than advocating for stair-free access to SHB in its list of deliverables.

The *North Sydney CBD Transport Masterplan* identified a number of missing links in the North Sydney cycling network for inclusion and delivery as part of TfNSW’s *North Sydney Integrated Transport Program* and *Western Harbour Tunnel* projects (Figure 1). These missing links include:

- separated cycle lanes on the Pacific Highway, between the Middlemiss Street underpass and West Street,
- a pedestrian and cyclist shared path on the High Street overpass,
- a separated cycle lane on the Mount Street overpass, and
- a shared path on Alfred Street North (and the Kirribilli slip-lane) between High Street and Falcon Street.

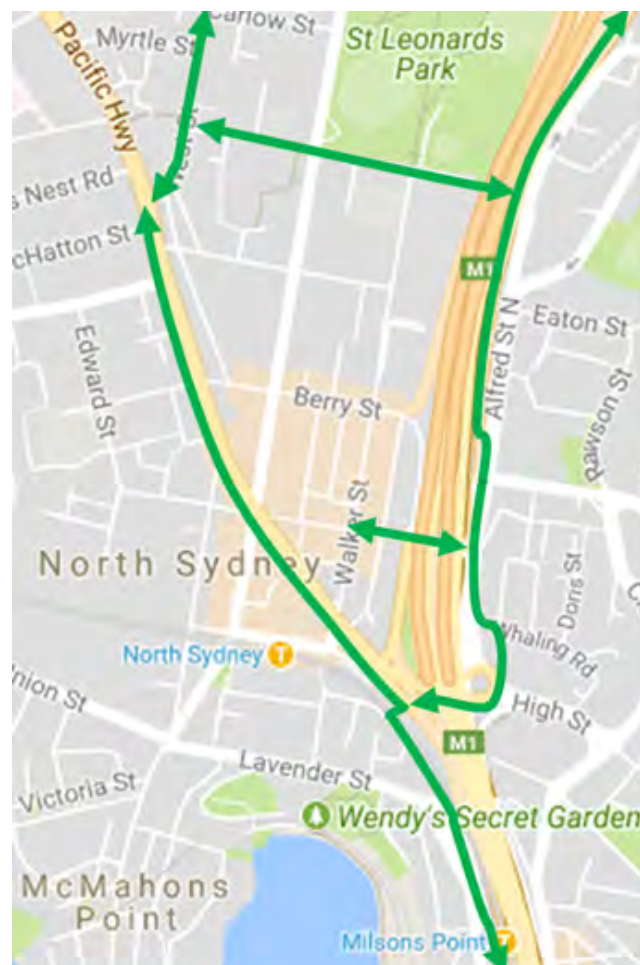


Figure 1: Missing links for inclusion in the Western Harbour Tunnel: Active Transport Network Review (E195)

Combined with Council's current Route 2 and Ridge Street cycling infrastructure, these new cycle links should form the basis for the Western Harbour Tunnel: Active Transport Network Review required by the Department of Planning as part of the Western Harbour Tunnel planning approval (conditions E195 and E195). The Western Harbour Tunnel planning approval also particularly notes the need to consider an active transport link on the Cahill Freeway, between High Street and Kirribilli as part of this review (condition E199).

Bradfield Park Bike Ramps have been discussed at a number of Council meetings and a list of recent Council resolutions relating to this project is provided below:

At Council's meeting of the 26 April 2021, Council resolved:

1.THAT Council strenuously objects to any Sydney Harbour Bridge cycle ramp proposal that:

- a) has a deleterious impact on our precious parkland*
- b) detracts from the heritage significance of the Sydney Harbour Bridge and its curtilage*
- c) reduces pedestrian safety*
- d) removes parking from Alfred Street South.*

2.THAT Council request that the current TfNSW confidential proposals be made available to the North Sydney community and public consultation be initiated.

3.THAT Council writes to the Premier, Gladys Berejiklian, the Minister for Planning and Public Places, Robert Stokes and Minister for Transport and Roads, Andrew Constance, to request that relocating cyclists onto the main deck of the Sydney Harbour Bridge be seriously considered as a strategic imperative for providing for cycling as a mode of transport in the future.

4. THAT the submission urge the Minister to ensure that community consultation is undertaken prior to any decision being made.

At Council's meeting of the 24 May 2021, Council resolved:

1.THAT Council acknowledge the motion from MLK.

2.THAT Council strongly object to both the linear and spiral ramp options in accordance with its resolution of 26 April 2021.

3.THAT Council support the alternative of providing lift access to cyclists as a supplementary option to the existing stairs/ramp.

At an extraordinary meeting of Council on the 7 June, 2021, Council resolved:

1.THAT Council write to Transport for NSW, the Minister for Transport and Roads, and the Minister for Planning and Public Spaces:

- calling for the current community engagement program on the two ramp options to cease immediately*

- *calling for a short-term solution to cycling access to the Harbour Bridge that doesn't reduce open space or impact the heritage curtilage of the Harbour Bridge*
 - *calling for a long-term, world-class solution to be developed that re-thinks cycling access rather than adding Band aid solutions to piecemeal cycling routes*
2. *THAT Council develop a community information campaign to advise the community of the proposed ramps and their impact on open space, to a maximum cost of \$15,000, funded from communications and promotions budgets.*
3. *THAT Council seek the support of residents, community groups and local businesses to support the campaign.*

It is worth noting that, although direct consultation regarding this project is being delivered by TfNSW, Council has committed \$15,000 to raise awareness and oppose the delivery of TfNSW's current *Bradfield Park Bike Ramp* proposals.

CONSULTATION REQUIREMENTS

Community engagement will be undertaken in accordance with Council's Community Engagement Protocol.

DETAIL

On 22 December, 2017 Council wrote to TfNSW's Greater Sydney Program Office to express its concerns regarding their Sydney Harbour Bridge: Northern Cycle Ramp (Bradfield Park Bike Ramp) project. The 3 key issues raised in this correspondence were: loss of public open space, heritage impact and transport network integration.

At the conclusion of the 2017 community consultation process TfNSW withdrew the cycle ramp proposal for further consideration of an appropriate design. In the intervening period there has been little consultation with the Council about the redesign options of this project until December 2020 when the Council was advised that TfNSW would be preparing new design options for the proposed cycle ramp.

On 3 June 2021 the NSW Government initiated a public exhibition of two options for a cycle ramp at the northern end of the *Sydney Harbour Bridge Cycleway Access Program*. It states that "a new ramp would improve the safety and capacity of the cycleway, enhance connections to the wider bike network and make bike riding convenient and attractive for more people". The exhibition closes on 27 June 2021.

The exhibition material does not address Council's previously expressed concerns regarding the Bradfield Park Bike Ramp options. These are outlined below.

1. Open Space

Bradfield Park is a highly significant corridor of open space that provides a physical and visual retreat for the North Sydney community and visitors to the area, particularly in the context of dense residential and commercial development in the surrounding area. Bradfield Park North (north of Burton street) is the most vulnerable part of Bradfield Park given that it is constrained by the Bridge wall and South Alfred Street.

Either of the proposed ramp options will significantly impact on the availability, quality and amenity of space in this important section of the park. In particular, it will:

- reduce the amount of usable open space,
- damage the visual amenity of the park,
- interrupt significant views available north south through the park and on to the Bridge and Harbour,
- impact solar access within the park,
- potentially require the loss of a number of significant mature trees,
- impact landscaped areas beneath the ramp through sun shadow/rain shadow effect,
- disrupt the interpretive scheme for the subsurface archaeology that was developed in cooperation with the NSWGO in 2003, and
- alienate sections of the park, creating areas of low amenity and unusable space, particularly near to the ramp landing point.

Council is further concerned about the cumulative impact of the loss of open space along the Warringah Freeway corridor due to major transport projects currently being developed by the NSW State Government. At the same time as approving plans that would add 20,000 new workers and 19,500 new residents to North Sydney by 2036, the Government has annexed more than 80,000 sqm of open space for infrastructure works and plans to take more than 15,000 sqm of that parkland permanently as a result of various NSW Government infrastructure projects.



Figure 2: Artists Impression of the scale of open space lost by the North Sydney community at Bradfield Park

2. Heritage

Council is concerned that both the current cycle ramp designs will have unreasonable impact on the heritage value of the SHB and related items (Milsons Point Station Entry and Bradfield Park views) and emphasise that provision of cycle access to the Bridge must ensure that the heritage value of significant items is not diminished.



Figure 3: National Heritage List, SHB heritage footprint

The Sydney Harbour Bridge, its approaches, and views to and from the Bridge are listed by a number of agencies in recognition of their international iconic status. The proposed design will impact upon elements of the Bridge defined as having 'exceptional' and 'high' heritage significance including the Bridge approaches and arches as described in the RMS Sydney Harbour Bridge Conservation Management Plan 2007. TfNSW's ramp proposals are in conflict with a number of policies in the CMP.



Figure 4: Artists Impression of the heritage impacts of a spiral ramp option on SHB

Bradfield Park has state significant historical, aesthetic and social value. Both ramp options impact on all aspects of this value. The park forms part of the curtilage to the Bridge as defined by the National Heritage Register and is, therefore, a critical contributor to the Bridge significance. Views of the Bridge and approaches from Bradfield Park are an essential component in conserving the cultural value of the Bridge and should remain unobstructed. In addition, there are significant Victorian-era archaeological sites within the park, that would be threatened by construction of either of the proposed ramps.

The Milsons Point Railway Station includes state listed heritage items such as the Alfred Street entrance, awning, walls and abutments. The proposed longitudinal ramp will obstruct these where it crosses in front of the station and, therefore, impact on the aesthetic and historic values of these items.

3. Transport Network Integration

Alongside the release of Future Transport 2056, TfNSW also adopted How We Plan Transport principles and processes. The following analysis provides a limited assessment of the Bradfield Park Bike Ramp project according to the TfNSW How We Plan Transport principles and process.

3.1 Defining the Problem

3.1.1 Policy Context

In 2016, Council adopted its *Integrated Cycling Strategy*. The main aim of the strategy was to deliver an accessible, safe and connected cycling network. To achieve this, Council committed to (in part):

- Implement priority routes to address key gaps in the network

- Advocate for step free access to the Sydney Harbour Bridge Cycleway

The strategy notes that Council is not the approval body for works on SHB and as such, no specific “solution” for step-free SHB cycling access was proposed as part of the strategy.

In 2018, TfNSW released *Future Transport 2056*, setting a 40-year vision for transport in NSW. Creation of a “30-minute City” and the need for improved cycling infrastructure to support increased cycling uptake are repeated throughout this strategy. That document states:

We are already working with local governments and other stakeholders to develop a connected metropolitan bicycle network, which will provide a safe, connected cycling network and grow the cycling mode share in the Greater Sydney area from 1 per cent in 2016 to 5 per cent in 2056.

It is important to note that the central position of the SHB “cycleway” within TfNSW’s *Principal Bicycling Network* would require that cycling volumes on the SHB would have to increase at a higher rate than at other locations in the network in order to achieve a wider 5% mode share target. Nevertheless, this 5% target gives us some sense of the scale of the problem that a *Sydney Harbour Bridge Cycling Access* project should be designed to address.

3.1.2 Cycling Mode Share

At 0.7%, commuter cycling in Sydney is as low as it has ever been. Compared to the rest of the world, and even to capital cities such as Canberra and Darwin, Sydney lags significantly behind. The key reason for declining participation is the low levels of safety and amenity provided by Sydney’s inconsistent cycling network, with its sub-standard links that frequently “drop-out” altogether.

In order to achieve its stated aim of increasing cycling mode share from 1% to 5%, TfNSW will have to invest heavily in a connected cycling network that both raises the profile of cycling in Sydney and provides high levels of safety and amenity for cyclists. Nowhere is this more important than on and around the SHB. Continuing to relegate cyclists to a sub-standard “cycleway” that does not meet current cycling infrastructure guidelines or provide opportunity for increased participation will mean that, alongside South Australia, NSW will remain at the bottom of Australia’s cycling participation curve and even lower compared to most other developed nations.

In simplistic terms, even if population-led travel demand were to remain static to 2056 (see 3.1.3), in order to achieve their stated mode share targets, TfNSW would have to increase SHB cycling capacity to allow for 5 times as many cyclists as currently cross the bridge (currently 2,000 cyclists per day according to TfNSW). If, instead, population-led travel demand grows by approximately 30%, as per 2018’s Common

Planning Assumptions, SHB capacity would have to be increased to accommodate 6.5 times as many cyclists as it currently does.

3.1.3 Covid-19

In 2021, Future Transport 2056 was updated, ostensibly to address events that have had a substantial and ongoing impact on travel demand, mode share and resulting transport infrastructure demand, including the 2020 bushfires and Covid-19. Despite broad commentary regarding the population-level impacts of Covid-19 and the massive impact that increased remote working is having on urban travel demand, the 2021 update continued to be based on Common Planning Assumptions set in 2018. This means that projects identified in the 2018 version of Future Transport 2056, which may or may not be required under revised (post-Covid) travel demand assumptions, continue to be supported in the 2021 update.

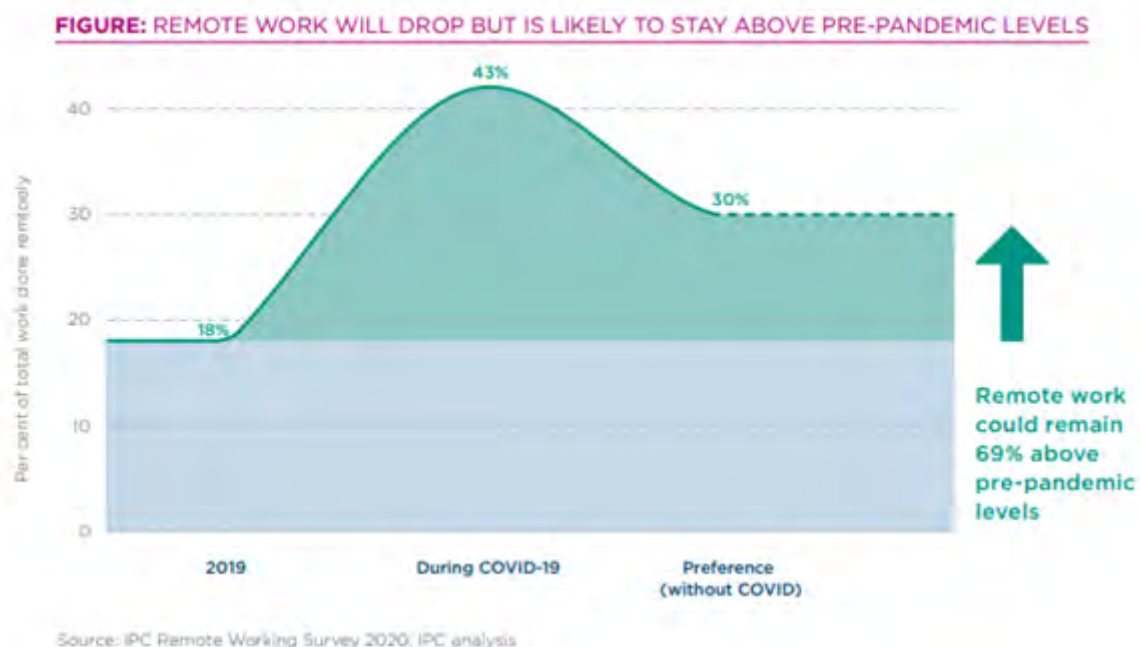


Figure 5: *Remote Working Insights Report* (2020): Innovation & Productivity Council, NSW Treasury

While it would be worth reconsidering the *Sydney Harbour Bridge Cycling Access* project in the context of revised post-Covid population growth, remote working and travel demand assumptions, we would suggest that this should be done as part of a wider re-assessment of TfNSW’s transport infrastructure program as demand for major projects such as *Western Harbour Tunnel and Beaches Link* will be equally if not more significantly impacted by these changes.

Irrespective of total travel demand, the desired mode shift targets identified in Future Transport 2056 (i.e. 5% mode share by 2056) will not be achieved if cycling infrastructure does not offer a comparable or better safety and amenity offering than private vehicle trips.

3.1.4 Engineering Analysis

Geometric requirements for cycling infrastructure are detailed in various engineering design codes: AustRoads' *Guide to Road Design: Paths for Walking and Cycling*, TfNSW's *Cycle Design Toolbox*, Bicycle NSW's *Summary of Design Principles for Good Bicycle Infrastructure*.

These design guides generally agree that the absolute minimum width of a bi-directional bike path that is constrained by vertical obstructions (SHB security fencing) is at least **2.9m**. This width would provide limited opportunity for overtaking where there are more consistent bi-directional cycling volumes, as would be expected once cycling mode share hits 5%.

Table 5.4: Separated two-way path widths

	Suggested path width (m)		
	Bicycle path	Pedestrian path	Total
Desirable minimum width	2.5	2.0	4.5

Figure 6: Austroads Guide to Road Design Part 6a: Paths for Walking and Cycling

The preferred width for this type of facility, as detailed in TfNSW's own *Cycle Design Toolbox* (excerpt below), would be more in the order of **4-5m**.

*An ideal two-way bicycle path on a priority regional route should maintain a preferred width of **4.0m** (plus an additional **1m** for clearances to chain link fences). This allows for safe overtaking, caters for future growth in ridership, and accommodates riders of all ages and abilities.*

Analysis of the current SHB "cycleway" using current engineering design guidance demonstrates that the current **2.4m** wide SHB "cycling facility" does not address minimum design requirements for the meanest of bi-directional cycle paths, let alone the most important piece of cycling infrastructure in Sydney. It is imperative, therefore, that more visionary options are identified, assessed and progressed that do deliver the **4-5m** wide step-free Sydney Harbour Bridge cycling access that Sydney deserves.

In addition to this first-principles engineering analysis, it is also worth noting that while TfNSW's *Bradfield Park Bike Ramp* analysis suggests that the "cycleway needs to stay on the western side of the bridge to connect to the Sydney CBD bike network", this is not substantiated by engineering design analysis. Both City of Sydney and North Sydney Council have suggested options that include changes to surrounding cycle networks as well as the "cycleway" itself.

3.2 Sydney's Transport Vision

As previously noted, Future Transport 2056 is TfNSW's guiding document for the development of NSW and Sydney transport networks.

Living in a '30-minute city' will mean residents can access jobs and services in their nearest metropolitan or strategic centre within 30 minutes by public transport, walking and/or cycling, seven days a week. This will give people better access to jobs, education and essential services and give people more time back in their days.

...a connected metropolitan bicycle network ... will provide a safe, connected cycling network and grow the cycling mode share in the Greater Sydney area from 1 per cent in 2016 to 5 per cent in 2056.

3.3 Options Identification

Options identified by the Bradfield Park Cycle Ramp project are limited in both their geographic and technological scope, suggesting a very limited scoping exercise given the transport problem at hand. Given the opportunity to meaningfully integrate the Sydney Harbour Bridge Cycling Access project with the Western Harbour Tunnel project and to capitalise on any traffic reducing benefits associated with this project, it is unclear why the *Sydney Harbour Bridge Cycling Access* proposals are being treated as stand-alone projects instead of as a key deliverable of a more holistic *Eastern Harbour City: Sydney Harbour Bridge Access* project.

In general, options for step-free access across SHB should:

- address current cycling infrastructure design guidance;
- provide opportunity for cycling growth (including reduced tidal flow and increased overtaking on SHB);
- limit impacts on SHB heritage;
- result in no loss of public open space in North Sydney; and
- help to overcome critical missing links in Sydney's Principal Bicycle Network.

Potential options for addressing these brief requirements could include:

- Below: A new 4m cycling link "slung" below SHB, connecting to ramp infrastructure just south of Fitzroy Street in North Sydney and at Cumberland Street south of the Dawes Point Reserve, might address the majority of the brief requirements outlined above.
- Above: A new 4m cycling link suspended over SHB traffic lanes or the train line might address some of the brief requirements outlined above.
- Besides: Widening the existing "cycling facility" to provide a 4-5m cycling link as well as providing the northern cycle ramp as proposed would still

impact SHB heritage and North Sydney open space outcomes and is therefore, not supported. Alternative northern ramp or lift options might be more acceptable in combination with current SHB “cycleway” widening if they can be shown to provide capacity for target cycling mode share in the longer term.

- On: Reallocation of carriageway space on SHB (traffic lane 7) to a new 4m cycle path on the bridge deck, connecting to High Street via the Cahill Freeway and crossing under SHB to connect to existing cycling facilities at Fort Street, might address the majority of the brief requirements outlined above. City of Sydney has also identified an option for re-allocating traffic lanes 1 and 2 to provide uni-directional cycling facilities on either side of the rail line that connect into Fort Street and Lavender Road.

A *Sydney Harbour Bridge Cycling Infrastructure Design Competition* would help to provide additional design detail, including deliverability, of some of the above project options and/or identify other design options that could then be considered as part of the state government’s *Western Harbour Tunnel Active Transport Network Review*.

3.4 Assessing Options against Vision-based Criteria

As highlighted above, there are a number of project options that have been overlooked in pursuit of the pre-conceived Bradfield Park Bike Ramp projects. These options, and their ability to address the key criteria outlined in this report, should be reviewed as part of the development of a more holistic Eastern Harbour City: Sydney Harbour Bridge Access project.

The Eastern Harbour City: Sydney Harbour Bridge Access project should provide a mechanism for integrating Sydney Harbour Bridge Cycleway Access Program, Western Harbour Tunnel and North Sydney Integrated Transport Program processes and project deliverables. It should also demonstrate how the traffic reducing benefits of the Western Harbour Tunnel project will be leveraged to deliver improved walking, cycling and public transport access within the Eastern Harbour City across the Sydney Harbour Bridge.

4. Conclusion

It is clear from the preceding analysis that the current *Bradfield Park Bike Ramp* proposals are not fit for purpose.

Alternative options for providing step-free cycling access across SHB should be investigated as part of a wider Eastern Harbour City: Sydney Harbour Bridge Access project that addresses the following project objectives as well as capitalising upon the traffic reducing benefits of the *Western Harbour Tunnel* project to deliver better walking cycling and public transport facilities on the Sydney Harbour Bridge:

- address current cycling infrastructure design guidance;
- provide opportunity for cycling growth (including reduced tidal flow and overtaking on SHB);
- limit impacts on SHB heritage;
- result in no loss of public open space in North Sydney; and
- help to overcome critical missing links in Sydney's Principal Bicycle Network could be achieved under the following broad project options:

A Sydney Harbour Bridge Cycling Infrastructure Design Competition that considers additional design detail for alternative, step-free SHB cycling access options, including project deliverability, should be pursued, with winners considered as part of the state government's *Western Harbour Tunnel Active Transport Network Review*.

It is recommended that the *Eastern Harbour City: Sydney Harbour Bridge Access* project be overseen by a project control group that includes representatives of both North Sydney and City of Sydney Councils as well as TfNSW's *Sydney Harbour Bridge Cycleway Access Program*, *Western Harbour Tunnel* and *North Sydney Integrated Transport Program* project teams.