Bridge Road Cycleway

Review of Environmental Factors

Transport for NSW | March 2022

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Review of Environmental Factors

Transport for NSW | December 2021

Prepared by AECOM and Transport for NSW

Document controls

Approval and authorisation

Title	Bridge Road, Glebe cycleway Review of Environmental Factors
Accepted on behalf of Transport for NSW by:	Leon Paap Project Manager
Signed:	
Dated:	31/03/22

Executive summary

The Proposal

Transport for NSW proposes to make the existing pop-up cycleway on Bridge Road/Pyrmont Bridge Road a permanent cycleway.

Key features of the permanent cycleway are:

- 1.4 metre – 1.5 metre wide, one-way, separated cycleways on either side of Pyrmont Bridge Road and Bridge Road along most of the Proposal corridor, except where road space does not allow. In areas without sufficient road space for a separated cycleway there is:
  - shared motorist and cyclist zones, allocated by painted bicycle symbols in the centre of the road lane
  - a shared pedestrian and cyclist path about 20 metres long, used for the east-bound cycleway lane under the railway bridge near Railway Street
- Permanent allocation of road space to cycleway facilities, some of which was previously allocated to 46 parking spaces outside of clearway hours of operation
- Retention of a raised pedestrian crossing over the cycleway at bus stop number 205014 ‘Pyrmont Bridge Road at Lyons Road’ (western side) to maintain priority to pedestrians boarding and alighting buses
- Replacement of the flexible barrier (Klemmfix) which separates motorists and bike riders with another low profile barrier type to improve the visual amenity of the cycleway
- Ancillary features:
  - Maintenance of current stormwater drainage with bicycle friendly grates
  - Maintenance of existing bicycle signage along the cycleway on existing power poles and posts
  - Maintenance of existing line marking and green cycleway painting areas along the cycleway.

The Proposal would utilise the existing cycleway along Bridge Road and Pyrmont Bridge Road and as such, the construction work associated with the Proposal is limited.

The Proposal would conduct modification to improve the cycleway such as replace the existing Klemmfix barriers with a different low profile barrier structure, the details of which would be confirmed during design. A construction methodology for the any proposed works such as to replacement of the current Klemmfix barrier would include:

- A temporary lane closure and temporary traffic flow management of a contraflow lane
- Out of hours removal of the existing barrier paddles and associated fixtures, delivery and installation of new barriers.

Need for the Proposal

The cycleway was initially installed and intended as a pop-up temporary cycleway to facilitate safe cycling to support travel during the COVID-19 recovery. Temporary cycleways were installed where it was identified as a strategic priority. This included locations where cycleways were discontinuous, where there was demand for cycling infrastructure, where there was a recognised route to key employment areas or where there was a recognised hot spot of congestion requiring more transport choices including access to recreation.

The establishment of the cycleway as a permanent form of infrastructure would continue to provide a means of walking and bike riding to key employment and recreational areas.

Proposal objectives

The objective of the Proposal is to maintain the provision of the existing cycleway, so as to:

- Provide a safe and efficient cycleway connection between Camperdown and Taylor Street, Glebe that continues to become the route of choice for bike riders, demonstrated by an increase in the number of cycling based trips
- Contribute to building the cycleway network in Inner Sydney.

The location of the existing temporary cycleway was selected and built under the COVID Order 2020 due to:

- Its location on a busy cycling route
- Providing a connection to existing bike riding infrastructure
- Locations where public transport, (in particular buses along Parramatta Road) is likely to become overcrowded
- Enabling access to schools, workplaces, recreational areas including parks and other services.

The development criteria for the Proposal are:

- Minimise environmental impacts
- Minimise constructability issues, including traffic disruption
- Maximise bike rider safety under current operational constraints.

Options considered

The options of the Proposal include:

- do-nothing option (removal of existing pop-up cycleway)
- continued and permanent operation of unidirectional and separated cycleways on both sides of Pyrmont Bridge Road and Bridge Road between Lyons Road in Camperdown and Taylor Street in Glebe.
- Implement another form of cycleway including bi-directional or utilising shared paths.

Option 1 would involve the removal of the existing cycleway along Pyrmont Bridge Road near Lyons Road in Camperdown, along Bridge Road through Forest Lodge and Glebe to the intersection with Taylor Street in Glebe.

Option 2 would involve permanently retaining the existing cycleway along Pyrmont Bridge Road near Lyons Road in Camperdown, along Bridge Road through Forest Lodge and Glebe to the intersection with Taylor Street in Glebe. This option may include a change to the type of barrier separating the cycleway from the roadway.

Option 3a would involve the alteration of the existing cycleway along Pyrmont Bridge Road and Bridge Road, and rather include a bi-directional cycleway along one side of the roadway.

Option 3b would involve the removal of the existing cycleway along Pyrmont Bridge Road and Bridge Road, and rather include utilising the footpath as a shared pathway for bike riders and pedestrians.

The Options were assessed against the Proposal objectives and development criteria. Option 2 was selected as it best meets the objectives of the Proposal, the relevant strategic plans and the development criteria by minimising environmental impacts.

Statutory and planning framework

The Proposal is for a cycleway on Bridge Road/Pyrmont Bridge Road and is to be carried by Transport for NSW and can therefore be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979*. Development consent from council is not required.

Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent. As the Proposal is for a road and road infrastructure facilities and is to be carried out by Transport for NSW, it can be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979*. Development consent from council is not required.

Under Section 10.17 of the *Environmental Planning and Assessment Act 1979,* the Minister for Planning and Public Spaces, Honourable Rob Stokes, created the *Environmental Planning and Assessment (COVID-19 Development – Temporary Cycleways) Order 2020* to permit the development of pop-up cycleways. The existing Bridge Road pop-up cycleway was implemented under this Order, beginning construction on the 29 July 2020, and opening to the public on the 21 September 2020.

Community and stakeholder engagement and consultation

Transport for NSW recognises that due to the rapid installation of the cycleway to protect public health we did not consult extensively in 2020 and we have acknowledged this from the outset. However, we also committed to community consultation before a decision is taken about whether to install a cycleway permanently on Bridge Road. Transport for NSW did so through the March 2021 consultation and the careful consideration of feedback. The Bridge Road Cycleway Consultation Report is included in Appendix J.

The key purpose of the consultation with the community and key stakeholders of the Proposal was to:

- Seek comment, ideas and suggestions for consideration when making a decision on the final form and location of the cycleway
- Advise the local community and directly affected stakeholders
- Continue to build a database of community members interested in the cycleway, to engage with further in the future
- Provide an opportunity for the community to learn more, ask questions and provide submissions through online surveys

Engagement with key stakeholders and the community has been ongoing since the announcement of the existing cycleway in 2020. Consultation consultation regarding the Proposal was focused specifically on the ‘Have Your Say’ consultation from 15 to 29 March 2021.

During the consultation period for the Proposal, Transport for NSW received 1,083 survey responses which were grouped thematically where possible to show the relative levels of interest or feeling about different matters. Key matters raised during the consultation period included:

- Safety of the Proposal
- Design of the Proposal including the cycleway barriers
- Impacts of the Proposal on road congestion and journey time for all road users
- Parking
- Benefits for bike riders resulting from the Proposal
- Extent of community consultation conducted for the Proposal
- Proposal maintenance including cleaning of the cycleway
- Integration of the Proposal with the existing bike network
- Location of the Proposal
- The Proposals contribution to environment, sustainability and the street scene
- Integration of the Proposal with traffic lights and intersections
- Use of the Proposal

- Operation of bus stops within the Proposal area
- Numerous comments that were out of scope of the Proposal.

Of the 1,083 survey responses received during the consultation period, a wide range of matters were raised with the majority being positive, neutral or mixed. All responses have been taken into account, with ongoing monitoring and evaluation of available data and feedback regarding the Proposal being provided to the Transport for NSW project team.

Various key government agencies and stakeholders have been consulted or informed about the Proposal during 2020 and 2021, including:

- City of Sydney Council - before, during and after ISEPP consultation, on-going
- Local Member for Balmain – during design refinement
- Internal Transport for NSW stakeholders – during strategic development phase and refinement of the design, on-going

Transport for NSW would continue to inform residents and stakeholders of the on-going development of the Proposal and likely timing of construction. This would be carried out using methods such as the distribution of community updates and emails to the stakeholder database. Ongoing steps to provide information would be largely consistent with those taken previously e.g. a written community update would be issued to the same distribution area as that for the consultation in March 2021, with details about how to get in touch by email, telephone or the project webpage to find out more.

Environmental impacts

The main environmental impacts of the Proposal are:

Traffic and transport

Given the limited scope of the Proposal and duration of any proposed construction activities such as the modification of the Klemmfix barriers to the existing cycleway, the traffic and transport impact of the Proposal during construction is likely to be minimal. This would include minimal traffic disruptions including a temporary lane closure and temporary traffic flow management of a contraflow lane. The work would occur over a period of three to four weeks, with no more than five nights of construction works in a row.

Minimal operational traffic and transport impacts are expected from the Proposal. By providing an alternative means of transport, there may be an easing of road congestion in the area.

Visual impacts

Given the limited scope of the Proposal and duration of any proposed construction activities such as the modification of the Klemmfix barriers to the existing cycleway, visual impacts are limited to the replacement of the Klemmfix barriers with an alternative low profile separator, which is expected to improve the visual amenity of the cycleway. It is likely these works would occur out of standard construction hours for the safety of the workers and to minimise impacts on traffic. The construction work would include plant, machinery and safety fencing to restrict public access and temporary lighting whist the Klemmfix barriers are replaced. This would not form a permanent visual component to the streetscape and would be temporary in nature.

Installation of the existing pop-up cycleway changed the character of the streetscape along Pyrmont Bridge Road/Bridge Road. Previously the existing roadway was dominated by vehicles and parked cars, the streetscape has now been altered presenting increased on-road road furniture including barriers and clearer sightlines as a result of reduced number of parked cars. Minor changes are expected with the modification to the existing cycleway such as the replacement of the Klemmfix barriers with an alternative low profile separator however the overall visual landscape would be consistent with the existing environment.

Noise and vibration

Any construction works to modify the existing cycleway including the replacement of the Klemmfix barriers would generally be undertaken outside of standard construction hours and during night works to minimise the level of disruption to traffic and provide safe working conditions along Bridge Road. Potential impacts to sensitive receivers would be short term as these works would be for a duration of less than two weeks and would move progressively along the corridor.

The Proposal is not anticipated to generate operational noise. It is expected that the local noise environment would decrease as the Proposal encourages community members to shift to active modes of transport from vehicle use.

Justification and conclusion

This REF has assessed the potential, biophysical, social and economic impacts of the preferred option. The retainment of the existing cycleway would result in a minimal amount of environmental impact including the use of plant and equipment out of hours for the removal of the existing barrier paddles and associated fixtures, delivery and installation of new barriers over about a period of three to four weeks. Appropriate safeguards have been proposed as part of this REF to minimise identified environmental impacts.
The Proposal would continue to enable safe bike riding in the area and continue to enable safe accessibility to schools, workplaces, recreational areas. It would also contribute to the cycleway network in Inner Sydney by minimising gaps between cycleway routes. It would also provide an alternative means of transport in an area of road and/or public transport congestion and create positive long-term environmental impacts associated with cycling. The Proposal would also minimise any negative short-term environmental impacts through retaining the existing cycleway infrastructure rather than removing it.

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Appendices

1. Introduction

This chapter introduces the Proposal and provides the context of the environmental assessment. In introducing the Proposal, the objectives and project development history are detailed and the purpose of the report provided.

1.1 Proposal identification

Transport for NSW proposes to make the existing pop-up cycleway, constructed under the 'Environmental Planning and Assessment (COVID-19 Development – Temporary Cycleways) Order 2020', along Pyrmont Bridge Road and Bridge Road a permanent cycleway (the Proposal). The existing pop-up cycleway (the existing cycleway) includes two one-way separated cycleways about 1.4-1.5 metres wide on both sides of Pyrmont Bridge Road and Bridge Road and is approximately 1.5 kilometres in length. The existing cycleway starts at Pyrmont Bridge Road, near Lyons Road in Camperdown and continues east onto Bridge Road through Forest Lodge and Glebe until Taylor Street in Glebe (the Proposal corridor).The cycle route facilitates connections with multiple routes on City of Sydney Council's Sydney Bike Network and broadly connects suburbs within the inner-west with Sydney's Central Business District (CBD).

The location of the existing temporary cycleway was selected and built under the COVID-19 Development – Temporary Cycleways Order 2020 due to:

- Its location on a busy cycling route
- Providing a connection to existing bike riding infrastructure
- Locations where public transport, (in particular buses along Parramatta Road) is likely to become overcrowded
- Enabling access to schools, workplaces, recreational areas including parks and other services

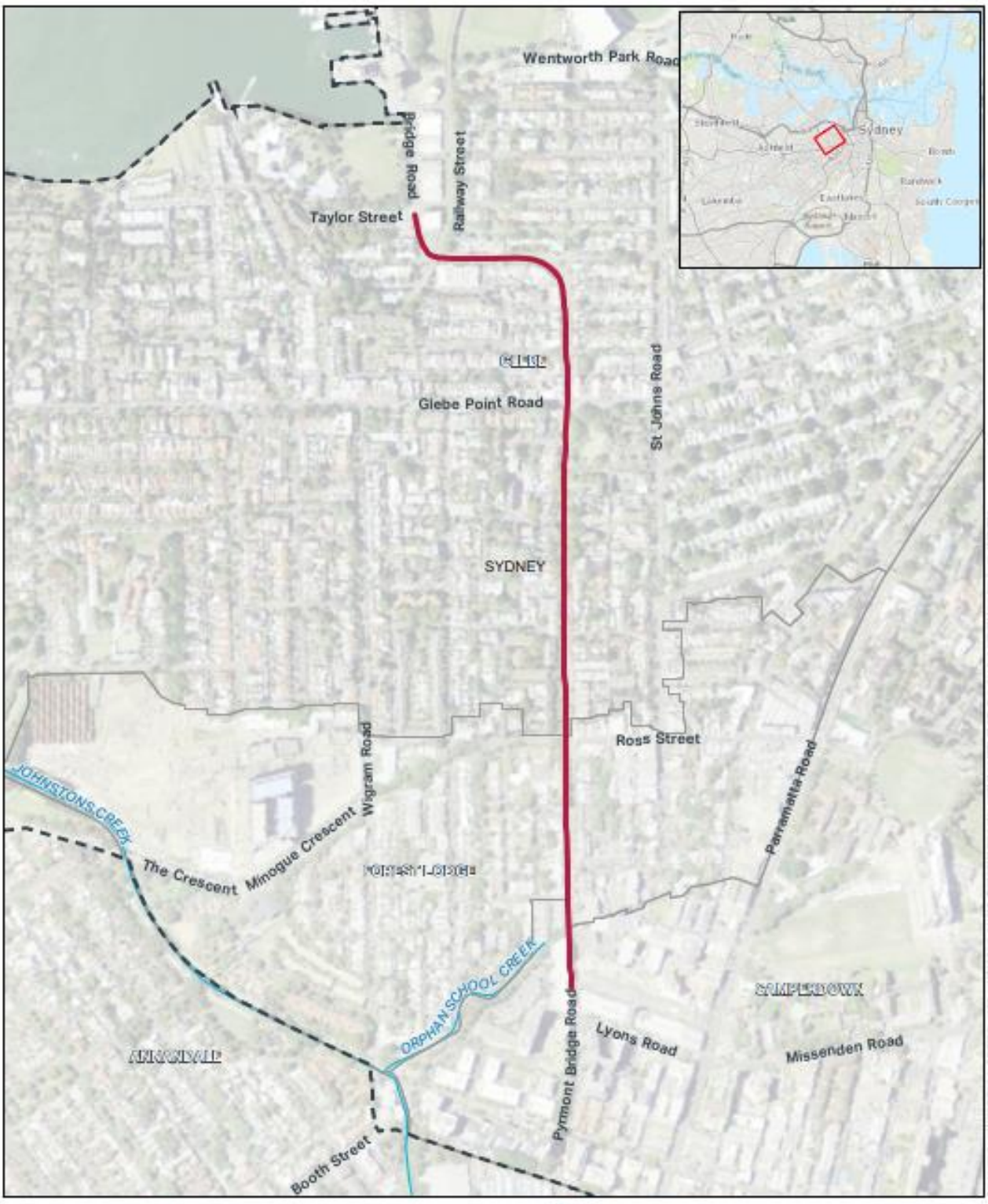
Key features of the existing cycleway, which currently operates under temporary provisions, include:

- Separated one-way cycleways on each side of the road
- A flexible barrier (currently Klemmfix) to separate bike riders and motorists
- Solid white line marking to mark the separated cycleway with sections of solid green paint at conflict points
- Installed cycleway signage on existing utility poles and new and existing sign posts
- Changes to the drainage grates replaced with bicycle friendly grates
- Reconstruction to the pedestrian refuge near Cross Street
- Removal of parking on Bridge Road and Pyrmont Bridge Road, including relocation of an accessible parking space into nearby side street
- Changes to the bus stop on Pyrmont Bridge Road including a raised bus platform, to allow customers to cross the cycleway to get on and off buses
- Linemarking for adjusted traffic lanes, painted symbols for areas of shared cycleway and shared motorist/pedestrian areas

The Proposal to retain the existing cycleway permanently would involve retaining the key features above, and may also include the following activities:

- Replacement of the current flexible barrier (Klemmfix) with an alternative barrier to improve the visual amenity of the cycleway.

The location of the Proposal corridor is shown in Figure 1-1. Chapter 3 describes the Proposal in more detail.



BRIDGE RD CYCLEWAY
PROPOSAL LOCATION

AECOM

Legend

- Proposal corridor
- Waterway
- Sydney LGA
- Suburb

Figure 1-1: Location of the Proposal

1.2 Purpose of the report

This review of environmental factors (REF) has been prepared by AECOM on behalf of Transport for NSW. For the purposes of these works, Transport for NSW is the proponent and the determining authority under Division 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

The purpose of the REF is to describe the Proposal, to document the likely impacts of the Proposal on the environment, and to detail mitigation and management measures to be implemented.

The description of the proposed work and assessment of associated environmental impacts has been undertaken in the context of clause 228 of the Environmental Planning and Assessment Regulation 2000, the factors in *Is an EIS Required? Best Practice Guidelines for Part 5 of the Environmental Planning and Assessment Act 1979* (Is an EIS required? guidelines) (DUAP, 1995/1996), *Roads and Related Facilities EIS Guideline (DUAP 1996)*, the *Biodiversity Conservation Act 2016 (BC Act), the Fisheries Management Act 1994* (FM Act), *and the Australian Government's Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

In doing so, the REF helps to fulfil the requirements of:

- Section 5.5 of the EP&A Act including that Transport for NSW examine and take into account to the fullest extent possible, all matters affecting or likely to affect the environment by reason of the activity.

The findings of the REF would be considered when assessing:

- Whether the Proposal is likely to have a significant impact on the environment and therefore the necessity for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act
- The significance of any impact on threatened species as defined by the BC Act and/or FM Act, in section 1.7 of the EP&A Act and therefore the requirement for a Species Impact Statement or a Biodiversity Development Assessment Report
- The significance of any impact on nationally listed biodiversity matters under the EPBC Act, including whether there is a real possibility that the activity may threaten long-term survival of these matters, and whether offsets are required and able to be secured.
- The potential for the Proposal to significantly impact any other matters of national environmental significance or Commonwealth land and the need, subject to the EPBC Act strategic assessment approval, to make a referral to the Australian Government Department of Agriculture, Water and the Environment for a decision by the Commonwealth Minister for the Environment on whether assessment and approval is required under the EPBC Act.

2. Need and options considered

This chapter describes the need for the Proposal in terms of its strategic setting and operational need. It identifies the various options considered and the selection of the preferred option for the Proposal.

2.1 Strategic need for the Proposal

The cycleway was initially installed and intended as a pop-up temporary cycleway to facilitate safe cycling to support travel during the COVID-19 recovery. Temporary cycleways were installed where it was identified as a strategic priority. This included locations where cycleways were discontinuous, where there was demand for cycling infrastructure, where there was a recognised route to key employment areas or where there was a recognised hot spot of congestion requiring more transport choices including access to recreation.

The Bridge Road cycleway is important as it provides a safer method of transport for bike riders to commute into the Sydney CBD. The cycleway facilitates connections with multiple routes in City of Sydney Council's Sydney Bike Network and broadly connects suburbs within the inner-west with Sydney's Central Business District (CBD). The Proposal provides a safer alternative method of transport for commuters to key employment areas, particularly the Sydney CBD, as bike riders are able to travel along a segregated pathway.

The establishment of the cycleway as a permanent form of infrastructure would continue to provide a means of walking and bike riding to key employment and recreational areas.

2.1.1 Local government strategies

City of Sydney Council's Cycling Strategy and Action Plan 2018-2030

The City of Sydney Council has made a commitment to complete the regional and local bike routes included in the City of Sydney Council's Cycling Strategy and Action Plan (the Plan), including local bike network extensions within Glebe, as well as other regional existing and planned routes to surrounding suburbs and to the CBD (City of Sydney Council, 2018).

The Plan was developed to support the Inner Sydney Regional Bike Plan (City of Sydney Council, 2010) that proposed a radial and cross-regional cycling network in excess of 284 kilometres stretching from Kogarah to Chatswood and from Rhodes to Watsons Bay. The regional plan was developed in collaboration with fourteen inner Sydney Councils. A key objective for the cycling network proposed under the Plan was to provide greater connectivity and segregation (to improve safety) for bike riders between key destinations and along key arterial routes within inner Sydney.

Pyrmont Bridge Road and Bridge Road are identified as part of the 'planned local bike network' on the Plan's Sydney Bike Network map, and are connected to many other low traffic streets or bike lanes, connecting to regional routes towards Annandale, Camperdown and other surrounding suburbs and the CBD. Nearby, other completed cycleway paths include an off-road shared path along Johnstone Creek on the border of the suburbs of Annandale and Forest Lodge, which is connected to Pyrmont Bridge Road through some low-traffic streets. The existing cycleway ends within close proximity to the shared path to Blackwattle Bay. Towards the city end, the existing cycleway is close to other low traffic streets or bike lanes and cycleways approaching Pyrmont Bridge and the Sydney CBD. The cycleway is also connected to Ultimo by the off-road shared path at Wattle Street, Pyrmont.

According to the 'Sydney cycling map' provided at the City of Sydney Council's website (City of Sydney Council, 2020a), Pyrmont Bridge Road and Bridge Road is identified as a "direct route with higher traffic"

(City of Sydney Council, 2020). According to *Cycling Aspects of Austroads Guide* (Austroads, 2014), a preferred cycleway along this type of route would be a separated bicycle lane. According to the 'Sydney cycling map', most surrounding cycleways do not have separated lanes (City of Sydney Council, 2020a). This may act as a deterrent to cycling uptake in this area.

The existing cycleway contributes to the achievement of Priority 1 'Connecting the Network' of the Plan by building on the connection to other regional and local routes, and improvements to safety and access throughout the area (City of Sydney Council, 2018). The existing cycleway also contributes to Priority 2 'Supporting people to ride' of the Plan through providing a safe separated cycleway which supports cycling uptake in the area.

City of Sydney Council's Sustainable Sydney 2030

Sustainable Sydney 2030 is a plan for a green, global and connected city. Its framework is guided by ten strategic directions, of which 'A city for walking and cycling' is the fourth. Other complimentary strategic directions relevant to and supported by the Proposal include strategic direction two 'A leading environmental performer', strategic direction three 'Integrated transport for a connected city' and strategic directive nine 'Sustainable development, renewal and design'.

The objectives of strategic direction four, 'A city for walking and cycling', are:

- 4.1 The city and neighbouring areas have a network of accessible, safe, connected pedestrian and cycling paths integrated with green spaces
- 4.2 The city centre is managed to facilitate the movement of people walking and cycling
- 4.3 The number of people who choose to walk and cycle continues to increase
- 4.4 Businesses in the city encourage their staff to walk and cycle more often.

According to the Sydney cycling map, the existing cycleway is connected to various existing and future planned cycleways within the CBD that are part of the 'Local Bike Network'. The existing cycleway also sits within a 'Regional Bike Network' building upon existing and future planned cycleways that connect Glebe to neighbouring suburbs such as Leichhardt, Camperdown, and Newtown (City of Sydney Council, 2020a).

In relation to objective 4.1 of Sustainable Sydney 2030, the existing cycleway maintains a separated and safe cycle path in the local Glebe area. In relation to objective 4.3, the number of bike riders using the existing cycleway doubled between the first week of its operation on 21 September 2020 and 11 weeks later on 7 December 2020 , increasing to an average of over 2,900 a trips a week (Transport for NSW, 2020).

City of Sydney Council's Local Strategic Planning Statement

A Local Strategic Planning Statement (LSPS) is a council's 20-year land use vision that links state and local strategies with Council's planning controls. The City of Sydney Council's LSPS sets out infrastructure priorities and objectives.

The first priority of City of Sydney Council's LSPS infrastructure chapter is 'Movement for walkable neighbourhoods and a connected city'. The aspects of the objective of this priority that are relevant to the Proposal are:

> *"Moving to and around our city is efficient, logical and practical with an integrated transport and access network that:*
>
> *a) is accessible, reliable and safe*
> *b) encourages and caters for increased walking, cycling and the use of public transport*
> *…*
> *g) supports a low-carbon and energy efficient city"*

The existing cycleway is consistent with these three sub-objectives and supports the general priority of efficient movement for walkable neighbourhoods and a connected city more broadly.

The LSPS also states actions to accompany its vision, and the Pyrmont Bridge Road/Bridge Road cycleway responds to Actions 1.1 and 1.2 under Priority 1 of the Sydney LSPS.

Under Priority 1, Action 1.1 says that Council will:

> *"Continue to encourage walking and cycling in the city by implementing the City's walking, cycling and Liveable Green Network strategies, and applying the NSW Government's Movement and Place framework, including working with:*
>
> *b) …The NSW Government to:*
> *i. implement pedestrian and cycling improvements as part of the Sydney City Centre Access Strategy*
> *ii. investigate opportunities to improve pedestrian and cycle priority and reduce travel time for people walking and cycling*
> *iii. respond to lower speed environments across the city that make streets safer and more liveable, by reducing speed limits with a target of 30km/h*
> *iv. ensure better access to major transport hubs…*
> *d) …Reviewing development controls to identify new walking and cycling links."*

The existing cycleway responds directly to the relevant sub-objectives above.

Under Priority 1, Action 1.2 says that Council will:

> *"Work with the NSW Government to plan for the transition of streets to 'people first' places, applying the NSW Government's Movement and Place framework so streets are healthier, quieter, cleaner and greener with increased footpath capacity throughout the city, particularly: …*
>
> *b) On local streets, identifying opportunities for reducing through traffic, to make streets more suitable for walking, cycling and play…"*

Bridge Road is a state road with a role to play in local access for freight and has wider than average suburban roads with one lane of traffic in both directions. Westconnex construction is currently underway and Bridge Road is used as a local haulage route. Other developments including the Sydney Fish Market development also utilise the roadway The Proposal does not reduce the number of traffic lanes available for motorists to use, and as it is not a freight route it is unlikely that freight traffic commonly use the road network. Therefore, it would not be expected that the existing cycleway obstructs road users.

The existing separated on-road cycleway, as opposed to shared pedestrian and bike rider cycleways, supports the objective of supporting streets as more suitable for walkers and bike riders. It would be expected that the provision of an on road separated cycleway would also detract bike riders from informally riding on pedestrian side paths.

As per the description above, the Proposal therefore achieves Action 1.2 under Priority 1 to transition the streets to 'people first' places.

The NSW Government strategies described in the following sections further support the need for the Proposal.

2.1.2 State strategies

Future Transport Strategy 2056 (FT 2056)

FT 2056 (Transport for NSW, 2018) is the NSW Governments' vision for how transport can support growth and the economy of New South Wales over the next 40 years. The Strategy has six customer outcomes, of which one relates to walking and cycling: 'Successful places - Sustaining and enhancing the liveability of our places'. It acknowledges that:

- Walking or cycling is the most convenient option for short trips around centres and local areas, supported by a safe road environment and suitable pathways
- Vibrant centres supported by streets that balance the need for convenient access while enhancing the attractiveness of our places.

The Proposal for a permanent cycleway on Bridge Road is consistent with achieving the strategic aims of the FT 2056 as it provides convenient walking and bike riding access to the Camperdown, Forest Lodge and Glebe centres by encouraging cycling, while maintaining vehicular access along Bridge Road. The Proposal would maintain safe cycling along Bridge Street, would not detracting from the landscape of the local suburb, and in the longer term, may improve the attractiveness of the 'place' by reducing the volume of vehicles and the associated traffic noise and vehicle emissions.

In addition, as an action, FT 2056 aims to deliver the Principal Bicycle Network comprising connected cycling networks within:

- 10 km of Sydney and Parramatta CBD's by 2026 and
- 10 km of other metropolitan centres and five km of Strategic centres by 2036.

The existing cycleway forms part of the 10km cycleway network surrounding Sydney's CBD.

A Metropolis of Three Cities

The Greater Sydney Commission's *A Metropolis of Three Cities* (Greater Sydney Commission, 2018) sets the strategic direction for growth in Sydney to 2056. It aims to create a 30-minute city, where people live within 30 minutes of jobs, education and health services.

The plan includes directions and indicators that support cycling, including designing places for people; a well-connected city that is more accessible and walkable; walking and cycling paths; and an efficient city with reduced transport-related greenhouse gas emissions.

Sydney City Centre Access Strategy

The *Sydney City Centre Access Strategy* (Transport for NSW, 2013) is a key action in the *NSW Long Term Transport Master Plan*. The Access Strategy is the state's first detailed plan showing how people will enter, exit and move in and around the CBD over the next 20 years and demonstrates how light rail, buses, trains, ferries, cars, taxis, pedestrians and bike riders will interact in the heart of Sydney. The Access Strategy also provides a clear direction for how all the different transport modes will work together in the city centre to:

- Reduce congestion
- Provide for future growth
- Improve the customer experience.
- The Access Strategy states its plans for completing safe and direct cycleway connections to the north, east, west and south of Sydney's CBD to provide the infrastructure needed for the increasing number of people who are choosing to ride between the city and surrounding suburbs. The initial focus of the Access Strategy regarding cycling was to provide separated cycleways to the city

centre within five kilometre catchments of major centres before broadening their focus to cycleways outside of these areas.

- Bridge Road is within five kilometres of the Sydney CBD major centre. As such it falls within the initial cycleway focus to provide separated cycleways to the city centre.

State Infrastructure Strategy

Infrastructure NSW's (INSW) *State Infrastructure Strategy* (Infrastructure NSW, 2018) makes the following recommendation:

- Recommendation 51: Develop a 10-year rolling program that prioritises walking and bike riding at high volume and high-profile locations in the Sydney CBD and other strategic centres, in partnership with local government.

As a form of walking and bike riding alongside walking, making the existing cycleway permanent will contribute to the fulfilment of INSW Recommendation 51.

Design and Place

The Design and Place SEPP puts place and design at the forefront of development. The policy is supported by the responsibility to care for Country and sustain healthy, thriving communities. The SEPP is scaled from precincts to state significant developments to buildings, infrastructure and public spaces.

Currently in draft phase the Design and Place SEPP is will go in public exhibition later 2021 to allow greater feedback from the community.

2.2 Existing infrastructure

The Proposal involved the permanent fixture of the cycleway on Bridge Road and Pyrmont Bridge Road, Pyrmont (as shown in figures provided in Figure 1-1). The existing infrastructure within the Proposal area is described below and presented within Figures Figure 6-2 and Figure 6-8.

Existing land use context

The Proposal area is located within the suburbs of Camperdown, Forest Lodge and Glebe under The City of Sydney Council local government area (LGA). The extent of the Proposal area is primarily located around land zoned as R1 General Residential. Minor segments of land are zoned as B2 Local Centre around Glebe Point Road, RE1 Public Recreation, B1 Neighbourhood Centre around Ross Street, and B4 Mixed Use to the south of Bridge Road in the suburb of Forest Lodge.

Existing road network

The Proposal corridor services the members of the public whom work within the local area and people accessing local businesses/services. The road also services people commuting to the Sydney CBD, Sydney Fish market or those accessing the Western Distributer.

The existing roadway consists of one lane bi-directional traffic flow with the existing cycleway occupying the kerbside space on both sides of the road in most segments along the Proposal corridor.

Kerbside use and Parking

No kerbside parking is provided along the Proposal corridor. There are various locations along the Proposal corridor where vehicles must cross the cycleway to access driveways/properties. The kerbside is currently primarily occupied by a segregated cycleway, where this is not the case the kerbside is shared by motorists and bike riders.

Pedestrian and bike riding facilities

Pedestrian walkways are provided along the length of the corridor on both sides. Signalised and zebra crossings and pedestrian islands are available to assist pedestrians in safely crossing the road.

Cycleways, segregated by traffic with Klemmfix barriers, are located on both sides of Bridge Road and Pyrmont Bridge Road providing a safe and active means of transport for community members. The Proposal currently ends at Taylor Street in Glebe, where bike riders merge onto the road with motorist traffic. Subsequently the cycleway is not linked to the next cycleway, although an off-road shared path exists nearby along Wentworth Park. Similarly, Bridge Road at Taylor Street in Glebe connects to the shared path to Blackwattle Bay however the shared path does not extend to the Bay and creates a 500 metre missing link in the network.

There are many disconnected cycleways in Sydney, as much of the cycleway infrastructure has been rolled out over recent years. This is recognised as a limitation of the current cycling network in Sydney, highlighted as Priority 1 of the Cycling Strategy and Action Plan (City of Sydney Council, 2018), which is to 'Connect the Network'.

Public transport

One bus service travels along the Proposal corridor (Route 470 - Lilyfield to City Martin Place), with two bus stops located on Pyrmont Bridge Road near Barr Street, and one located opposite Forest Lodge Public School. Bus patrons are required to cross the cycleway, utilising a pedestrian crossing, when alighting the bus.

A light rail service (L1) traverses the Proposal corridor via an overhead bridge across Bridge Road near Burton Street in Glebe.

2.3 Objectives and development criteria

2.3.1 Proposal objectives

The objective of the Proposal is to maintain the provision of the existing cycleway, so as to:

- Provide a safe and efficient cycleway connection between Camperdown and Taylor Street, Glebe that continues to become the route of choice for bike riders, demonstrated by an increase in the number of cycling based trips
- Contribute to building the cycleway network in inner Sydney.

2.3.2 Development criteria

The development criteria for the Proposal are:

- Minimise environmental impacts
- Minimise constructability issues, including traffic disruption
- Maximise bike rider safety under current operational constrains

2.4 Alternatives and options considered

This section describes the methodology for the selection of the preferred option for the Proposal.

2.4.1 Methodology for selection of preferred option

The cycleway was initially installed as a temporary cycleway under the *Environmental Planning and Assessment (COVID-19 Development – Temporary Cycleways) Order 2020* (Temporary Cycleways Order) which encouraged infrastructure to accommodate safe bike riding to support travel during the COVID-19 recovery. The decisions involved in choosing the route for the cycleway included consideration of:

- where a connection was required along missing cycleway links
- where there was demand for bike riding infrastructure
- where there was a recognised route to key employment areas; and/or
- where there was a recognised hot spot of congestion requiring more transport choices.

Following the upcoming expiry of the *Temporary Cycleways Order* in late March 2022, the current Proposal seeks to make the existing pop-up cycleway permanent.

The options of the Proposal include:

- do-nothing option (removal of existing pop-up cycleway)
- continued and permanent operation of unidirectional and separated cycleways on both sides of Pyrmont Bridge Road and Bridge Road between Lyons Road in Camperdown and Taylor Street in Glebe.
- Implement another form of cycleway including bi-directional or utilising shared paths.

Each option for the current Proposal was evaluated against the strategic need for the Proposal as described in Section 3 and the Proposal objectives as described in Section 2.3. The analysis was undertaken on a qualitative basis.

The following options were considered:

Option 1 – 'Removal of the existing pop-up cycleway on Pyrmont Bridge Road and Bridge Road'

Option 1 would involve the removal of the existing cycleway along Pyrmont Bridge Road near Lyons Road in Camperdown, along Bridge Road through Forest Lodge and Glebe to the intersection with Taylor Street in Glebe.

Option 2 – 'Continued and permanent operation of the existing unidirectional and separated cycleways on both sides of Pyrmont Bridge Road and Bridge Road

Option 2 would involve permanently retaining the existing cycleway along Pyrmont Bridge Road near Lyons Road in Camperdown, along Bridge Road through Forest Lodge and Glebe to the intersection with Taylor Street in Glebe. This option may include changes to the exiting cycleway infrastructure to improve the facility such as change to the type of barrier separating the cycleway from the roadway.

Option 3a & 3b – 'Implementation of a different cycleway treatment, including a bi-directional cycleway or shared path treatment of Pyrmont Bridge Road and Bridge Road

Option 3a would involve the alteration of the existing cycleway along Pyrmont Bridge Road and Bridge Road, and rather include a bi-directional cycleway along one side of the roadway.

Option 3b would involve the removal of the existing cycleway along Pyrmont Bridge Road and Bridge Road, and implementing a cycleway on the footpath as a shared pathway for bike riders and pedestrians.

2.4.2 Analysis of options

The Options described in the preceding section are analysed in Table 2-1 against the Proposal objectives and development criteria outlined in Section 2.3.

Table 2-1 Analysis of options against Proposal objectives and development criteria

	Option 1	Option 2	Option 3a	Option 3b
Proposal objectives				
O1. Provide a safe and efficient cycleway connection between Camperdown and Taylor Street, Glebe that continues to become the route of choice for bike riders, demonstrated by an increase in the number of cycling based trips	No – Option 1 would not provide a safe and efficient cycleway connection between Camperdown and Glebe. Removal of the cycleway would likely decrease the number of cycling based trips, and the route would not become the route of choice for bike riders.	Yes – Option 2 provides and would continue to provide a safe and efficient cycleway connection between Camperdown and Glebe. From the previous increase in bike riders surveyed, the cycleway would likely continue to become the route of choice for bike riders.	Somewhat – Option 3a would provide an efficient cycleway connection between Camperdown and Glebe. The bidirectional cycleway would not provide the same level of safety provided bike riders would have to share road space with other bike riders travelling in the opposite direction.	Somewhat – Option 3b would provide a cycleway between Camperdown and Glebe, however it may not provide sufficient safety or efficient means of travel to bike riders. The bidirectional cycleway would not provide the same level of safety, as bike riders would have to share the footpath with pedestrians. As pedestrians move at slower speeds to bike riders, there is a higher risk of collision. In addition, bike riders would have to slow down to navigate through pedestrians, thereby decreases the efficiency of the cycleway.

O2. Contribute to building the cycleway network in inner Sydney	No – Option 1 would not support the strategic objective to connect the cycleway network in inner Sydney as a cycleway within the five kilometre radius of the Sydney CBD, specified as a priority route in the Access Strategy connecting bike riders to city centres.	Yes – Option 2 would continue to contribute to connecting the cycleway network in inner Sydney as a cycleway within the five kilometre radius of the Sydney CBD, specified as a priority route in the Access Strategy connecting bike riders to city centres.	Yes – Option 3a would continue to contribute to connecting the cycleway network in inner Sydney as a cycleway within the five kilometre radius of the Sydney CBD, specified as a priority route in the Access Strategy connecting bike riders to city centres.	Yes – Option 3b would continue to contribute to connecting the cycleway network in inner Sydney as a cycleway within the five kilometre radius of the Sydney CBD, specified as a priority route in the Access Strategy connecting bike riders to city centres.
COVID Order 2020 Proposal objectives				
C1. Its location on a busy cycling route	No – In line with C1, Option 1 is located on a previously busy cycling route. Option 1 to remove the cycleway therefore would not support a cycleway in this strategic location, and therefore does not support objective C1.	Yes – In line with C1, Option 2 is located on a previously busy cycling route. Retaining the cycleway would continue to support the strategic location of the cycleway, and therefore does support objective C1.	Yes – In line with C1, Option 3a would be located on a previously busy cycling route. Option 3a to provide a bidirectional cycleway along one side of the roadway would continue to support the strategic location of the cycleway, and therefore does support objective C1.	Yes – In line with C1, Option 3b would be located on a previously busy cycling route. Option 3b to utilise the footpath as a shared pathway would continue to support the strategic location of the cycleway, and therefore does support objective C1.

C2. Providing a connection to existing bike riding infrastructure	No – In line with C2, Option 1 has minimised the gap between existing and planned networks in surrounding suburbs. Option 1 would result in the decrease of connectivity in the cycleway network as the existing cycleway would be removed.	Somewhat – In line with C2, Option 2 has minimised the gap between existing and planned networks in Annandale, Camperdown and other surrounding suburbs, including the shared path to Blackwattle Bay. Towards the CBD, there would be possibilities for future cycleway projects to connect the Pyrmont Bridge Road/Bridge Road cycleway with others nearby including one on the Pyrmont Bridge, and cycleways in Ultimo via Wattle Street. Retaining the cycleway would continue to support the connectivity of bike riding infrastructure nearby.	Somewhat – In line with C2, Option 3a has minimised the gap between existing and planned networks in surrounding suburbs. Option 3a would continue to support the connectivity of bike riding infrastructure nearby.	Somewhat – In line with C2, Option 3b has minimised the gap between existing and planned networks in surrounding suburbs. Option 3b would continue to support the connectivity of bike riding infrastructure nearby.

C3. Locations where public transport, (in particular buses along Parramatta Road) is likely to become overcrowded	No – In line with C3, Option 1 was located close to areas where public transport is likely to become overcrowded (in particular along Parramatta Road). Option 1 and the removal of the cycleway would possibly result in increased overcrowding on nearby bus routes.	Yes – In line with C3, Option 2 was located close to areas where public transport is likely to become overcrowded (in particular along Parramatta Road). Option 2 would continue to provide an alternative means of low-cost transport in an inner-city location where public transport is generally overcrowded nearby.	Yes – In line with C3, Option 3a was located close to areas where public transport is likely to become overcrowded (in particular along Parramatta Road). Option 3a would continue to provide an alternative means of low-cost transport in an inner-city location where public transport is generally overcrowded nearby.	Yes – In line with C3, Option 3b was located close to areas where public transport is likely to become overcrowded (in particular along Parramatta Road). Option 3b would continue to provide an alternative means of low-cost transport in an inner-city location where public transport is generally overcrowded nearby.

C4. Enabling access to schools, workplaces, recreational areas including parks and other services	No – In line with C4, Option 1 enabled access to schools, workplaces, recreational areas including parks and other services by bicycle. Option 1 would not provide such access by bicycle thereby limiting the range of transport modes supported by infrastructure within the surrounding environment.	Yes – In line with C4, Option 2 enabled access to schools, workplaces, recreational areas including parks and other services by bicycle Option 2 would continue to provide such access by bicycle supported by infrastructure within the surrounding environment.	Yes – In line with C4, Option 3a enabled access to schools, workplaces, recreational areas including parks and other services by bicycle Option 3a would provide such access by bicycle supported by infrastructure within the surrounding environment.	Somewhat – In line with C4, Option 3b enabled access to schools, workplaces, recreational areas including parks and other services by bicycle Option 3b would provide such access by bicycle but may also hinder access to pathways for pedestrians having to share and navigate the footpath with bike riders.

Development criteria				
D1. Minimise environmental impacts	No – Option 1 would incur some short-term negative environmental effects from construction due to the plant and equipment needed to remove the cycleway. Option 1 would also contribute to long-term negative environmental impacts through not promoting bike riding (a form of carbon neutral travel) and supporting a return to a road environment without cycling infrastructure, anticipated to discourage bike riding.	Yes – Although Option 2 may have some short-term minor negative environmental effects due to the possible replacement of the Klemmfix barrier, long term Option 2 would continue to minimise environmental impacts as it would continue to promote bike riding (a form of carbon neutral travel). This option would also continue to support walking and bike riding and healthy lifestyles, possibly ease road congestion and thereby minimise motorist emissions.	Somewhat – Option 3a would incur some short-term negative environmental effects from construction due to the plant and equipment needed to alter the cycleway, including the removal of the cycleway on one side of the road. Long-term it would continue to minimise environmental impacts as it would continue to promote bike riding (a form of carbon neutral travel). This option will continue to support walking and bike riding and healthy lifestyles, possibly ease road congestion and thereby minimise motorist emissions. .	Somewhat – Option 3b would incur some short-term negative environmental effects from construction due to the plant and equipment needed to remove the on-road cycleway. The existing footpath would be utilised as a shared path. Long-term it would continue to minimise environmental impacts as it would continue to promote bike riding (a form of carbon neutral travel). This option would continue to support walking and bike riding and healthy lifestyles, possibly ease road congestion and thereby minimise motorist emissions.

D2. Minimise constructability issues, including traffic disruption	No – Option 1 would require deconstruction of the current cycleway which requires associated short term construction impacts including the presence of plant and equipment, noise impacts, and disruptions to traffic.	Somewhat– Option 2 construction works would be limited to potentially upgrading the existing cycleway such as the possible Klemmfix barrier replacement, and associated minimal traffic and transport disruptions. No construction works would be required at present to continue the cycleway. .	Somewhat – Option 3a would require some major civil construction works at signalised intersections due to bike riders approaching from the wrong direction. It would also require deconstruction of part or all of the current cycleway which requires the short term presence of plant and equipment, noise impacts, and disruptions to traffic.	No – Option 3b would require light construction works to signal bike riders on the footpath such as line painting and signage. It would also require deconstruction of the current cycleway which requires associated short term construction impacts including the presence of plant and equipment, noise impacts, and disruptions to traffic

D3. Maximise bike rider safety under current operational constrains	No – Option 1 would decrease bike rider safety. The removal of the separated cycleway, which is the only one in the suburbs of Glebe and Forest Lodge, would force bike riders to use less safe cycleway infrastructure such as on-road bike lanes (without any barriers between bike riders and motorists) low traffic streets, and/or bike riders may elect to use the pedestrian side path informally.	Yes – Option 2 would continue to maximise bike rider safety through maintaining the only separated cycleway in the suburbs of Glebe and Forest Lodge.	Somewhat – Option 3a would change bike rider safety slightly. The removal of the separated cycleway and replacement with a bidirectional cycleway, may increase the risk of bike rider collisions with motorists, however is safer than having no cycleway.	Somewhat – Option 3b would change bike rider and pedestrian safety. The removal of the separated cycleway and replacement with shared pathway with pedestrian path, would increase the risk of bike rider and pedestrian collisions.

Option 1

As per Table 2-1, Option 1 would not achieve the Proposal objectives, nor would it support the strategic aims of Transport for NSWs FT 2056 strategy.

The removal of the cycleway would have a slightly positive socio-economic impact for some local residents as motorists in the area would be able to access parking options previously provided outside of clearway hours on Pyrmont Bridge Road and Bridge Road. Despite a positive impact to local residents by restoring parking in the area, the removal of the cycleway would result in various negative environmental effects as described in Table 2-1. The environmental and social benefits from retaining the cycleway would likely outweigh the negative impact of parking removal for motorists.

The removal of the cycleway would not achieve the strategic priorities and objectives for Sydney and the area defined in Section 2.1. Therefore the 'Removal' option would not the preferred option.

Option 2

As per Table 2-1, Option 2 would meet the objectives of the Proposal as well as those of the relevant strategic plans by retaining access and safety for bike riders along Pyrmont Bridge Road and Bridge Road.

Retaining the cycleway and making the infrastructure permanent would have a negative impact on motorists in the area through the permanent removal of parking spaces outside clearway hours on Pyrmont Bridge Road and Bridge Road. Alternative on-road parking exists in the adjoining and neighbouring streets surrounding Pyrmont Bridge Road and Bridge Road. Despite the negative impact through the permanent removal of parking outside of clearway hours, retaining the cycleway would result in various positive environmental effects as described above. The environmental and social benefits from retaining the cycleway along Pyrmont Bridge Road and Bridge Road would likely outweigh the negative impact of parking removal for motorists. Feedback received during the community consultation period pertaining to safety and parking was mixed. The Road Safety Audit conducted for the Proposal identified numerous ways in which the safety of the Proposal could be improved. All issues identified in the audit were addressed by Transport for NSW along with issues identified by the community. The community identified that the removal of temporary parking spaces would inconvenience neighbouring residences whereas some responses identified the positives associated with parking removal in the area which would benefit bike riders in particular. Both pieces of feedback have been acknowledged by Transport for NSW and assessed throughout the development of the Proposal.

Retaining the cycleway would achieve the strategic priorities and objectives for Sydney and the area defined in Section 2.1. Therefore 'Option 2' to retain the cycleway as permanent infrastructure is the preferred option.

Option 3a

As per Table 2-1, Option 3a would not completely achieve the Proposal objectives, nor would it completely meet safety requirements by introducing risks to bike riders through the inclusion of the bidirectional cycleway.

The alteration of the cycleway to a single bidirectional cycleway would have a slightly positive socio-economic impact for local residents as motorists in the area would be able to access some parking options on one side of the road previously provided outside of clearway hours on Pyrmont Bridge Road and Bridge Road. Despite a positive impact to local residents by restoring parking in the area, the environmental and social benefits from retaining a cycleway along Pyrmont Bridge Road and Bridge Road would likely outweigh the negative impact of parking removal for motorists.

As per Table 2-1, the alteration of the cycleway would still achieve some of the strategic priorities and objectives for Sydney and the area defined in Section 2.1, however would impact on safety of the bike riders and would have greater construction impacts than alternative options. Therefore Option 3a would not the preferred option.

Option 3b

As per Table 2-1, Option 3b would not completely achieve the Proposal objectives, nor would it meet safety requirements by introducing unacceptable risks to bike riders and pedestrians through their interaction on the shared pathway.

The removal of the on-road cycleway and installation of the shared path would have a slightly positive socio-economic impact for local residents as motorists in the area would be able to access parking options previously provided outside of clearway hours on Pyrmont Bridge Road and Bridge Road. Despite a positive impact to local residents by restoring parking in the area, the environmental and social benefits from retaining a cycleway along Pyrmont Bridge Road and Bridge Road would likely outweigh the negative impact of parking removal for motorists. Construction impacts would be limited to line markings as the current pedestrian foot path would be able to be utilised.

As per Table 2-1, the alteration of the cycleway would still achieve some of the strategic priorities and objectives for Sydney and the area defined in Section 2.1, however would create greater safety concerns for bike riders and pedestrians on the shared path. The shared path would also limit the efficiency of the cycleway through the possible interaction with pedestrians and would have greater construction impacts than alternative options. Therefore Option 3b would not the preferred option.

2.5 Preferred option

Option 2 was selected as the preferred option which involves the continued and permanent operation of the existing unidirectional and separated cycleway on both sides of Pyrmont Bridge Road and Bridge Road. This option may include the upgrade of the exiting cycleway infrastructure such as the current Klemmfix separation barriers to a more permanent structure to further increase the safety of bike riders utilising the cycleway.

Option 2 was selected as it best meets the objectives of the Proposal and the relevant strategic plans. This option would contribute to connecting to the cycleway network of inner Sydney rather than remove the only separated cycleway in the suburbs of Glebe and Forest Lodge.

Option 2 meets the development criteria by minimising environmental impacts through continuing to promote bike riding (a form of carbon neutral travel). It will provide opportunities in the future for other projects to connect parts of the Sydney Bike Network including connecting gaps between the Proposal and the CBD further supporting active means of transport.

3. Description of the Proposal

This chapter describes the Proposal and provides details of the existing infrastructure, the design parameters and major design features of the Proposal, as well as the construction method for the changes proposed.

3.1 The Proposal

Transport for NSW proposes to make the existing pop-up cycleway a permanent cycleway along the Proposal corridor.

The existing cycleway, which is approximately 1.6 kilometres long, runs along both the western and eastern sides of Pyrmont Bridge Road and Bridge Road in the existing road corridor. Prior to the temporary cycleway being implemented, kerbside parking was a clearway zone in peaks with timed parking provided in some limited locations outside of clearway hours. In some areas which were too narrow to allow for a separated cycleway, bike riders share the road space with general motorists.

A flexible safety barrier between the roadway and cycleway is installed along the sections of existing separated cycleway along Pyrmont Bridge Road and Bridge Road, with gaps to allow access to intercepting driveways.

Key features of the permanent cycleway are:

- –1.4 – 1.5 metre wide, one-way, separated cycleways on either side of Pyrmont Bridge Road and Bridge Road along most of the Proposal corridor, except where road space does not allow. In areas without sufficient road space for a separated cycleway there is:
  - Shared motorist and bike rider zones, allocated by painted bicycle symbols in the centre of the road lane
  - Shared pedestrian and cyclist path about 20 metres long, used for the east-bound cycleway lane under the railway bridge near Railway Street
- Permanent allocation of road space to cycleway facilities, some of which were previously allocated to 46 parking spaces outside of clearway hours of operation
- Retention of a raised pedestrian crossing over the cycleway at bus stop number 205014 ‘Pyrmont Bridge Road at Lyons Road’ (western side) to maintain priority to pedestrians boarding and alighting buses
- Replacement of the flexible barrier (Klemmfix) which separates motorists and bike riders with another low profile barrier type
- Ancillary features:
  - Maintenance of current stormwater drainage with bicycle friendly grates
  - Maintenance of existing bicycle signage along the cycleway on existing power poles and posts
  - Maintenance of existing line marking and green cycleway painting areas along the cycleway.

The key features of the cycleway is described in more detail in the following sections.

3.1.1 Detailed scope

Barr Street to Cross Street:

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on both eastern and western sides of the road
- Continued allocation of former 2P off-peak parking on both eastern and western sides of Pyrmont Bridge Road for cycleway use
- Replacement of flexible Klemmfix barrier with another low profile barrier.

Cross Street to Forest Lodge Public School:

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on both eastern and western sides of the road
- Continued allocation of the space formerly allocated for unrestricted off-peak parking on both eastern and western sides of Bridge Road for cycleway use
- Replacement of flexible Klemmfix barrier with another low profile barrier.

Forest Lodge Public School to about 10 metres west of Jarocin Avenue:

- Ongoing use of the shared road between bike riders and motorists and maintenance of the bicycle painted symbols on the travel lanes on both sides of Bridge Road.

About 10 metres west of Jarocin Avenue to Clare Street

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on both eastern and western sides of the road
- Replacement of flexible Klemmfix barrier with a less flexible barrier on the western side of Bridge Road, between about 10 metres west of Jarocin Avenue and Clare Street

Clare Street to Hewit Avenue

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on the eastern side of the road
- Replacement of flexible Klemmfix barrier with a less flexible barrier on the eastern side of Bridge Road, between Clare Street and Hewit Avenue
- Ongoing use of the shared road between bike riders and motorists on the western side of Bridge Road between Clare Street and Hewit Avenue and maintenance of existing painted bicycle symbols on the east-bound travel lane
- Continued no vehicular access between Bridge Road and Hewitt Avenue

Hewit Avenue to Woolley Street

- Ongoing use of the shared road space for bike riders and motorists on both sides of the road between Hewit Avenue and Woolley Street, and maintenance of the painted bicycle symbols on the travel lanes on both sides of Bridge Road.

Woolley Street to about 70 metres east of Woolley Street:

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on both eastern and western sides of the road
- Replacement of flexible Klemmfix barrier with a less flexible barrier until about 70 metres east of Woolley Street

About 70 metres east of Woolley Street to Rosebank Street:

- Ongoing use of the shared road for bike riders and motorists and maintenance of the painted bicycle symbols on the travel lanes on both sides of Bridge Road between about 70 metres east of Woolley Street and Rosebank Avenue.

Rosebank Street and Talfourd Street:

- Ongoing use of the shared road for bike riders and motorists and maintenance of the painted bicycle symbols on the travel lanes on both sides of Bridge Road.

Talfourd Street to Railway Street:

- Retention of the existing 1.4-1.5 metre one-way separated cycleways on both eastern and western sides of the road
- Replacement of flexible Klemmfix barrier with a less flexible barrier.

Railway Street to Taylor Street:

- Retention of the existing 1.4-1.5 metre one-way separated cycleway on eastern side of the road
- Maintenance of the painted 1.4-1.5 metre one-way cycleway on western side of the road between Railway Street and Burton Street
- Replacement of flexible Klemmfix barrier with a less flexible barrier between Railway Street and Taylor Street
- Ongoing use of the shared pedestrian and cyclist path under the railway bridge on eastern side of the road
- Ongoing use of the shared road for bike riders and motorists and maintenance of the painted bicycle symbols on the travel lanes on western side of Bridge Road from Burton Street to Taylor Street.

Figure 3-1 to Figure 3-3 show the key features. The concept design for the Proposal is presented in Appendix D.

Figure 3-1 Key features of the existing cycleway (Northern Section)

Figure 3-2 Key features of the existing cycleway (Middle Section)

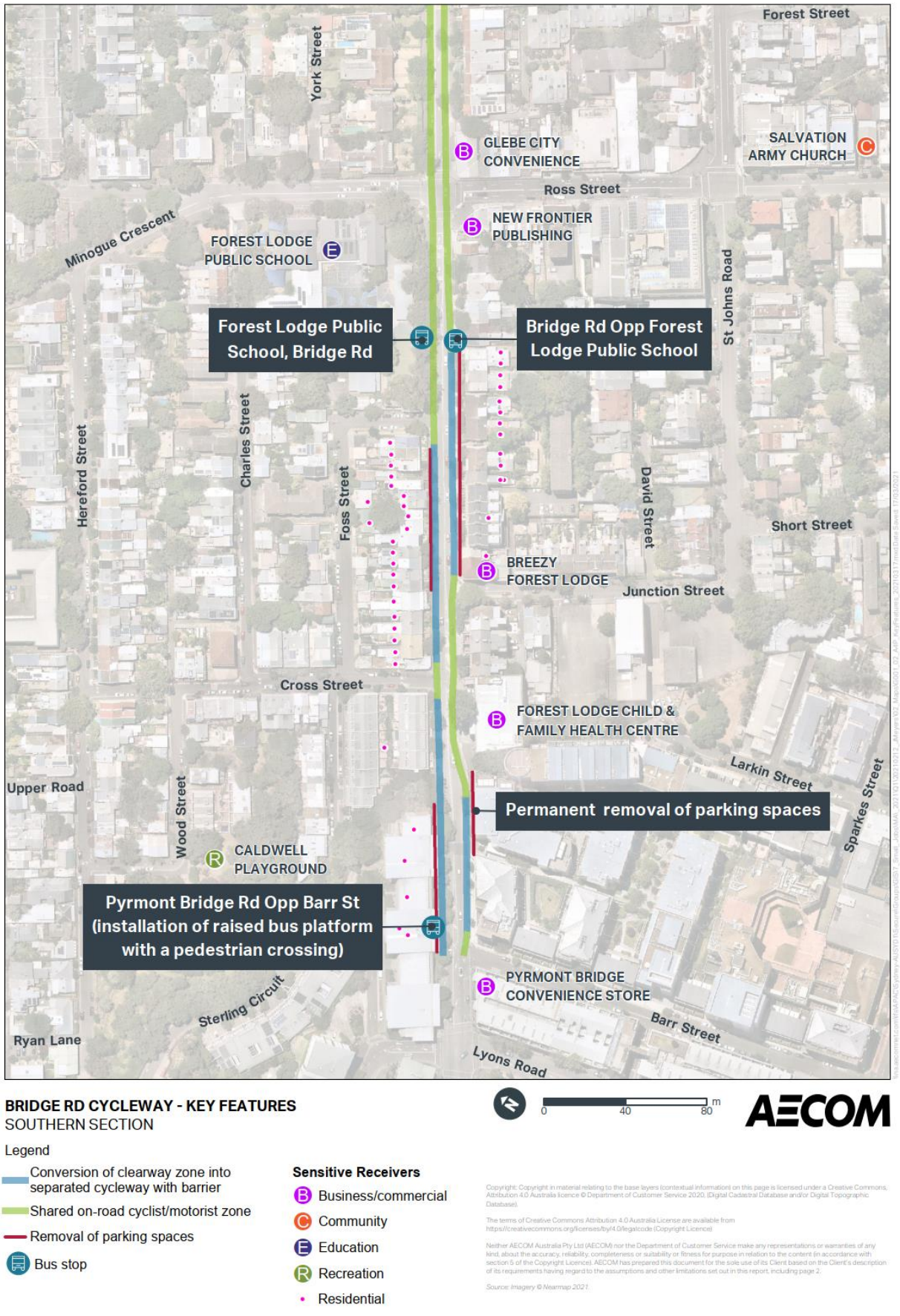


Figure 3-3 Key features of the existing cycleway (Southern Section)

3.2 Design

3.2.1 Design criteria

The Proposal was designed to be consistent with Transport for NSW design criteria including the *Guide to Road Design* (Austroads, 2015), *Beyond the Pavement 2020* (Transport for NSW, 2020a) and *Cycling Aspects of Austroads Guide* (Austroads, 2014).

In addition, the Proposal referenced design guides from local council and key bicycle membership organisations in NSW including the *Sydney Streets Code 2013* (City of Sydney Council, 2013) and the *Summary of Principles for Good Bike Infrastructure* (Bicycle NSW, 2020).

The principal design criteria for the Proposal are identified in Table 3-1.

Table 3-1 Design criteria for the Proposal

Criterion	Cycleway design
Cycleway type	• Separated unidirectional (one-way) cycleway adjacent to pavement kerbs on each side of Pyrmont Bridge Road/Bridge Road where sufficient road space allowed • On-road shared lane for motorists and bike riders on Bridge Road where insufficient road space is available for a separated cycle way • On-pavement shared pedestrian and cyclist path for about 20 metres under the light rail bridge near Railway Street
Cycleway width	1.4-1.5 metres
Barrier type	Low profile temporary separator (Klemmfix)
Pre-cycleway existing posted speed limit	60km/hr
Post-cycleway existing posted speed limit	40km/hr

Cycleway type

According to *Cycling Aspects of Austroads Guide* (Austroads, 2014), a separated bicycle lane aims "to improve the safety for bike riders by providing (physical) separation from other motor traffic whilst maintaining directness of travel and priority at intersections".

According to the Austroads guide,

"A separated bicycle lane:

- *is usually considered where a substantial length of road is being widened or duplicated and where there are few driveways and intersections*
- *generally provides a higher level of service for cyclists and has been shown to promote increased patronage on cycling routes*

- *is an option to be considered where a full width off-road path with suitably high levels of directness and priority for cyclists at intersections cannot be achieved within the existing road reservation."*

The Proposal provides bike riders with a permanent separated bicycle lane along most of the Proposal corridor, where sufficient space is available in the roadway. This type of cycleway provides a higher level of service and enhances bike rider safety than shared zones with motorists or pedestrians, and has contributed to the increase in bike riding along the route since its installation.

To maintain right turns at signalised intersections at Glebe Road and Ross Street it is not possible under this Proposal to provide bike riders priority at intersections

Cycleway width

According to *Guide to Road Design Part 6a: Paths for Walking and Cycling* (Austroads, 2015) and the *Summary of Principles for Good Bike Infrastructure* (Bicycle NSW, 2020), the desirable minimum width for separated one-way cycleway paths is 1.4 metres. According to Part E 'Street Design Coordination' of the *Sydney Streets Code 2013* (City of Sydney Council, 2013), the preferred minimum width is 1.5 metres.

The existing Bridge Road cycleway generally has a lane width of 1,5 metres, while some areas are slightly narrower at a width of 1.4 metres.

3.3 Construction activities

3.3.1 Work methodology

The Proposal would utilise the existing cycleway along Bridge Road and as such the construction work associated with the Proposal is limited.

The Proposal would replace the existing Klemmfix barriers with a different low profile barrier structure, the details of which would be confirmed during detail. A construction methodology for the replacement of the current Klemmfix barrier would include:

- A temporary lane closure and temporary traffic flow management of a contraflow lane
- Out of hours removal of the existing barrier paddles and associated fixtures, delivery and installation of new barriers.

3.3.2 Construction hours and duration

Replacement of the existing Klemmfix barrier would take place at night to limit traffic impacts and reduce worker safety risks and would typically take place between Sunday to Thursday. The work would occur over a period of three to four weeks, with no more than five nights construction works in a row.

The proposed working hours are subject to a Road Occupancy Licence (ROL), but generally are as detailed in the following proposed out of hours works schedule:

- Night work hours: 8:00pm to 5:00am, Sunday to Thursday
- No work on public holidays.

3.3.3 Plant and equipment

Likely equipment that may be needed for the replacement of the current Klemmfix barrier include:

- Piggyback forklift
- Traffic control utes and trucks
- Hammer drills
- Impact drivers
- Hand tools
- Line marking trucks and equipment
- Day lighting
- Light vehicles.

3.3.4 Source and quantity of materials

The source and quantity of materials that may be needed for the replacement of the current Klemmfix barrier would be determined during a later detailed design phase and would consider the requirements of the NSW Sustainable Design Guidelines – Version 4.0 (TfNSW, 2017). Materials would be sourced from local suppliers where practicable. Reuse of existing and recycled materials would be undertaken where practicable.

3.3.5 Traffic management and access

It is expected that construction works would occur at night time to reduce impacts on traffic flow. Traffic management and access procedures that may be needed during the replacement of the current Klemmfix barrier would be identified in a traffic management plan (TMP) that would be developed in accordance with *Traffic Control at Worksites Manual* (Transport for NSW, 2020b) and Transport for NSW's *QA Specification G10 – Traffic Management* (Transport for NSW, 2020c).

The TMP would provide details of traffic management to be implemented during construction, to ensure that traffic flow along Bridge Road is maintained throughout construction works. Potential impacts to the public (including traffic and pedestrians) during construction would be managed through the TMP and detailed pedestrian traffic control plans.

3.4 Ancillary facilities

Ancillary features that may be needed for the replacement of the current Klemmfix barrier are limited, and there would be no compound site required for the activity. There may be some site access requirements for trucks and other equipment required, which would be detailed further in the TMP.

3.5 Public utility adjustment

As construction of the original cycleway is complete, the need for public utility adjustment is not required as part of the Proposal.

3.6 Property acquisition

Property acquisition is not required as a part of the Proposal.

4. Statutory and planning framework

This chapter provides the statutory and planning framework for the Proposal and considers the provisions of relevant state environmental planning policies, local environmental plans and other legislation.

4.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979 (*EP&A Act) establishes the system of environmental planning and assessment in NSW. This Proposal is subject to the environmental impact assessment and planning approval requirements of Division 5.1 of the EP&A Act. Division 5.1 of the EP&A Act specifies the environmental impact assessment requirements for activities undertaken by public authorities, such as Transport for NSW, which do not require development consent under Division 5.2 of the EP&A Act.

In accordance with Section 5.5 of the EP&A Act, Transport for NSW, as the proponent and determining authority, must examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the Proposal. Clause 228 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation) defines the factors which must be considered when determining if an activity assessed under Division 5.1 of the EP&A Act would have a significant impact on the environment.

Chapter 6.1 of this REF provides an environmental impact assessment of the sustained Proposal in accordance with Clause 228 and Appendix A specifically responds to the factors for consideration under Clause 228.

4.1.1 State Environmental Planning Policies

State Environmental Planning Policy (Infrastructure) 2007

State Environmental Planning Policy (Infrastructure) 2007 (ISEPP) aims to facilitate the effective delivery of infrastructure across the State.

Clause 94 of ISEPP permits development on any land for the purpose of a road or road infrastructure facilities to be carried out by or on behalf of a public authority without consent.

As the Proposal is for a road and road infrastructure facilities and is to be carried out by Transport for NSW, it can be assessed under Division 5.1 of the *Environmental Planning and Assessment Act 1979*. Development consent from council is not required.

The Proposal is not located on land reserved under the *National Parks and Wildlife Act 1974* and does not require development consent or approval under State Environmental Planning Policy (Coastal Management) 2018, State Environmental Planning Policy (State and Regional Development) 2011 or State Environmental Planning Policy (State Significant Precincts) 2005.

Part 2 of ISEPP contains provisions for public authorities to consult with local councils and other public authorities prior to the commencement of certain types of development. Consultation, including consultation as required by ISEPP (where applicable), is discussed in chapter 5 of this REF.

4.1.2 COVID-19 pandemic – Ministerial Orders

Under Section 10.17 of the *Environmental Planning and Assessment Act 1979,* the Minister for Planning and Public Spaces, Honourable Rob Stokes, created the *Environmental Planning and Assessment*

(COVID-19 Development – Temporary Cycleways) Order 2020 to permit the development of pop-up cycleways deemed as,

> *"necessary to protect the health, safety and welfare of members of the public during the COVID-19 pandemic, as it will facilitate social distancing by reducing the demand on public transport through greater use of cycle transport."*

The Order included the following provisions for pop-up cycleways:

"

1. *Development for the purposes of a pop-up cycleway (including the construction or installation of a temporary structure or work for that purpose) on an identified road is development specified for this Order.*
2. *The temporary use of an identified road as a cycleway is development specified for this Order.*
3. *The conditions specified for the development are that the development –*
    a. *Is carried out by or on behalf of a public authority, and*
    b. *Must not remain in place for more than 2 months after the expiry of the prescribed period."*

The existing Bridge Road pop-up cycleway was implemented under this Order, beginning construction on the 29 July 2020, and opening to the public on the 21 September 2020.

4.1.3 Local Environmental Plans

The Proposal is located in the suburbs of Camperdown, Forest Lodge and Glebe. The City of Sydney Council Local Government Area (LGA) is the local governing authority. Hence, the Sydney Local Environmental Plan (LEP) 2012 would apply.

Sydney Local Environment Plan 2012

Under the Sydney LEP the majority of the Proposal would be within the SP2 Infrastructure zone as the Proposal takes place within the road corridor. Surrounding the Proposal corridor to the north and south, most of the land is zoned as R1 General Residential, with some smaller parcels of land zoned as B2 Local Centre around Glebe Point Road, RE1 Public Recreation, B1 Neighbourhood Centre around Ross Street, and B4 Mixed Use to the south of Bridge Road in the suburb of Forest Lodge (refer to Figure 4-1).

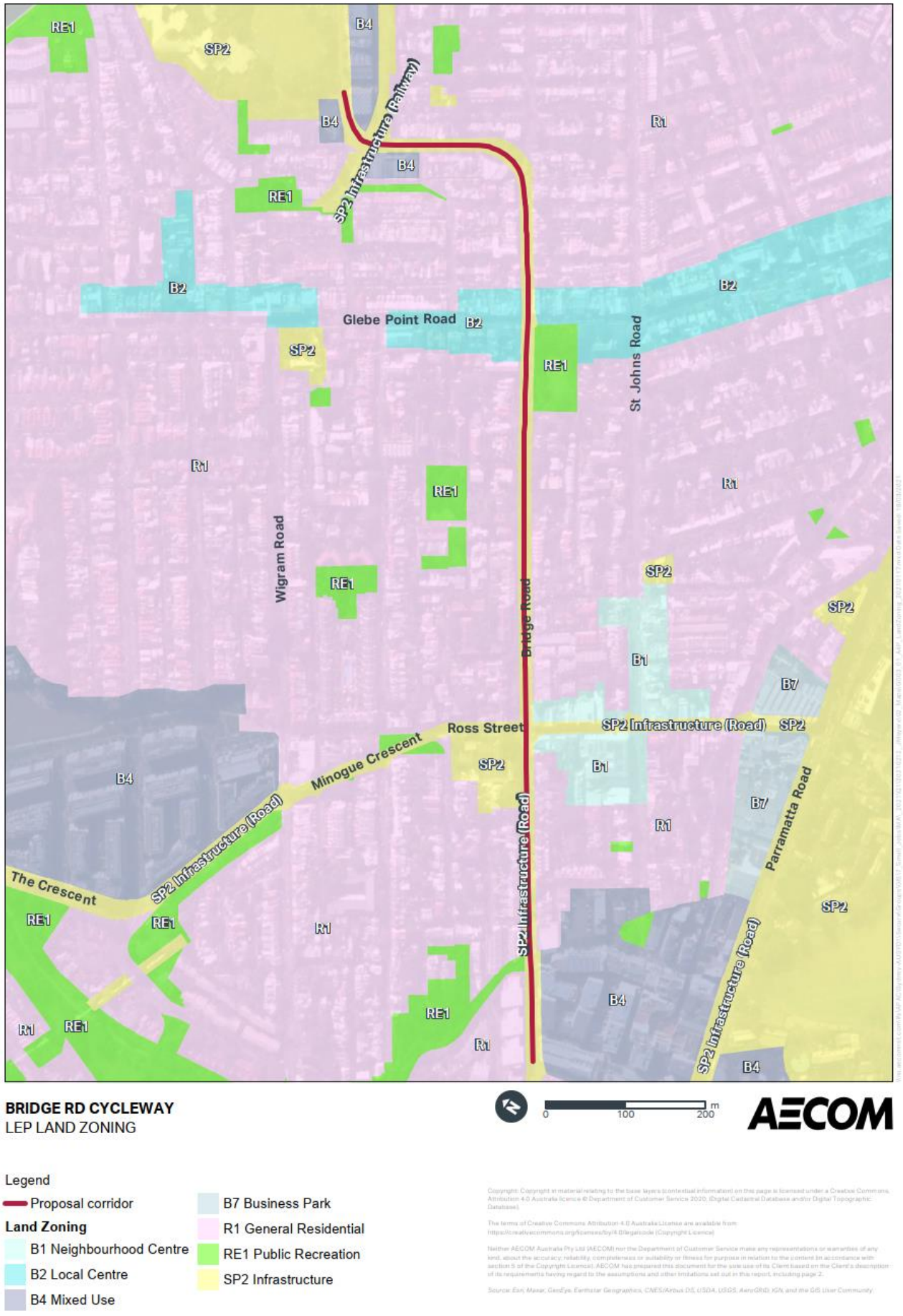


Figure 4-1 Proposal site and land use zones (Sydney LEP)

Table 4-1 lists the land use zones relevant to and adjacent to the Proposal, and describes the associated zone objectives from the Sydney LEP.

Table 4-1 Land use zones and objectives

Land use zone	Zone objectives
SP2 Infrastructure[1] (Classified Road)	• To provide for infrastructure and related uses. • To prevent development that is not compatible with or that may detract from the provision of infrastructure. • To provide for key transport corridors
SP2 Infrastructure[1] (Railways)	
R1 General Residential	• To provide for the housing needs of the community. • To provide for a variety of housing types and densities. • To enable other land uses that provide facilities or services to meet the day to day needs of residents. • To maintain the existing land use pattern of predominantly residential uses.
B1 Neighbourhood Centre	• To provide a range of small-scale retail, business and community uses that serve the needs of people who live or work in the surrounding neighbourhood. • To allow appropriate residential uses so as to support the vitality of neighbourhood centres
B2 Local Centre	• To provide a range of retail, business, entertainment and community uses that serve the needs of people who live in, work in and visit the local area. • To encourage employment opportunities in accessible locations. • To maximise public transport patronage and encourage walking and cycling. • To allow appropriate residential uses so as to support the vitality of local centres.
B4 Mixed Use	• To provide a mixture of compatible land uses. • To integrate suitable business, office, residential, retail and other development in accessible locations so as to maximise public transport patronage and encourage walking and cycling. • To ensure uses support the viability of centres.
RE1 Public Recreation	• To enable land to be used for public open space or recreational purposes. • To provide a range of recreational settings and activities and compatible land uses. • To protect and enhance the natural environment for recreational purposes. • To provide links between open space areas. • To retain and promote access by members of the public to areas in the public domain including recreation facilities and waterways and other natural features.

[1]The permitted use, noted within brackets, is as annotated on the relevant LEP Land Zoning map [(Sydney LEP)]. The purpose identified on the map is permitted with consent, including any development that is ordinarily incidental or ancillary to the use (Sutherland Shire Council, 2014).

Developments comprising roads and other development that is incidental or ancillary to that purpose are permitted with consent on land zoned SP2 (Classified Road), where the Proposal is located.

According to Division 17, Subdivision 1, ‘Road and road infrastructure facilities’ of the ISEPP,

"exempt development [(development that does not require approval)] may be carried out by or on behalf of a public authority… in connection with a road or road infrastructure facilities [including]:

…

c. erection, installation, maintenance, reconstruction or replacement of any of the following, and any associated landscaping works—

…

iv. pedestrian and cyclist facilities (such as footpaths, street lighting, kerb adjustments and ramps, pedestrian fences, refuges, holding rails, and bollards),

…

xi. pavement and road surface markings (such as bus lane markings), lane delineators, electric pavement lights, detection loops and traffic counters,"

While ISEPP removes any restrictions to seek consent under the provisions of LEPs as the Proposal can be assessed under Division 5.1 of the EP&A Act, the Proposal also complements many of the land use zone objectives listed in Table 4-1.

The Sydney LEP also identifies local heritage items within the LGA boundaries. Under the Sydney LEP the Proposal traverses four conservation heritage areas and passes multiple heritage buildings fronting Bridge Road. Heritage conservation areas have a special 'character' often due to its history or physical appearance. The heritage conservation areas that the Proposal is situated across are shown in Table 4-2 and Figure 6-11.

Table 4-2 Proposal and Sydney LEP heritage conservation areas

Sydney LEP Heritage Item	Type of item	Group/Collection	Category
C28 Glebe Point Heritage Conservation Area	Conservation Area	Urban Area	Townscape
C31 Lyndhurst Heritage Conservation Area	Conservation Area	Retail and Wholesale	Shop
C29 Glebe Point Road Heritage Conservation Area	Conservation Area	Urban Area	Streetscape
C33 Hereford & Forest Lodge Heritage Conservation Area	Conservation Area	Urban Area	Townscape

ISEPP removes any restrictions to seek consent under the provisions of LEPs as the Proposal can be assessed under Division 5.1 of the EP&A Act. However, further discussion of the Proposal and non-Aboriginal heritage items is discussed in Section 6.4.

Ecologically sustainable development

The City of Sydney is committed to ensuring that its projects are implemented in a manner that is consistent with the principles of ecologically sustainable development (ESD). The principles of ESD are generally defined under the provisions of clause 7(4) of Schedule 2 to the EP&A Regulation as:

- The precautionary principle – if there are threats of serious or irreversible damage, a lack of full scientific uncertainty should not be used as a reason for postponing measures to prevent environmental degradation.
- Intergenerational equity – the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.
- Conservation of biological diversity and ecological integrity – the diversity of genes, species, populations and their communities, as well as the ecosystems and habitats they belong to, should be maintained or improved to ensure their survival.
- Improved valuation, pricing and incentive mechanisms – environmental factors should be included in the valuation of assets and services.

The principles of ESD have been adopted by Transport for NSW throughout the development and assessment of the Proposal. Chapter 6 includes an assessment of the impact of the Proposal on a range of environmental factors, including noting the benefits of bike riding to reduce greenhouse gas emissions and to limit the effects of climate change. Principles of ESD are also acknowledged in Section 8.1 on justifications for the project and 8.2.1 ESD under the EP&A Act.

4.2 Other relevant NSW legislation

4.2.1 Roads Act 1993

Section 138 of the *Roads Act 1993* (Roads Act) requires consent from the relevant road authority for the carrying out of work in, on or over a public road. However, under clause 5(1) in Schedule 2 of the Roads Act, public authorities do not require consent for work on unclassified roads. Therefore, the Proposal only requires consent from the relevant roads authority for work impacting classified roads within the Proposal corridor.

The Proposal would involve works on Bridge Road, which is a classified State Road maintained by Transport for NSW. Consent under the Roads Act would not be required as the road is managed by Transport for NSW. However, Road Occupancy Licence/s would need to be obtained for road works and any temporary road closures. The Proposal would require temporary partial road closures for activities such as cycleway barrier replacement (refer to Section 7.3). Heritage Act 1977

The *Heritage Act 1977* (Heritage Act) provides for the conservation of buildings, work, relics and places that are of historic, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance to the State. Matters protected under the Heritage Act include items subject to an Interim Heritage Order and items listed on the State Heritage Register, the heritage schedules of local council LEPs, and the heritage and conservation registers established under section 170 of the Heritage Act by NSW state government agencies (section 170 Registers). The Heritage Act also provides for the protection of archaeological ‘relics’, being any deposit, object or material evidence that relates to the non-Aboriginal settlement of NSW and is of State or local heritage significance.

The Heritage Act is concerned with all aspects of heritage conservation ranging from basic protection against indiscriminate damage and demolition of buildings and sites, through to restoration and enhancement. A search of the Australian Heritage Database and NSW State Heritage Register was carried out on 9 February 2021 and identified one heritage item located next to the Proposal corridor. However, as the cycleway already exists, the Proposal which aims to make the structure permanent and which would have little construction impacts, would unlikely affect the heritage item.

Impacts to non-Aboriginal heritage items are considered further in Section 6.4 of this REF.

4.2.2 National Parks and Wildlife Act 1974

Sections 86, 87 and 90 of the *National Parks and Wildlife Act 1974* (NPW Act) require consent from the NSW Office of Environment and Heritage (OEH) for the destruction or damage of Aboriginal cultural heritage objects. It is considered unlikely that the Proposal would disturb any objects of Aboriginal cultural heritage significance (refer Section 6.1).

No Aboriginal cultural heritage objects were identified in the Step 2 Memo searches conducted in 26 May 2020. No Aboriginal cultural heritage objects were identified during construction works for the Bridge Road cycleway that was installed and opened on 21 September 2020.

In the unlikely case that unexpected archaeological items or items of Aboriginal heritage significance are discovered during the construction of the Proposal, all works would cease, and appropriate advice sought. Mitigation measures to protect Aboriginal heritage are listed in Section 7.2.

4.2.3 Biodiversity Conservation Act 2016

The *Biodiversity Conservation Act 2016* (BC Act) replaced the *Threatened Species Conservation Act 1995* as of 25 August 2017. The purpose of the BC Act is to maintain a healthy, productive and resilient environment for the greatest well-being of the community, now and into the future, consistent with the principles of ecologically sustainable development.

Under the BC Act, if a Division 5.1 activity has the potential to have a significant impact on biodiversity, the proponent must prepare a Species Impact Statement or opt-in to the Biodiversity Offsets Scheme which includes preparation of a Biodiversity Development Assessment Report to determine whether Serious and Irreversible Impacts are likely.

Given the location of the Proposal in an urban environment and that the cycleway already exists, it is unlikely that the Proposal would have an impact on threatened species, populations or ecological communities or their habitats and therefore have a significant impact on biodiversity.

As such a Species Impact Statement or opt-in to the Biodiversity Offsets Scheme is not required. Mitigation measures to protect biodiversity are listed in Section 7.2.

4.3 Commonwealth legislation

4.3.1 Environment Protection and Biodiversity Conservation Act 1999

Under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) a referral is required to the Australian Government for proposed actions that have the potential to significantly impact on matters of national environmental significance or the environment of Commonwealth land. These are considered in Appendix 1, Appendix 2 and Chapter 6 of the REF.

A referral is not required for proposed road activities that may affect nationally listed threatened species, endangered ecological communities and migratory species. This is because requirements for considering impacts to these biodiversity matters are the subject of a strategic assessment approval granted under the EPBC Act by the Australian Government in September 2015.

Potential impacts to these biodiversity matters are also considered as part of chapter 6 of the REF and Appendix E.

Findings – matters of national environmental significance

The assessment of the Proposal's impact on matters of national environmental significance and the environment of Commonwealth land found that there is unlikely to be a significant impact on relevant matters of national environmental significance or on Commonwealth land. Accordingly, the Proposal has not been referred to the Australian Government Department of Agriculture, Water and the Environment under the EPBC Act.

Findings – nationally listed biodiversity matters (where the strategic assessment applies)

The assessment of the Proposal's impact on nationally listed threatened species, endangered ecological communities and migratory species found that there is unlikely to be a significant impact on relevant matters of national environmental significance. Chapter 6 of the REF describes the safeguards and management measures to be applied.

4.4 Confirmation of statutory position

The Proposal is categorised as development for the purpose of a road and/or road infrastructure facilities and is being carried out by or on behalf of a public authority. Under clause 94 of ISEPP the Proposal is permissible without consent. The Proposal is not State significant infrastructure or State significant development. The Proposal can be assessed under Division 5.1 of the EP&A Act.

Transport for NSW is the determining authority for the Proposal. This REF fulfils Transport for NSW's obligation under section 5.5 of the EP&A Act including to examine and take into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the activity.

5. Consultation

This chapter discusses the consultation undertaken to date for the Proposal and the consultation proposed for the future. The consultation report prepared for the Proposal is included as Appendix J.

5.1 Consultation strategy

The key purpose of the engagement with the community and key stakeholders of the Proposal were to:

- Seek comment, ideas and suggestions for consideration when making a decision on the final form and location of the cycleway
- Advise the local community and directly affected stakeholders
- Continue to build a database of community members interested in the cycleway, to engage with further in the future
- Provide an opportunity for the community to learn more, ask questions and provide submissions through online surveys

Engagement with key stakeholders began in 2020 for the installation of the existing cycleway. Due to the rapid installation of the existing cycleway under the 'Environmental Planning and Assessment (COVID-19 Development – Temporary Cycleways) Order 2020' and to adhere to the COVID-19 public health orders, Transport for NSW recognises and acknowledges that it did not consult extensively with stakeholders at the outset, when the pop-up cycleway was installed. However, extensive consultation regarding the Proposal was carried out in March 2021, in line with Transport for NSW's commitment to prior to any decisions regarding the Proposal e made.

5.2 Community involvement

Engagement with key stakeholders and the community has been ongoing since the announcement of the existing cycleway in 2020. Consultation regarding the Proposal was focused specifically on the 'Have Your Say' consultation from 15 to 29 March 2021.

During the consultation period for the Proposal, Transport for NSW received 1,083 survey responses which were grouped thematically where possible to show the relative levels of interest or feeling about different matters.

A summary of the consultation activities conducted for the existing cycleway and the Proposal is provided in Table 5-1.

Table 5-1 Consultation type and summary of activities

Consultation activity	Summary
State and local government	Meetings were held with City of Sydney Council and the Local Member for Balmain has been briefed
Community updates delivered to local addresses	• **Community update, June 2020**: over 3,500 delivered to addresses closest to the cycleway

Consultation activity	Summary
	• **Community postcard, July 2020**: over 1,400 delivered to addresses closest to the cycleway • **Have Your Say community update, March 2021**: over 10,700 delivered to addresses closest to the cycleway
Signs placed along the route	• **Pop-up cycleway information sign, July 2020**: with 'YOU ARE HERE' point tailored for eight different locations along the route • **No parking sign, July 2020**: placed in multiple locations along the route • **Pop-up cycleway consultation sign, March 2021**: placed in twelve different locations along the route
NSW Government Have Your Say webpage	Details about the March 2021 consultation were also uploaded to the website at *https://www.nsw.gov.au/have-your-say*, to maximise awareness
Social media posts	**Two targeted and sponsored Facebook posts, March 2021**: the first post was aimed at the local community and had a reach of over 17,000 Facebook users and the second post was aimed at bike riders and had a reach of over 13,800 Facebook users
Pop-up transport webpage	The webpage went live at *nswroads.work/covid-infrastructure* in 2020, shortly after the cycleway was announced
Community information line, community information email address and webpage feedback form	Transport continues to respond to feedback and enquiries through the community information line on **1800 573 193**, community information email address at *covidpopup@transport.nsw.gov.au* and through the dedicated Bridge Road online feedback form at *nswroads.work/covid-infrastructure*, w i i e i e l e e e w e le e . Anyone using the feedback form can subscribe for updates and those who had been in contact previously, or subscribed, were informed about the March 2021 Have Your Say community consultation directly by email, along with key stakeholders such as the schools on the route
Review of survey responses	We reviewed all survey responses from the community and used this in decision-making about the proposal. The survey used in the March 2021 Have Your Say community consultation was used by 1,083 respondents to give feedback. Each survey included three op-ended questions, allowing for broad and lengthy feedback. Transport has reviewed and carefully considered all feedback, including 2,915 responses to these open-ended questions.

As a result of the consultation activities identified in Table 5-1, Transport for NSW received 2,915 open-ended responses to the final three survey questions regarding the existing cycleway and the Proposal. All responses have been reviewed and grouped thematically where possible, to show the relative levels of interest or feeling about different matters. Given the high number of responses received Transport for NSW was unable to provide a detailed response to every submission and instead provided responses for each submission theme, as outlined in Table 5-2.

Table 5-2 Summary of issues raised by the community

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
Safety	
The cycleway has made the road less safe / safer.	We acknowledge that the community feedback about safety was mixed. However, the Road Safety Audit process and the safety upgrades that have been made give Transport confidence the cycleway improves safety. These include: • the reduced 40 km/h speed limit (from 60 km/h, which is a significant reduction) • the introduction of a physical barrier to separate bike riders from vehicles • changes made in conflict areas with all side streets intersecting with Bridge Road, including new warning signs for road users exiting side streets and new painted green road markings for road users entering them, advising them of the cycleway. Feedback from bike riders very clearly shows they feel safer, as described above.
New road safety measures should be introduced, including traffic calming (such as speed humps), signs, lighting, road markings or speed cameras.	As described above, road safety has been improved in a number of ways. Transport will continue to consider further improvements, but does not plan to implement any further at this time (apart from to the cycleway barrier).
Independent Road Safety Audits concluded the cycleway is unsafe.	All cycleways have a Road Safety Audit carried out before opening. Road Safety Audits are commissioned and used by Transport to address safety issues on NSW roads, including cycleways. This process was followed for the cycleway and gave confidence that it would be safe. All issues raised in the audit were addressed by Transport and we also addressed all issues raised in the audit commissioned by residents. For example, we added the new warning signs referred to above.
Turning into and out of side streets is more dangerous for vehicles after the installation of the cycleway.	As described above, changes were made in conflict areas with all side streets intersecting with Bridge Road. These included new warning signs for road users exiting side streets and new painted green road markings for road users entering them, advising them of the cycleway.

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
Turning into and out of driveways is more dangerous for vehicles after the installation of the cycleway.	Many residents in Sydney already live alongside a cycleway. The cycleway enables access to properties and inevitably requires drivers to take care when crossing it. Similar to the changes made in conflict areas with all side streets intersecting with Bridge Road, new painted green road markings were added outside the major driveways, where vehicle volumes are highest.
Merging of the cycleway with the road at intersections is unsafe.	Gaps in the barriers at intersections are necessary to enable vehicles to turn safely. Due to road width, dedicated cycleway barriers could not be installed at six locations (eastbound and westbound) and appropriate merge treatments were installed with line marking and signs instead.
Vehicles overtaking buses and garbage trucks risk collision with oncoming traffic, now the road is narrower.	Unsafe overtaking should not be attempted anywhere at any time, as stated in NSW road rules. This applied on Bridge Road before and after installation of the cycleway, where a double solid line indicates vehicles should not overtake. City of Sydney Council has adjusted garbage collection times to minimise the impact on road users on the route.
The reduced speed limit is too low / makes the road safer / needs to be enforced.	The new speed limit of 40 km/h applies to all road users, including bike riders. The evidence clearly shows that slower speeds reduce the severity of crashes. Speed reduction and separation of bike riders from traffic both improve safety.
Bike rider behaviour is unsafe (including riding on the footpath or road, speeding, failing to slow for turning vehicles, not using lights at night etc).	In an emergency contact **000**. At other times contact the Transport Management Centre on **131 700** to report an incident or safety risk. Penalties will apply under NSW road rules in the usual way, whether to bike riders, drivers or pedestrians. For example, drivers who drive or park in a cycleway will be fined and vehicles parked in the cycleway will be towed. Although some of the behaviour described is clearly unsafe, some feedback included misperceptions about what is and is not allowed. For example, in some circumstances bike riders are able to ride on the footpath (and are encouraged to do so), such as when accompanying children.
Driver behaviour is unsafe (including failure to give enough space to bike riders at intersections, speeding, riding over the barrier, parking in the cycleway etc).	
The cycleway is misused by motorcyclists and pedestrians.	

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
Bus users can be in danger from bike riders when crossing the cycleway.	As part of the cycleway's installation a bus platform was constructed east of the Lyons Road intersection. Safety measures have been installed here to alert bike riders to bus passengers. These include signs and road markings.
Visibility is better / worse with the cycleway.	The Road Safety Audit carried out before opening did not identify the creation of unsafe restrictions to visibility.
The cycleway is unnecessary / helpful as a response to COVID-19.	Transport acted quickly to give people safer travel options in response to COVID-19. The cycleways were key public health measures, delivered on the advice of our health experts.
Removal of car parking improves bike rider safety.	This feedback is consistent with previous feedback, in which 92% of the bike riders surveyed felt safer riding on the cycleway than they did riding in the previous road conditions.
Improvements need to be made to the road surface, to drains and to prevent water build-up.	This will be monitored on an ongoing basis and improvement work carried out if needed.
Cycleway design	
Gaps in the cycleway should be filled, so it is continuous.	Gaps in the cycleway (apart from those at intersections) were created for bike riders to enter the cycleway at any point along the route. Some gaps were also left to help with drainage.
The cycleway should be extended, including past Sydney Fish Market and to connect it to other cycleways nearby.	In the longer term this is the intention. However, the redevelopment of the Sydney Fish Market is planned in the near future and it makes sense to wait for this to be completed first. Also, as part of the Sydney Fish Market redevelopment a cycleway connection is planned through to Wattle Street.
The cycleway should be wider / narrower.	The width is consistent with relevant Austroads guidelines.
Install special road markings / bike boxes at intersections for bike riders.	There is no plan to do so and this is consistent with the Road Safety Audit process. The road is too narrow at the intersections with Ross Street and Glebe Point Road to do this.
Emergency vehicles now lack space to overtake traffic.	The Road Safety Audit process did not identify this as an issue to prevent installation of the cycleway. Drivers should allow emergency

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
	vehicles to pass and should pull over where necessary, including in side streets. The cycleway replaces restricted car parking in places. When in use, this space would have been unavailable for overtaking and made it more difficult.
The shared path section of the cycleway close to the light rail station is badly designed.	Space at this section of road is particularly tight because of the bend at the bridge. The shared path is a solution designed to remove conflict between bike riders and vehicles here by maximising space for vehicles, while keeping bike riders separated.
The pedestrian refuge should be removed.	The Road Safety Audit process did not identify this as a safety concern. The pedestrian refuge near Cross Street is used as a crossing point to access the cycleway on Junction Street.
The cycleway should be bi-directional on one side of the road only.	The relevant guidelines make clear that uni-directional cycleways are safer and are the preferred design solution where feasible. They have the significant benefit of creating a better understanding between bike riders and other road users, as both travel in the same direction.
Possible changes to the light rail station should be taken into account.	Transport will continue to work closely with light rail colleagues to understand how any proposed changes may impact the cycleway and whether changes to the cycleway are needed.
The cycleway should be placed between parked cars and the road.	There is not enough space available for this.
Congestion and journey time	
Congestion is worse because vehicles are unable to pass buses and garbage trucks.	We acknowledge this feedback and we accept that minimal delays have resulted. As described above, City of Sydney Council has adjusted garbage collection times to minimise the impact on road users.
Vehicles turning right increase congestion because there is no room to pass on the narrower road.	We acknowledge this feedback and we accept that minimal delays have resulted.

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
The cycleway has helped to reduce public transport and car use.	This is consistent with previous findings. More than 30% of the people surveyed using the cycleway said they would have travelled to their destination using another form of transport before it was installed.
The cycleway has improved journey times for bike riders.	We acknowledge this feedback.
Parking	
Parking removal has inconvenienced residents, preventing access for them and others to their homes.	No permanent spaces were removed, as the whole route was subject to clearways. 46 temporary spaces were removed in total, from both sides of the road on the route. The disability parking space fronting 180 and 182 Bridge Road was removed and reinstated nearby on Jarocin Avenue. After a resident meeting another was also created on Clare Street. Both are permanent spaces. Emergency service vehicles, taxis and authorised postal vehicles are able to stop in the cycleway.
Parking removed because of the cycleway should be reinstated.	It is not possible to reinstate parking and to have a separated cycleway in this location.
Removal of parking has increased competition for spaces on other streets.	Residents who have permits to park should seek alternatives nearby. City of Sydney Council provides parking permit area maps on its website: *www.cityofsydney.nsw.gov.au*
Loading zones need to be installed in the cycleway.	There are no plans to install loading zones. Loading and unloading on side streets is encouraged as an alternative.
Parking removal is good and has benefited bike riders in particular.	We acknowledge this feedback.
Increased bike riding / benefits for bike riders	
The cycleway has increased bike riding and given new and less experienced bike riders the confidence to use their bikes.	Since its completion there have been up to 3,000 trips made on the cycleway per week.
The cycleway has improved the experience of existing bike riders.	We acknowledge this feedback.

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
The cycleway helps to improve bike rider health and encourages exercise.	We acknowledge this feedback.
Cycleway barriers	
The barriers should be made permanent / prevent vehicles crossing.	The barrier will be upgraded, as described.
The barriers should be removed / enable vehicles to cross it / be replaced with a painted cycleway.	Feedback clearly shows that bike riders feel much safer with a separated cycleway. These suggestions would remove the main benefits of the cycleway for many bike riders.
The barriers are dislodged by vehicles colliding with them and are vandalised.	Transport continues to monitor the situation and carries out regular maintenance while the temporary barriers are in place. The upgraded barrier will help prevent this.
Community consultation	
There has been insufficient consultation with the community about the cycleway.	As we said in the March 2021 Have Your Say community update, we recognise that due to the rapid installation of the cycleway to protect public health during the COVID-19 response we did not consult extensively. However, the March 2021 consultation about the cycleway's future was very widely publicised in a number of ways and over 1,083 survey responses were received.
The survey and community updates were flawed.	The survey was designed to enable respondents to give any feedback they wished. The community updates issued provided key information about the cycleway and Transport contact details for anyone with specific questions that were not covered. Since installation we have also spent a large amount of time responding to people who got in contact by telephone, email or through the webpage.
Cycleway cleaning	
Rubbish builds up in the cycleway and is not removed.	Street cleaning is the responsibility of City of Sydney Council and it carries this out regularly. The Council does have smaller street sweepers that can access the cycleway.
Garbage trucks and street sweepers are unable to access the cycleway, for rubbish collection and cleaning.	Residents are asked to leave bins on the kerb, outside pop-up cycleways. Transport will work with City of Sydney Council to ensure rubbish collection can continue as normal.

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
Bike network	
The cycleway should be better connected to the existing bike network.	This is the intention and Transport is working to do so.
The wider bike network should be improved.	Transport is doing exactly that and new cycleways were installed in 2020 and 2021. New routes are being developed all the time to improve the bike network. Making improvements to walking and bike riding infrastructure is a core focus for Transport, as outlined in relevant policy documents[1].
Location of the cycleway	
The location of the cycleway is good.	We acknowledge there was mixed feedback on this point, but only a small minority of respondents supported relocation to another street. The route was chosen after careful consideration and discussion with City of Sydney Council and it is part of the Principle Bicycle Network.
The cycleway should be relocated on other streets, including St Johns Road.	
Environment, sustainability and street scene	
The cycleway reduces emissions and noise, providing a more sustainable travel option / more congestion increases pollution.	Increased bike riding has been proven to have the benefits referred to. However, more congestion would also increase pollution.
Improvements should be made to improve local amenity, including adding vegetation, benches etc near the cycleway.	These suggestions were mostly out of scope and are the responsibility of City of Sydney Council.
Traffic lights	

[1] Such as Future Transport Strategy 2056: *https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf*

Feedback on the Bridge Road Pop-up Cycleway	Transport for NSW responses
Install dedicated traffic light signals for bike riders.	This was not something identified through the Road Safety Audit process and Transport does not plan to do so. Also, the road is too narrow at the intersections with Ross Street and Glebe Point Road to do this.
Traffic light sequencing should be improved / sped up, to increase traffic flow.	This was not something identified through the Road Safety Audit process and Transport does not plan to do so. Traffic signal phasing was not altered when the cycleway was installed and continues to run within the optimum times for this route.
Use of the cycleway	
The cycleway is underused / the cycleway is well-used.	Since its completion there have been up to 3,000 trips made on the cycleway every week. Bike riding is increasing in Sydney and new cycleways help accommodate this growth. Use of the cycleway has been measured and captured by an automatic bike counter.
Bus stops	
Bus stop(s) on the cycleway should be moved / removed.	As above, this was not something identified through the Road Safety Audit process and Transport does not plan to do so. Our data shows that bus usage remains high along the route.
Out of scope	
Many comments were out of scope or not feasible e.g.: • Bridge Road should be a single lane for traffic • remove power lines etc and other suggestions.	The Bridge Road Pop-up Cycleway was installed between Lyons Road and Taylor Street and the consultation in March 2021 was about this cycleway only. Feedback about these and other unrelated matters (e.g. changing the law to tax bike riders etc) and transport projects elsewhere (e.g. WestConnex) will not be addressed here.

All of the feedback received, which includes 2,915 open-ended responses to the final three survey questions, was carefully considered. A wide range of matters were raised and the majority of feedback about them was positive, neutral or mixed. All responses have been taken into account, with ongoing monitoring and evaluation of available data and feedback regarding the Proposal being provided to the Transport for NSW project team.

A large portion of feedback received during the consultation period focused on the safety of the Proposal, with many respondents highlighting the improvements to bike rider safety that will result from the Proposal. On the other hand, some respondents felt the existing cycleway was unsafe or in need of further safety improvements.

Based on the benefits identified including improved safety, the cycleway's growing use and delivery of a more sustainable travel option consistent with Transport's Future Transport 2056 vision[2] – the decision has been made to proceed with the Proposal.

5.3 Aboriginal community involvement

A search for National Native Title on the National Native Title Tribunal Register undertaken on 19 February 2020 did not identify any Native Title claims within the Sydney LGA. A basic and extensive AHIMS search was undertaken on 26 May 2020 which identified no Aboriginal items in or near the Proposal corridor. The search results for Native Title claims and AHIMS objectives items are included as Appendix F.

The Proposal is limited to the existing road corridor and excavations for the Proposal would be very minor, localised and shallow and therefore there are unlikely to be any construction or operational impact on Aboriginal heritage as a result of the Proposal. As a result of this, the Proposal has not been considered against the requirements of the Procedure for Aboriginal Cultural Heritage Consultation and Investigation (PACHCI) (RMS, 2011). The Metropolitan Local Aboriginal Land Council has been consulted about the Proposal.

5.4 Government agency and stakeholder involvement

Various key government agencies and stakeholders have been consulted about the Proposal during 2020 and 2021, including:

- City of Sydney Council - before, during and after ISEPP consultation, on-going
- Local Member for Balmain – during design refinement
- Internal Transport for NSW stakeholders – during strategic development phase and refinement of the design, on-going

The outcomes of the consultation to date have been described in this chapter and earlier sections of this REF including Chapters 2 and 3. Consultation remains on-going with all the stakeholders noted above as the design progresses and would continue prior to and during construction.

5.5 Ongoing or future consultation

Transport for NSW would continue to inform residents and stakeholders of the on-going development of the Proposal and likely timing of construction. This would be carried out using methods such as the distribution of community updates and emails to the stakeholder database. Ongoing steps to provide information would be largely consistent with those taken previously e.g. a written community update would be issued to the same distribution area as that for the consultation in March 2021, with details about how to get in touch by email, telephone or the project webpage to find out more.

[2] Future Transport Strategy 2056: *https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf*

6. Environmental assessment

This section of the REF provides a detailed description of the potential environmental impacts associated with the construction and operation of the Proposal. All aspects of the environment potentially impacted upon by the Proposal are considered. This includes consideration of:

- Potential impacts on matters of national environmental significance under the EPBC Act
- The factors specified in the guidelines Is an EIS required? (DUAP 1995/1996) as required under clause 228(1) *of the* Environmental Planning and Assessment Regulation 2000 and the *Roads and Related Facilities EIS Guideline (DUAP 1996)*. The factors specified in clause 228(2) of the Environmental Planning and Assessment Regulation 2000 are also considered in Appendix A.

Site-specific safeguards and management measures are provided to mitigate the identified potential impacts, as required.

Issue Identification

The Proposal has been reviewed in context of the receiving environment to identify issues for assessment. The review is documented in Table 6-1. Environmental factors which are expected to have an impact are assessed further in this REF. Factors which would not be impacted by the Proposal are only summarised in the following table.

Table 6-1 The Proposal and issue identification against environmental factors

Environmental factor	Further assessed within this REF	Reasoning
Traffic and transport	Yes	The Proposal is located in a local urban environment setting. The Proposal corridor would mainly service local commuters or those accessing local businesses and services. However it may also be used by commuters accessing the CBD, the Sydney Fish Market, or the Western Distributor. <u>Construction impacts:</u> As construction of the existing cycleway has already occurred, and due to any proposed modification of the cycleway such as the modification of the Klemmfix barrier would have impacts to traffic are likely to be minimal. Minimal impacts to traffic may occur as a result of ROLs during construction. Impacts to traffic will be minimised through conducting construction during night works and utilising traffic control. Further assessment of the potential traffic impacts during due to any proposed modification of the cycleway such as replacement of the current Klemmfix barrier is discussed in Section 6.1. <u>Operational impacts:</u> Operationally, the existing cycleway resulted in various changes to local traffic and transport including: removal of parking outside of clearway zone hours; reduction of two redundant bus stops; changed access for

Environmental factor	Further assessed within this REF	Reasoning
		bus stop 205013 ‘Pyrmont Bridge Rd opposite Barr Street’, and altered pedestrian movements. The current Proposal would make permanent these changes and as such further assessment of the Proposal’s parking and access impacts is provided in Section 6.1.
Visual impacts	Yes	The Proposal is located in a highly disturbed urban environment with a variety of built infrastructure including roads, public transport and the existing cycleway, footpaths, surrounding residential and commercial properties and other features including parks, street greenery and other services infrastructure. <u>Construction impacts:</u> The Proposal would retain the existing cycleway such that only minor construction works would be required due to any proposed modification of the cycleway such as replace the existing Klemmfix barriers with an alternative low profile separator. Temporary works would likely occur out of standard construction hours and include temporary lighting. The construction work would include plant, machinery and safety fencing. This would not form a permanent visual component to the streetscape and would temporary in nature. <u>Operational impacts:</u> The Proposal would retain the existing cycleway and maintain reduced kerbside parking. The reduced kerbside parking would increase the visual amenity of the road corridor and create cleaner sightlines. The Proposal would not cause any further visual impact as a result of line markings or green paint indicating the cycleway as this is already existing within the urban environment. Should the Klemmfix barrier be replaced this may improve the visual amenity of the area. A further assessment of the Proposal’s visual impacts is provided in Section 6.2.
Noise and vibration	Yes	The Proposal is located in an urban environment with various sensitive receivers nearby. <u>Construction impacts:</u> As construction of the existing cycleway has already occurred, the construction noise and vibration impact of the Proposal would be due to the modification to the existing cycleway through the replacement of the Klemmfix barriers. The noisiest plant utilised in the modification is considered to be a 5 tonne excavator and no vibration works are anticipated.

Environmental factor	Further assessed within this REF	Reasoning
		Operational impacts: The Proposal is not anticipated to result in operational noise impact. There may be a reduction in operational noise should the Proposal result in a modal shift in transport as people opt to utilise the cycleway thus resulting in a reduction in traffic. A further assessment of the Proposal's noise and vibration impacts is provided in Section 6.3.
Non-Aboriginal heritage	Yes	As mentioned in Section 4.1 the Proposal traverses four conservation heritage areas listed under the Sydney LEP and passes multiple heritage buildings fronting Pyrmont Bridge Road and Bridge Road. Construction impacts: As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required due to any proposed modification of the cycleway such as for the modification of the Klemmfix barrier, impacts on non-Aboriginal heritage during construction are not anticipated as part of the Proposal. Operational impacts: An assessment of the impacts to the surrounding heritage conservation areas in relation to the heritage significance statements is provided in Section 6.4.
Aboriginal heritage	No	A search for National Native Title on the National Native Title Tribunal Register was undertaken on the 19 February 2020. The search results did not identify any Native Title claims within the Sydney LGA. A basic and extensive AHIMS search was undertaken on 26 May 2020. The search identified no Aboriginal items in or near the Proposal corridor. The search results for Native Title claims and AHIMS objectives items are included as Appendix F. Therefore there are unlikely to be any construction or operational impact on Aboriginal heritage as a result of the Proposal. Standard mitigation measures regarding Aboriginal heritage are stated in Section 7.2.
Biodiversity	No	As construction of the existing cycleway has already occurred, impacts on biodiversity during construction are unlikely as part of the Proposal.

Environmental factor	Further assessed within this REF	Reasoning
		For the replacement of the current Klemmfix barrier, impacts on biodiversity are also unlikely. A search of potential EPBC Act Protected Matters was conducted on the 9 February 2021 and can be found in Appendix E. A search for species threatened in NSW and nationally was conducted on the Bionet search database on the 19 February 2021, and can be found in Appendix E. Standard mitigation measures regarding biodiversity are stated in Section 7.2.
Air quality	No	A search for National Pollutant Inventory from the Australian Government Department of Agriculture, Water and Environment was conducted around the Proposal corridor on the 12 February 2021. The search results are included as Appendix G. The search identified one facility 'Malt Shovel Brewery' located at 99 Pyrmont Bridge Road, Camperdown, which is about 470 metres away from the Proposal. Given the negligible negative air quality impacts of the Proposal, it is not expected to results in cumulative air quality impacts with the existing pollutant sources in the vicinity. <u>Construction impacts:</u> As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required for the due to any proposed modification of the cycleway such as modification of the Klemmfix barrier impacts on air quality are unlikely. <u>Operational impacts:</u> The Proposal corridor exists within a highly disturbed urban environment, located close to Sydney CBD which is typically known as having slightly worse air quality than the countryside. Long term effects of retaining the existing infrastructure would not result in an increase in air pollution. Should the Proposal result in a model shift in transport through people utilising the cycleway it may result in less vehicles utilising the roadway within the area. Standard mitigation measures regarding air quality are stated in Section 7.2.
Soil and contamination	No	A search for contaminated land records from the NSW Environment Protection Authority was conducted for the Council of the City of Sydney on the 12 February 2021. The search found no contaminated land records for sites along Pyrmont Bridge Road or Bridge Road or nearby the Proposal.

Environmental factor	Further assessed within this REF	Reasoning
		The search results are included as Appendix H. A desktop-based assessment done on 12 February 2021 identified one potentially contaminating land use along the Proposal length on Bridge Road at 'Glebe Auto Repairs' mechanic at 21 Bridge Road Glebe. As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required due to any proposed modification of the cycleway such as the modification of the Klemmfix barrier impacts to soil or contamination is unlikely. No operational impacts on soil and contamination are anticipated from the cycleway. Standard mitigation measures regarding soil and contamination are stated in Section 7.2.
Water quality and flooding	No	The Proposal is not identified as being within a flood planning risk area according to DPIE's NSW Planning Portal's 'ePlanning Spatial Viewer'. City of Sydney Council floodplain management documents contain figures on peak flood depths, including lands subject to a 1% AEP flood event. The Proposal is located in the Johnstons Creek Catchment and Blackwattle Bay Catchment. Part of the Proposal in the Blackwattle Bay Catchment area, Bridge Road between Taylor Street and Glebe Point Road and around Orphan School Creek, is located on flood prone land, and mapped as being inundated by 0 - 0.5metres depth in a 1% AEP (1 in 100 year) flood event. Part of the Proposal in the Johnstons Creek catchment area, around Bridge Road's intersection with Clare Street and Hewitt Avenue, is located on flood prone land and mapped as being inundated by 0 - 0.75 metres depth in the 1% AEP flood event. The flood maps for Blackwattle Bay and Johnstons Creek catchment areas are included as Appendix I. The flood chance percentage and the mapped potential flood levels as described above are relatively low. As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required due to any proposed modification of the cycleway such as the modification of the Klemmfix barrier impacts it is unlikely there will be any impacts on flooding. There are unlikely to be operational flooding impacts due to the existing cycleway or with the replacement of the Klemmfix barrier, as neither

Environmental factor	Further assessed within this REF	Reasoning
		would increase the area of impermeable surfaces or surface flows within the catchments, nor would they impede the flow paths of flood waters. The future design of the replacement barrier would allow drainage to pass through the installed structure Standard mitigation measures to protect existing flood paths and drainage systems in the area are stated in Section 7.2.
Waste and resource use	No	As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required due to any proposed modification of the cycleway such as the modification of the Klemmfix barrier it is anticipated there would be minimal waste and resource use as part of the Proposal. A small amount of waste would be associated with the modification of the Klemmfix barrier and would be disposed of according to standard mitigation measures regarding waste and resource use are stated in Section 7.2.
Socio-economic impacts	Yes	The population in the Sydney LGA is younger than the Greater Sydney area, attracted to a variety of educational and work attractions within and nearby the area. A variety of land uses surrounding the Proposal exist including residential properties, as well as small-scale village style retail and commercial premises. <u>Construction impacts:</u> As construction of the existing cycleway has already occurred, and given the limited scope of construction activities required due to any proposed modification of the cycleway such as the modification of the Klemmfix barrier, the socio-economic impact of the construction of the Proposal is likely to be minimal. <u>Operational impacts:</u> The Proposal would continue to provide the positive impacts introduced by the existing cycleway, including: providing a safe and efficient cycleway to become the route of choice for bike riders; supporting greater bike riding transport in Sydney through contributing to the cycleway network. Should the Proposal result in a model shift in transport through people utilising the cycleway it may result in less vehicles utilising the roadway within the area. The Proposal would provide a low-cost travel option that supports the young demographic in the area; and maximise bike rider safety through provision of a separated cycleway within the area.

Environmental factor	Further assessed within this REF	Reasoning
		A further assessment of the Proposal's socio-economic impact is provided in Section 6.5.
Cumulative impacts	Yes	The Proposal would, in combination with other cycleways identified within the City of Sydney's *Cycling strategy and action plan*, result in cumulative improvements in traffic congestion, safety, improved air quality, and health improvements. Cycleways being developed in surrounding neighbourhoods and the CBD include • Liverpool Street, College Street, Oxford Street Cycleway in Darlinghurst • Lawson Street pedestrian and cycling improvements in Redfern • Saunders and Miller streets cycling improvements in Pyrmont Cumulative effects between projects may also lead to negative impacts such as parking loss or cumulative changes to road access. There are no cycleway routes nearby the Proposal that would have negative cumulative impacts due to construction timeframes. Further analysis of cumulative impacts are considered in Section 6.6.

6.1 Traffic and transport

This section assesses and describes the impacts of the Proposal on traffic, transport and pedestrian and bike rider access within and surrounding the Proposal corridor. The assessment is based on a desktop analysis. Detailed traffic counts and modelling were not considered necessary for the assessment of the Proposal.

6.1.1 Existing environment

Road network and traffic

The Proposal is a State road under the care and control of Transport for NSW. It's located in a local urban environment setting. The Proposal corridor would mainly service local commuters or those accessing local businesses and services and will also be used by commuters accessing the CBD, the Sydney Fish Market, or the Western Distributor.

The current configuration of Pyrmont Bridge Road and Bridge Road consists of one general traffic lane in either direction, with the existing cycleway occupying the kerbside road space on both sides of the road along most parts of the Proposal corridor. Prior to cycleway implementation the configuration of Pyrmont Bridge Road and Bridge Road consisted of one general traffic lane in each direction, with clearways in place during traffic peaks and parking outside of clearway hours occupying the kerbside road spaces on both sides of the road along some of the corridor. The number of trafficable lanes under the current temporary cycleway condition traffic lanes is the same as before the introduction of the existing cycleway,

however road space previously used for clearways and/or parking has been reallocated to allow for the existing cycleway. Buses travel along Pyrmont Bridge Road and Bridge Road within the general traffic lanes. An excerpt of the Proposal corridor (near Barr Street) that required the conversion of clearway zones can be seen Figure 6-1.

Other features of the road network include traffic control measures and road network connections. The introduction of the existing cycleway changed the posted speed limit from 60km/hr 40 km/hr. The current Proposal corridor is also subject to school speed zones (40 km/hr), present on the western half of the corridor. There are various side streets off Pyrmont Bridge Road and Bridge Road, with Ross Street and Glebe Point Road providing main north west-south east thoroughfares. The existing cycleway has not altered the access to these main road connections.

Kerbside use and parking

There are various property access points/driveways along Pyrmont Bridge Road and Bridge Road that require motorists to traverse the cycleway.

The kerbside use in the existing Proposal corridor is currently occupied by the cycleway in most areas. In areas where there is no separated cycleway, the kerbside lane is used by a shared motorist and bike rider lane, with right turn lanes occupying the other road space.

Prior to the existing temporary cycleway clearways were in place on both sides of the road along Pyrmont Bridge Road between Parramatta Road and Booth Street and on Bridge Road between Cross Street and Harris Street in both morning (6am-10am) and afternoon (3pm-7pm) peak periods. Between Booth Street and Cross Street, clearways were in place in the morning peak (6am-10am) inbound and afternoon peak (3pm-7pm) outbound. Parking was permitted in some locations outside of the clearway hours of operation, although much of the corridor had “No Parking” restrictions in place

Prior to the cycleway, the kerbside parking included:

Eastbound side of Pyrmont Bridge Road and Bridge Road:

- 8 x 2P time restricted parking spaces
- 9 x unrestricted parking spaces.

Westbound side of Pyrmont Bridge Road and Bridge Road:

- 8 x 2P 6.00am to 3.00pm Monday to Friday and 8.30am to 12.30pm Saturday
- 20 x unrestricted parking spaces (outside clearway hours)
- 1 x accessible parking space.

The removal of parking as part of the existing cycleway is shown in Section 3. An excerpt of the Proposal corridor (near Barr Street) that required the removal of parking outside clearway hours can be seen Figure 6-1.

There are currently no loading zones along the Proposal corridor. No loading zones previously existed along the Proposal corridor before the implementation of the existing cycleway.

The accessible parking space was relocated to a nearby side street as part of the temporary cycleway project

Public transport

One bus service travels along the Proposal corridor (Route 470 - Lilyfield to City Martin Place), with two bus stops located on Pyrmont Bridge Road opposite Barr Street, and one located opposite Forest Lodge Public School. Two additional bus stops along the Proposal route were recently made redundant based on the low patronage alighting and boarding from those stops.

Prior to construction of the existing cycleway, bus stop number 205013 ‘Pyrmont Bridge Rd opposite Barr Street’ was situated along the Proposal corridor. This bus stop was developed into a raised bus platform with a pedestrian crossing, giving pedestrians right of way across the cycleway when boarding and alighting the bus. This bus stop can be located in an excerpt of the Proposal corridor (near Barr Street) in Figure 6-1.

There is also a light rail service (L1) that traverses the Proposal corridor via an overhead bridge across Bridge Road near Burton Street in Glebe which provides customers access and transfer between transport modes.

Walking and bike riding

The existing environment provides opportunities for bike riding, through the existing cycleway established in late 2020. The existing cycleway comprises of a separated cycleway on both sides of Bridge Road and Pyrmont Bridge Road between:

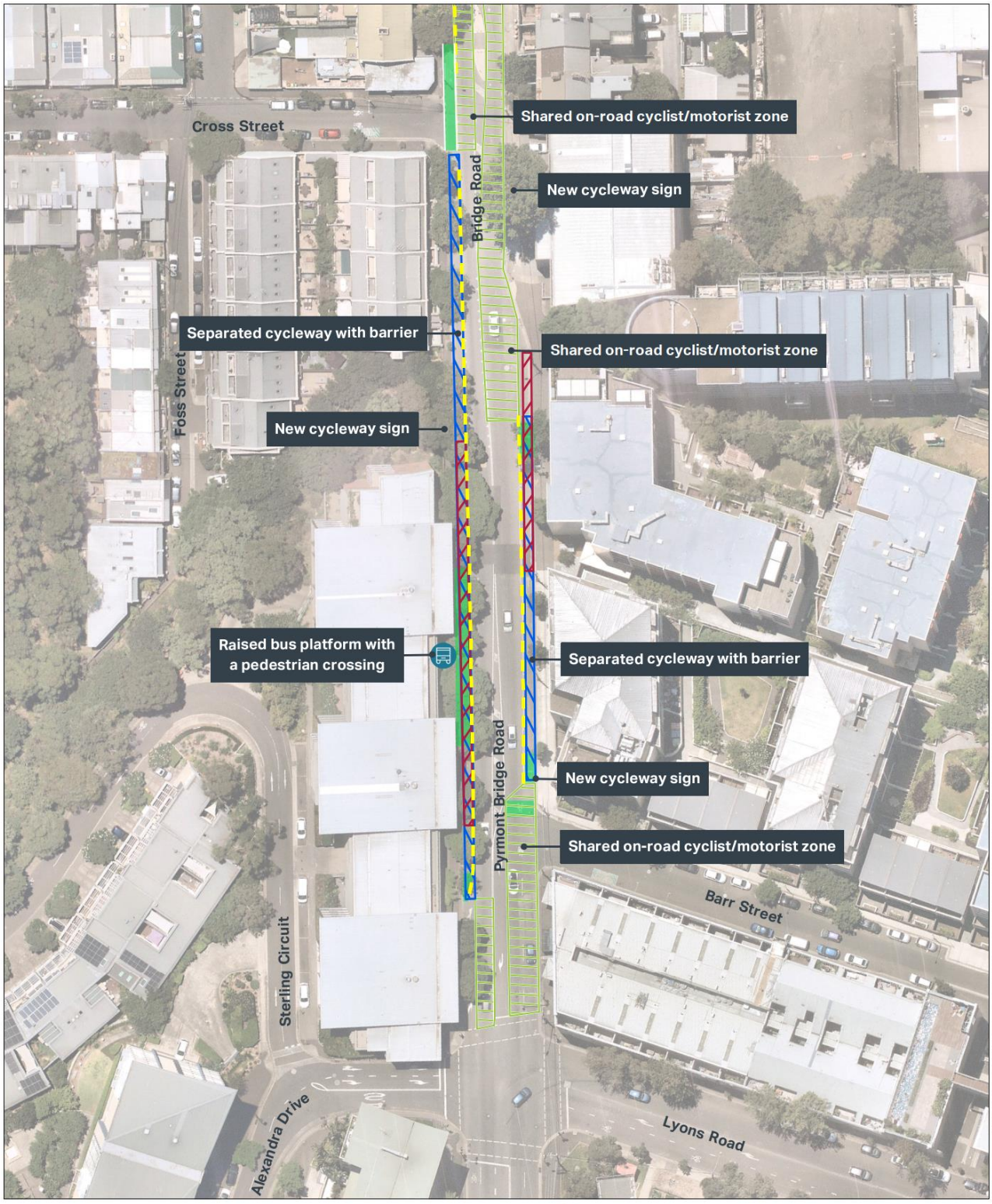
- Barr Street to Forest Lodge Public School
- Cross Street to Forest Lodge Public
- About 10 metres west of Jarocin Avenue to Clare Street
- Clare Street to Hewitt Avenue (eastern side of the road only)
- Woolley Street to about 70 metres east of Woolley Street
- Talfourd Street to Railway Street
- Railway Street to Taylor Street (eastern side of the road only)
- Railway Street to Burton Street (western side of the road only)

There are other sections of the Proposal were bike riders are required to share the roadway with motorists. Pedestrians and bike riders are required to use the shared path in a small section of the proposal under the railway bridge on the eastern side of the road near Railway Street.

Both cycleway treatments described above are shown in an excerpt of the Proposal corridor (near Barr Street) in Figure 6-1.

Previous to the existing cycleway being installed, there was no bike riding infrastructure located along the Proposal corridor.

The existing environment provides for walking by having pedestrian side paths on both sides of the entire Proposal corridor. Dedicated pedestrian crossing facilities, (including signalised crossings, zebra crossings and pedestrian islands) are present along the Proposal corridor in various locations, particularly near schools and businesses.



BRIDGE RD CYCLEWAY - KEY FEATURES
ROAD AND TRAFFIC ALTERATIONS NEAR BARR STREET

0 10 20 m

AECOM

Legend

- Bus stop (No. 205013)
- Previous 2P off-peak parking
- Shared on-road cyclist/motorist zone
- Previous clearway zone and current separated cycleway
- Green cycleway paint
- Klemmfix barrier

Figure 6-1 Bridge Road cycleway road features near Barr Street

6.1.2 Potential impacts

Construction

As the existing cycleway has already been constructed, possible construction impacts of the Proposal may be due to any proposed modification of the cycleway such as the replacement of the current Klemmfix barrier.

Given the limited scope and duration of construction activities for the modification such as the Klemmfix barriers to the existing cycleway, the traffic and transport impact of the Proposal during construction is likely to be minimal. This would include minimal traffic disruptions including a temporary lane closure and temporary traffic flow management of a contraflow lane.

The work would occur over a period of three to four week, with no more than five nights construction works in a row.

The proposed working hours would be between:

- Night work hours: 8:00pm to 5:00am, Sunday to Thursday; and
- No work on public holidays.
- During this time there would be the visual presence of work vehicles along Pyrmont Bridge Road/Bridge Road including a machinery such as a 5 tonne excavator, traffic control utes and trucks, hammer drills, impact drivers, hand tools, line marking trucks and equipment, light towers, and light vehicles.

Standard mitigation measures to mitigate the construction impacts to traffic and transport are summarised in Section 6.1.3.

The Proposal would also avoid additional traffic and transport disruptions to local receivers associated with decommissioning the cycleway.

Operation

In the same way as the existing pop-up cycleway, the permanent operation of the cycleway may affect (positively and negatively) the following:

- Users (pedestrians, motorists, public transport customers, bike riders) of Pyrmont Bridge Road and Bridge Road
- Residents of Pyrmont Bridge Road and Bridge Road
- Businesses, restaurants and cafés on Pyrmont Bridge Road and Bridge Road.

Details of how the Proposal may impact the above users is detailed below.

Road network and traffic

The Proposal would result in no changes to the current environment. The existing use of kerbside lanes, and revised on-street parking, removal of clearway areas, and reduced speed limits would continue to be used for a permanent cycleway.

Kerbside and parking

The Proposal would result in no changes to the current kerbside and parking environment and would retain the current road configuration.

The existing pop-up cycleway, installed in late 2020, maintained access for all driveway and laneways along the corridor. Access is maintained through the strategic placement of Klemmfix barriers, which are not placed across driveways in order to maintain motorist access. The current Proposal would seek to

make this impact permanent. The possible replacement of the Klemmfix barrier as part of this Proposal would maintain driveway access.

The existing pop-up cycleway resulted in the temporary removal of 46 parking spaces. The Proposal would seek to make this impact permanent. Since parking along Pyrmont Bridge Road and Bridge Road was either timed (short-stay) or unrestricted but subject to peak traffic clearway provisions, the impact of parking removal from the pop-up cycleway affected short-stay, overnight parking and local parking permit holders (outside of clearway hours). This impact is not anticipated to change with the Proposed permanent cycleway. Alternative overnight parking could be found in adjacent side streets which are generally unrestricted from 6.00pm to 8:00am while restricted to 1P and 2P during day time hours.

The impact of the removal of the limited timed and unrestricted parking, previously subject to clearway provisions, would be consistent with the existing impacts for motorists, and are considered minor in significance due to there being other on-street parking available in the immediately surrounding streets.

As there were no loading zones previously on the Proposal corridor, the Proposal would not result in any changes to access for the business loading fronting the Proposal corridor

One accessible parking space, which was relocated to a nearby side street as part of the temporary cycleway project, would remain in place in the side street

Public Transport

The Proposal would result in no changes to the current public transport environment and would retain the current road configuration.

Due to the existing cycleway, buses (route 440 and other private bus operators) still use Pyrmont Bridge Road and Bridge Road. Noting that two redundant bus stops were recently removed, prior to the existing cycleway, on Bridge Road it is unlikely that the Proposal would cause negative impacts on any other nearby public transport infrastructure or its operation.

The existing cycleway resulted in changed access for bus stop 205013 ‘Pyrmont Bridge Road opposite Barr Street’, which now has a raised platform and pedestrian crossing to increase the safety of public transport users boarding and alighting the bus across the cycleway. This would be retained by the current Proposal.

The Proposal seeks the permanent reallocation of roadspace to cycleways. During consultation with bus operators from Transit Systems and STA, undertaken during development of the temporary cycleway project there were no objections to the cycleway operating in the kerbside road space. Therefore the impact of the permanent removal of the clearway zone to bus operators is considered minor.

Walking and bike riding

The Proposal would result in minor changes to the current walking and bike riding environment and would retain the current road configuration.

By retaining the existing cycleway, the Proposal would maintain the positive operational impact of connecting people on bikes directly to other existing parts of the cycleway network and the wider city of Sydney, as outlined in the Access Strategy. The Proposal’s inclusion of a possible modification of the Klemmfix barrier to a concrete structure or similar would enhance bike rider safety.

Pedestrian impacts would remain the same. Pedestrians currently and would continue to use dedicated pedestrian crossing facilities, (including signalised crossings, zebra crossings and pedestrian islands) to cross the cycleway and road. The existing cycleway, installed in late 2020, may have impacted pedestrians by limiting opportunities for jaywalking due to the presence of the Klemmfix barrier. This would have increased the overall safety of such crossings. Retaining the existing cycleway would continue to support pedestrians through providing bike riders, who alternatively would have ridden on the footpath, a safe cycleway to ride along.

6.1.3 Safeguards and management measures

The following safeguards apply to the Proposal.

Impact	Environmental safeguards	Responsibility	Timing
Traffic and transport	According to Section 4.8 of QA *G36 Environment Protection,* a Traffic Management Plan (TMP) will be prepared and implemented as part of the CEMP for construction works. The TMP will be prepared in accordance with the Transport for NSW *Traffic Control at Work Sites Manual* (RTA, 2010) and *QA Specification G10 Control of Traffic* (Transport for NSW, 2008). The TMP will include: • measures to maintain access to local roads and properties • site specific traffic control measures (including signage) to manage and regulate traffic movement • measures to maintain pedestrian and bike rider access • requirements and methods to consult and inform the local community of impacts on the local road network • access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads. • a response plan for any construction traffic incident • consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic • monitoring review and amendment mechanisms.	Contractor	Detailed design / Pre-construction
Traffic and transport	Consultation with emergency service authorities including NSW Rural Fire Service and Fire Rescue would be undertaken during development of the detailed design of the replacement safety barrier	Transport for NSW	Detailed Design
Traffic and transport	Vehicular property access would be maintained including access to pre-schools, places of worship and all commercial premises during construction works. Where property access would have to be temporarily closed during construction: • property owners would be notified at least seven calendar days prior to the access closure • alternative access would be provided if available	Contractor	Construction

Impact	Environmental safeguards	Responsibility	Timing
	• access closure would be minimised and access would be returned to the property owners as soon as possible		
Traffic and transport	Pedestrian and bike rider access is to be maintained throughout construction. Provision of signposted outlining the pedestrians and bike rider diversion routes would be displayed during construction. There would be advance notification of any construction works that affect pedestrians and bike riders.	Contractor	Construction
Traffic and transport	Access to appropriate bus stop locations would be maintained during construction in consultation with bus operators. Ongoing updates on locations and access to bus stops would be provided to the community during construction period to ensure that disruption is minimised.	Contractor	Construction
Traffic and transport	Monitoring of roadway and cycleway traffic to track possible congestion impacts and cycleway usage.	Transport for NSW	Operation

Other safeguards and management measures that would address traffic and transport impacts are identified in sections 6.3 (noise and vibration), section 6.5 (socio-economic) and 6.6 (cumulative).

6.2 Visual impacts

This section assesses the potential visual impact of the Proposal on a variety of viewpoints along the existing cycleway. The visual impact assessment assesses the quality of existing viewpoints and the visual sensitivity to change as a result of the Proposal.

6.2.1 Methodology

The assessment of the potential visual impact of the Proposal used an analysis of the sensitivity of the view of either the landscape itself or the receptor seeing the view subject to change, and an assessment of the magnitude of change on that zone or view as recommended by the Roads and Maritime's *Environmental Impact Assessment Practice Note – Guideline for Landscape Character and Visual Impact Assessment (Reference number EIA-N04, 2013).*

The visual impact of the changes as a result of the Proposal was assessed by examining the views seen from a number of representative viewpoints. These visual catchments were often bounded by landmarks, including intersections, cross streets and bends in the road. They were defined using desktop analysis.

The visual impact was assessed against the magnitude of the Proposal and the sensitivity. The magnitude of the Proposal refers to the scale, contrast and quality of the Proposal. The sensitivity revers to the qualities of the area and the number and type of receivers and how sensitive the existing character of the environment is.

6.2.2 Existing environment

The Proposal and existing cycleway is located within an urbanised area. The dominant land uses in the surrounding area are a mixture of infrastructure (Local and State roads), residential, recreational, commercial, and educational facilities. Residential properties and a number of commercial buildings front Bridge Road. The properties fronting the road corridor are generally one or two storey terrace houses with the exception of low rise apartment blocks near the Lyons Road intersection.

Street trees line Pyrmont Bridge Road and Bridge Road, however no street trees are present within the Proposal corridor.

As the Proposal involves retention of the existing cycleway and associated infrastructure, the permanent change to the visual landscape for receivers including residents, pedestrians, heritage places, occupants of vehicles or bike riders would be consistent with the current views. Figure 6-2 to 6.8 present a variety of existing viewpoints traveling east to west along the Proposal corridor.

Viewpoint 1. (V1) – Bridge Road near Burton Street looking south near tram overpass

Viewpoint 1 presents a viewpoint from the perspective of motorists traveling along Bridge Road. Visually prominent in this viewpoint are the various transport modes including the light rail overpass, the green painted cycleway with a Klemmfix barrier, and other motorists on the road.

Figure 6-2 Viewpoint 1 Bridge Road near Burton Street looking south near tram overpass

Viewpoint 2. (V2) –Allum Place looking east across Bridge Road

Viewpoint 2 presents a viewpoint from the perspective of the commercial area across Bridge Road. Visually prominent in this viewpoint is the motor traffic along Bridge Road, the concrete road space, residential buildings and stone and wood fences. The cycleway with the Klemmfix barrier, and other infrastructure including street and traffic signs, and transmission lines form part of this existing view but are not dominant features.

Figure 6-3 Viewpoint 2 Allum Place looking east across Bridge Road

Viewpoint 3. (V3) – Bridge Road pedestrian near Lyndhurst Street intersection looking south west

Viewpoint 3 presents a viewpoint from the perspective of pedestrians on Bridge Road near Lyndhurst Street looking at Bridge Road north-east. Visually prominent in this viewpoint is the urban greenery, road infrastructure including motor vehicles, buildings including those reflecting heritage conservation area (C31), and to a lesser extent the Klemmfix cycleway barrier and other infrastructure including transmission lines.

Figure 6-4 Viewpoint 3 from Lyndhurst Street intersection looking south west towards Bridge Road

Viewpoint 4. (V4) – Bridge Road corner of Rosebank Street looking South West

Viewpoint 4 presents a viewpoint from the perspective of residents and the community members at St James Hall looking across the road and towards H J Foley Park. Visually prominent in this viewpoint is the greenery provided by the park and street trees, the stone walls surrounding the park, the road and stone kerb and motor vehicles, and to a lesser extent the green painted cycleway without Klemmfix barrier, and various other infrastructure including transmission lines.

Figure 6-5 Viewpoint 4 from corner of Bridge Road and Rosebank Street looking south west

Viewpoint 5. (V5) – Bridge Road near Rosebank Street looking south west

Viewpoint 5 presents a viewpoint from the perspective of motorists and bike riders as they transition from the separated cycleway with Klemmfix barriers to a singular shared bike rider and motorist road lane. Noticeable in the visual environment for a motorist or bike rider is the on-road painted bicycle symbols that indicate the end of the cycleway and the road signs signalling the merge, and the road network. Other features in the surrounding environment include the street trees, residential housing and transmission line infrastructure.

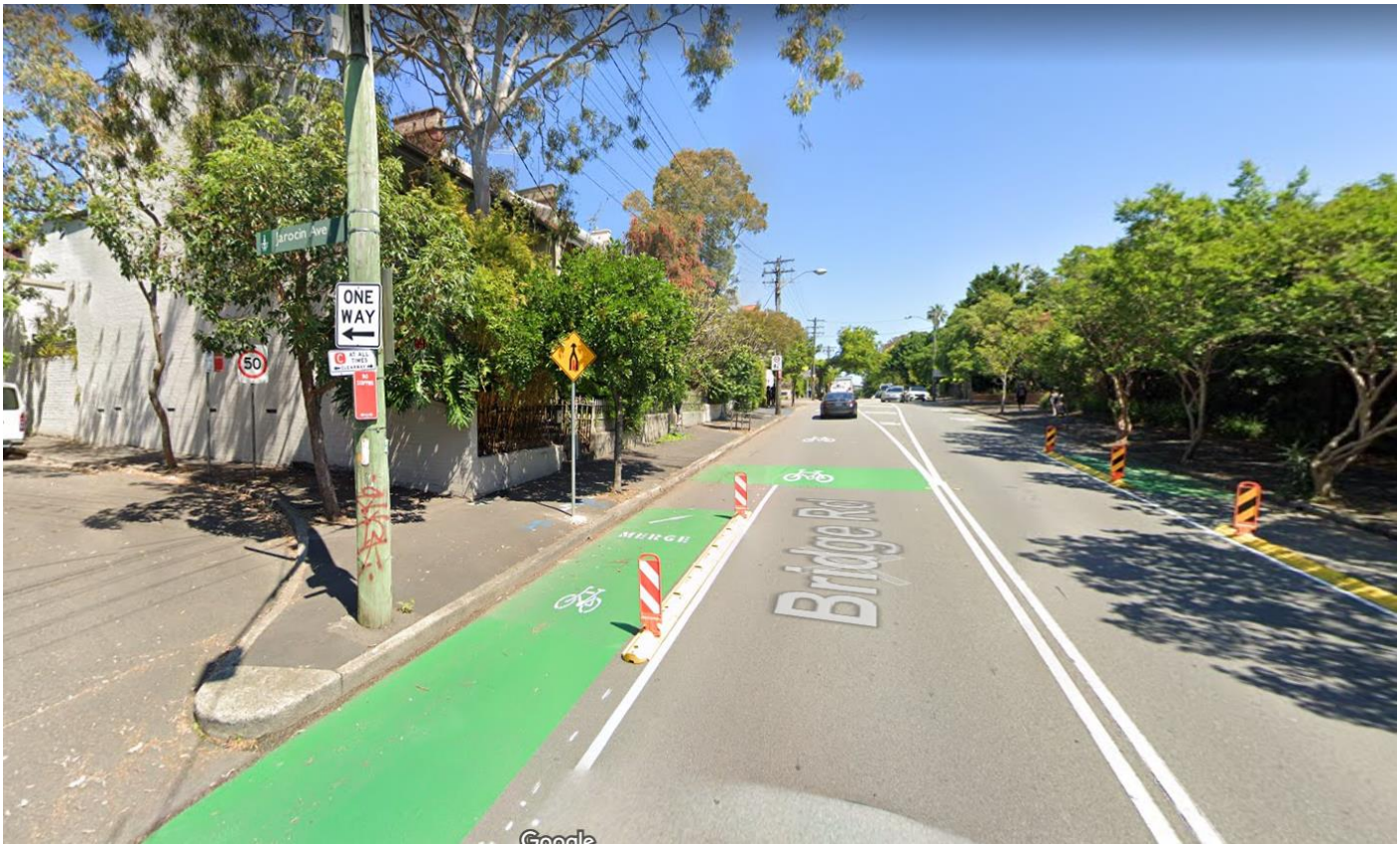


Figure 6-6 Viewpoint 5 on Bridge Road near Jarocin Avenue looking South

Viewpoint 6. (V6) Bridge Road opposite Junction Street looking across Bridge Road

Viewpoint 6 presents a residential and pedestrian viewpoint from Bridge Road opposite Junction Street looking south east. The visual environment is dominated by two-storey residential buildings reflective of the heritage conservation area (C33), urban greenery including street trees, road infrastructure including motor vehicles, and the cycleway infrastructure including the green painted cycleway lane and the Klemmfix cycleway barrier. Before the existing cycleway was implemented, this viewpoint would have showed clearway signs and cars parked along the side of the road (outside of clearway hours) where the existing cycleway infrastructure is currently.

Figure 6-7 Viewpoint 6 Bridge Road opposite Junction Street

Viewpoint 7. (V7) Barr Street looking across Pyrmont Bridge Road and the raised bus platform

Viewpoint 6 presents a pedestrian viewpoint from Pyrmont Bridge Road near Barr Street looking towards the raised bus platform built to accommodate the existing cycleway. The visual environment is dominated by urban greenery including street trees, road infrastructure including motor vehicles, medium density residential buildings, the green painted cycleway lane, pedestrian crossing and the Klemmfix cycleway barrier, and less noticeably the bus stop.

Figure 6-8 Viewpoint 7 Barr Street looking across Pyrmont Bridge Road and the raised bus platform

The seven viewpoints described above are shown in Figure 6-9.

Figure 6-9 Selected representative viewpoints along the Proposal corridor

6.2.3 Potential impacts

Construction

The Proposal would retain the existing cycleway such that only minor construction works would be required including the modification of the existing cycleway such as the replacement of the Klemmfix barriers with an alternative low profile separator. It is likely these works would occur out of standard construction hours for the safety of the workers and to minimise impacts on traffic.

The construction work would include plant, machinery and safety fencing to restrict public access whist the Klemmfix barriers are replaced. This would not form a permanent visual component to the streetscape and would be temporary in nature.

Temporary lighting would be required for evening and night time construction works. Lighting would be generated from lighting towers, as the existing street lighting would not provide the necessary light for works to be carried out safely and appropriately. Lighting towers have the potential to spill light into adjacent areas, particularly building uses closer to street level. The light generated from those towers, although focused and directed to the ground level, may be visible from residents in higher levels of occupancy along Pyrmont Bridge Road/Bridge Road. As the Proposal corridor already features lighting at night in the form of streetlights, traffic lights, vehicle head lights and light spill from street-level premises, the lighting towers would not substantially alter existing conditions. Additionally, as construction works would be short term in duration, the overall effect of the lighting towers and other construction equipment is considered to be a minor, negative impact.

Operation

Installation of the existing pop-up cycleway changed the character of the streetscape along Pyrmont Bridge Road/Bridge Road. Previously the existing roadway was dominated by vehicles and parked cars, the streetscape has now been altered presenting increased on-road road furniture and clearer sightlines as a result of reduced number of parked cars. The impact of the Proposal would be similar to the current visual landscape of the Proposal corridor, with all existing on-road cycleway road furniture, line marking and infrastructure to be maintained in place.

Minor changes are expected with the modification to the existing cycleway such as the replacement of the Klemmfix barriers with an alternative low profile separator however the overall visual landscape would be consistent with the existing environment. The current Klemmfix barriers are bright orange-coloured for bike rider safety and create a small visual impact to existing view lines. Noting the Proposal is situated across four heritage conservation areas, the replacement of these barriers with a potentially different material may allow a less visually intrusive colour to be considered for the cycleway barrier. The detailed design would take this into account, and further discussion of heritage considerations is provided in Section 6.4.

In the long term, the cycleway is likely to be used by an increasing number of bike riders which would increase the presence of people within the street. This is not expected to substantially change the overall visual environment.

An evaluation of the visual impact of the Proposal is described in Table 6-2.

Table 6-2 Evaluation of visual impact of the Proposal

Viewpoint	Element of Proposal visible	Nature of Impact	Visual Sensitivity	Magnitude of view effect	Overall rating of visual impact
V1	The solid green painted lane, and the yellow and orange Klemmfix barrier of the existing cycleway are noticeable from this viewpoint. Other transport modes are also prominent from this viewpoint and the cycleway adds to the transport-orientated character of this viewpoint. Without the Proposal the view point would not differ greatly.	N	VL	G	VL
V2	The yellow and orange Klemmfix barrier of the existing cycleway is noticeable from this viewpoint. The viewpoint of the Proposal is obstructed from lanes of motorist traffic. Without the Proposal, this viewpoint would include parked cars.	N	G	G	G
V3	The yellow and orange Klemmfix barrier of the existing cycleway on both sides of Bridge Road is noticeable from this viewpoint. The features visible of the existing cycleway are visually distinct from the surrounding environment. The surrounding environment would not be significantly different without the Proposal.	A	VL	G	VL
V4	The solid green paint on the cycleway is visually noticeable from this viewpoint (with an absence of the Klemmfix barrier), however are complimentary to the surrounding greenery. This viewpoint would not be significantly different without the Proposal as Klemmfix barriers are not utilised and the space would not be utilised as parking.	N	VL	G	VL
V5	The solid green paint on the cycleway, the Klemmfix barrier, and associated bicycle	N	VL	G	VL

Viewpoint	Element of Proposal visible	Nature of Impact	Visual Sensitivity	Magnitude of view effect	Overall rating of visual impact
	symbols on the road and other signposts are visually noticeable from this viewpoint. The prominence of these features would be positively received by bike riders with added safety when merging to the singular road lane with motorist traffic, though the view of motorists has been altered by the additional road furniture and signage. Without the Proposal motorists would have clearer views as there would be no additional road furniture nor signage.				
V6	The solid green paint on the cycleway and the Klemmfix barrier are visually noticeable from this viewpoint. The surrounding greenery is also visually noticeable. These features would have replaced the visual impact of parked cars and passing buses during clearway hours.	N	VL	VL	VL
V7	The solid green paint on the cycleway, the Klemmfix barrier, the slightly raised bus stop pedestrian crossing, and the pedestrian crossing signage are visually noticeable from this viewpoint. The green paint is complimentary to the surrounding urban greenery, while the yellow and orange Klemmfix barrier and yellow pedestrian signage is visually distinct from the surrounding environment. Without the Proposal this viewpoint would have been dominated by parked cars.	A	VL	G	VL

Notes:

A=Adverse, N= Neutral, B= Beneficial

G=Negligible, VL=Very Low, L=Low, ML=Moderate Low, M=Moderate, MH=Moderate High, H=High, VH=Very High

6.2.4 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Visual impact	Visual coherence with heritage conservation areas aesthetics are to be incorporated into the final design of the safety barriers.	TfNSW	Detailed design / pre-construction
Visual impact	A high level of housekeeping will be maintained by ensuring that the work site is kept in a clean and tidy condition. Waste materials, from construction, will be removed from site.	Contactor	Construction

Other safeguards and management measures that would address landscape character and visual impacts are identified in section 6.4 (non-Aboriginal heritage).

6.3 Noise and vibration

This section assesses and describes the noise and vibration impacts associated with the Proposal. The assessment is based on the Roads and Maritime “Construction Noise Estimator” tool. The assessment identified nearby sensitive receivers, characterised background noise conditions, quantitatively assessed potential noise and vibration-related impacts and recommended suitable management measures to minimise impacts during construction.

6.3.1 Methodology

Construction noise

Construction noise impacts were predicted using Transport for NSW’s “Construction Noise Estimator” tool to determine Noise Catchment Areas (NCAs) listed in Table 6-4. NCAs differentiate receivers into groups that would be similarly impacted by noise and vibration from construction activities.

Construction noise would be generated during proposed modification of the cycleway such as the modification to the existing cycleway including the replacement of the Klemmfix barriers. The ‘distance based (nosiest plant)’ assessment was selected to conduct the assessment as it considers the noisiest plant to be utilised to complete the construction works. The assessment considers noise generated in the ‘worst case’ scenario, in this case the nosiest plant was considered to be a 5 tonne excavator.

Construction vibration

No jackhammering, compaction or intrusive works are anticipated during construction, and as such no vibration is likely to be generated and an assessment of potential vibration impacts was not required.

Operational noise

An operational noise assessment was not undertaken as the Proposal is not anticipated to result in operational noise impacts. There may be a reduction in operational noise should the Proposal result in a modal shit in transport as people opt to utilise the cycleway thus reducing traffic and the associated noise.

6.3.2 Existing environment

The surrounding land use activities around the Proposal corridor are:

- Residential
- Local centre
- Mixed use
- General commercial
- Public recreation
  - Glebe tennis courts
  - DR HJ Foley Rest Park
- Educational facilities

These surrounding land uses are shown in the key feature in Section 3.1, and the land use zoning Figure 4-1 in Section 4.1.3.

The construction noise management levels (NMLs) are established to indicate residential receivers whom may potentially be affected by construction of the Proposal. Construction works which may cause inconvenience within the community (traffic impacts) or safety concerns will be considered for out of hours works. NMLs outside of the standard construction hours are presented in Table 6-3.

Table 6-3 Procedure for establishing construction NMLs at residential receivers (ICNG, DECC 2009)

Time of Day	Management level LAeq (15 min)	How to apply
Recommended standard hours: (Monday to Friday 7 am to 6 pm Saturday 8 am to 1 pm No work on Sundays or public holidays)	Noise affected (RBL + 10 dB)	The noise affected level represents the point above which there may be some community reaction to noise. Where the predicted or measured LAeq (15 min) is greater than the noise affected level, the proponent should apply all feasible and reasonable work practices to meet the noise affected level. The proponent should also inform all potentially impacted residents of the nature of works to be carried out, the expected noise levels and the duration, as well as contact details.
	Highly noise affected (75 dB(A))	The highly noise affected level represents the point above which there may be strong community reaction to noise. Where noise is above this level, the relevant authority (consent, determining or regulatory) may require respite periods by restricting the hours that the very noisy activities can occur, taking into account: • Times identified by the community when they are less sensitive to noise (such as before and after school for works near schools, or midmorning or mid-afternoon for works near residences). • If the community is prepared to accept a longer period of construction in exchange for restrictions on construction times.
Outside recommended standard hours	Noise affected (RBL + 5 dB)	A strong justification would typically be required for works outside the recommended standard hours. The proponent should apply all feasible and reasonable work practices to meet the noise affected level. Where all feasible and reasonable practices have been applied and noise is more than 5 dB(A) above the noise affected level, the proponent should negotiate with the community.

Table 6-4 provides the background noise levels background noise levels (also referred to as Rating Background Level (RBL)) and NMLs for the Proposal corridor.

Table 6-4 RBLs and NMLs

Noise Area Category		R3
RBL or L_{A90}[1] Background level (dB(A))	Day	50
	Evening	45

Noise Area Category		R3
	Night	40
$L_{Aeq(15minute)}$ Noise Management Level[2] (dB(A))	Day	60
	Day (OOHW)	55
	Evening	50
	Night	45

Notes: [1] L_{A90} = Background noise level

[2] Noise Management Level for works during standard hours = Background level plus 10dB (A) Noise Management Level (NML) for out of hours works = Background level plus 5dB (A). Potential impacts

Construction

Construction works to modify the existing cycleway including the replacement of the Klemmfix barriers would generally be undertaken outside of standard construction hours and during night works to minimise the level of disruption to traffic and provide safe working conditions along Bridge Road. Potential impacts to sensitive receivers would be short term as these works would be for a duration of less than two weeks and would move progressively along the corridor. The potential impacts from construction noise have therefore assessed a 'worse case' scenario in terms of noise management levels.

The noise assessment for construction was undertaken in using the 'Construction Noise Estimator' tool to assess the potential noise impacts at affected residences and assist in identifying the most appropriate management and mitigation measures throughout the construction process. As previously stated, the 'distance based (nosiest plant)' assessment was completed.

The noise estimator tool predicted noise levels at different locations for various receivers. To assist with the assessment, receivers were grouped into four noise catchment areas (NCAs) for the construction noise assessment. The NCAs for the Proposal are shown in Figure 6-10 for each of the NCAs, affected distances (or the distances up to which noise levels are expected to exceed the NML) are recorded in Table 6-5.

Standard noise mitigation measures may not address all predicted exceedances in NMLs at receivers during construction activities. Where exceedances remain, a range of additional mitigation measures are recommended under the CNVG for consideration (based on the extent of exceedance) where feasible and reasonable which vary depending on the level of exceedance within each catchment area. The additional mitigation measures include:

- (N) 'Notification' (letterbox drop or equivalent) providing advanced warning of works and potential disruptions a minimum of five working days prior to the works commencing.
- (SN) 'Specific Notification' providing advanced warning of works and potential disruptions a minimum of seven calendar days prior to the works commencing (more detailed and specific to a potential receiver which may be more affected than other receivers).
- (PC) 'Phone Calls' detailing relevant information made to identified and affected stakeholders within seven calendar days of the proposed work. It is not anticipated TfNSW will conduct phone call notification due to telephone numbers for all residents being difficult to obtain. TfNSW will use alternative means of engagement.
- (RO) 'Respite Offers' where there are high noise generating activities near receivers, limiting works to designated time periods and frequencies with a minimum one hour respite break in between.
- (R1) 'Respite Period 1' limiting out of hours evening construction work to no more than three consecutive evenings per week and no more than six evenings per month except where there is a Duration Respite.

- (R2) ‘Respite Period 2’ limiting out of hours night time construction work to no more than two consecutive nights per week and no more than six nights per month except where there is a Duration Respite.
- (DR) ‘Duration Respite’ increasing the works duration, number of evenings or nights worked in consultation with the community in order to complete the works more quickly.
- (AA) ‘Alternative Accommodation’ offered to residents living in close proximity to construction works that are likely to experience highly intrusive noise levels over a prolonged period across all hours of the day. This is considered on a case by case basis.

Suitable standard mitigation measures have been recommended for the potential impacts as assessed in Section 0

Table 6-5 Construction noise assessment results – residential receivers

Catchment distances	Day		
	NML, dB(A)	**Predicted noise levels, dB(A)**	**Recommended additional mitigation measures**
NCA1 (10m) – in line of sight	60	75	N, PC, RO
NAC2 (10m) – behind solid barrier	60	70	N
Catchment distances	**Night**		
NCA1 (15m) – in line of sight	45	70	AA, N, PC, SN, R2, DR
NCA2 (25m) – behind solid barrier	45	60	N, PC, SN, R2, DR
NCA3 (55m) – behind solid barrier	45	50	N, R2, DR
NCA4 (95m) – behind solid barrier	45	45	N

The noise catchment areas described in Table 6-5 are visually presented in Figure 6-10.

BRIDGE RD CYCLEWAY
NOISE CATCHMENT AREAS

Legend

Day

- NCA1 (10m) - in line of sight/NCA2 (10m) - behind solid barrier

Night

- NCA1 (15m) - in line of sight
- NCA2 (25m) - behind solid barrier
- NCA3 (55m) - behind solid barrier
- NCA4 (95m) - behind solid barrier

0 100 200 m

AECOM

Figure 6-10 Noise Catchment Areas and the Proposal area

Measures to mitigate and minimise the potential impacts of the construction of the project are discussed in Section 6.3.3.

The Proposal would also avoid additional noise and vibration impacts on local receivers associated with decommissioning the cycleway.

Operation

The Proposal is not anticipated to generate operational noise. It is expected that the local noise environment would decrease as the Proposal encourages community members to shift to active modes of transport from vehicle use.

6.3.3 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Noise and vibration	As per Section 4.6 of QA *G36 Environment Protection,* noise impacts are to be minimised in accordance with Transport for NSW's Construction Noise and Vibration Guideline (CNVG).	Contactor	Construction
Noise and vibration	All sensitive receivers (local residents) likely to be affected will be notified at least seven (7) day prior to commencement of any works associated with the activity that may have an adverse noise impact. The following mitigation measures will be in place. • Notification (**N**) - Letterbox drops for receivers within a 95 m radius. Notifications should detail work activities, dates, and hours, impacts and mitigation measures, indication of work schedule over the night-time period (if any), any operational noise benefits from the works (where applicable) and contact telephone number. Notification will be sent a minimum of 7 calendar days prior to the start of works. • Respite Period 2 (R2) – Night-time construction noise should be limited to two consecutive nights except for where there is a Duration Respite. For night-time work these periods of work should be separated, by not less than one week, and no more than 6 evenings per month.	Contractor	Pre-construction

6.4 Non-Aboriginal heritage

This section assesses and describes the impacts of the Proposal on non-Indigenous heritage within and surrounding the Proposal corridor. This assessment is based on a desktop analysis of the relevant heritage registers. The Proposal corridor includes items of State heritage significance under the NSW State Heritage Register and local heritage significance under the Sydney LEP and Section 170 Heritage and Conservation Register.

6.4.1 Existing environment

A search of the following heritage registers was undertaken in September 2020 and February 2021 to identify potential non-Indigenous heritage items located within the Proposal corridor. This included a search of the following databases:

- Australian Heritage Places Inventory
- Commonwealth EPBC Heritage List
- NSW State Heritage Register (SHR)
- Section 170 Heritage and Conservation Registers
- *Sydney Local Environmental Plan 2012*.

Numerous local heritage items and two state heritage items are present along the Proposal corridor, as described in Table 6-6 and shown in Figure 6-11.

Table 6-6 Heritage items along the Proposal corridor

Item	Address	Listing number	Significance	Location relative to the Proposal
Reussdale	160 Bridge Road	00292	State	Adjacent to Proposal route
Pyrmont and Glebe Railway Tunnels	Metropolitan goods railway, Pyrmont	01225		
Warehouse 'Greens Woolstore'	22 Bridge Road	I658	Local	
Public Housing development including interior	82–96 Bridge Road	I659		
Ancient Briton Hotel including interior	225 Glebe Point Road	I742		
Commercial building including interior	142 Glebe Point Road	I726		
Foley Park including wireless house and	Glebe Point Road	I725		

Item	Address	Listing number	Significance	Location relative to the Proposal
interior, sandstone walls, trees, and landscaping				
House including interior	175 Bridge Road	I662		
House "The Hermitage" and stables including grounds and interiors of house and stables	154 Bridge Road	I660		
Former church "The Abbey" including interior and grounds	156–158 Bridge Road	I661A		
House group "Killara", "Morocco", "Hillston" and "Strathmore" including interiors, former stables at No. 229 and front fencing	223A–229 Bridge Road	I663		
Forest Lodge Public School including buildings and interiors, fencing and grounds	231–233 Bridge Road	I632		
Former house "Briarbank" including interior	231–233 Bridge Road	I633		
Terrace group "Magnolia Terrace" including interiors and front fencing	272–280 Bridge Road	I634		
Bridge Hotel and terrace group including interiors	282–284 Bridge Road	I635		
Orphan Creek Public Reserve	N/A	I38		
Glebe Point Conservation Area	N/A	C28		Proposal traverses the conservation area
Lyndhurst Conservation Area	N/A	C31		

Item	Address	Listing number	Significance	Location relative to the Proposal
Glebe Point Road Conservation Area	N/A	C29		
Hereford and Forest Lodge Conservation Area	N/A	C33		

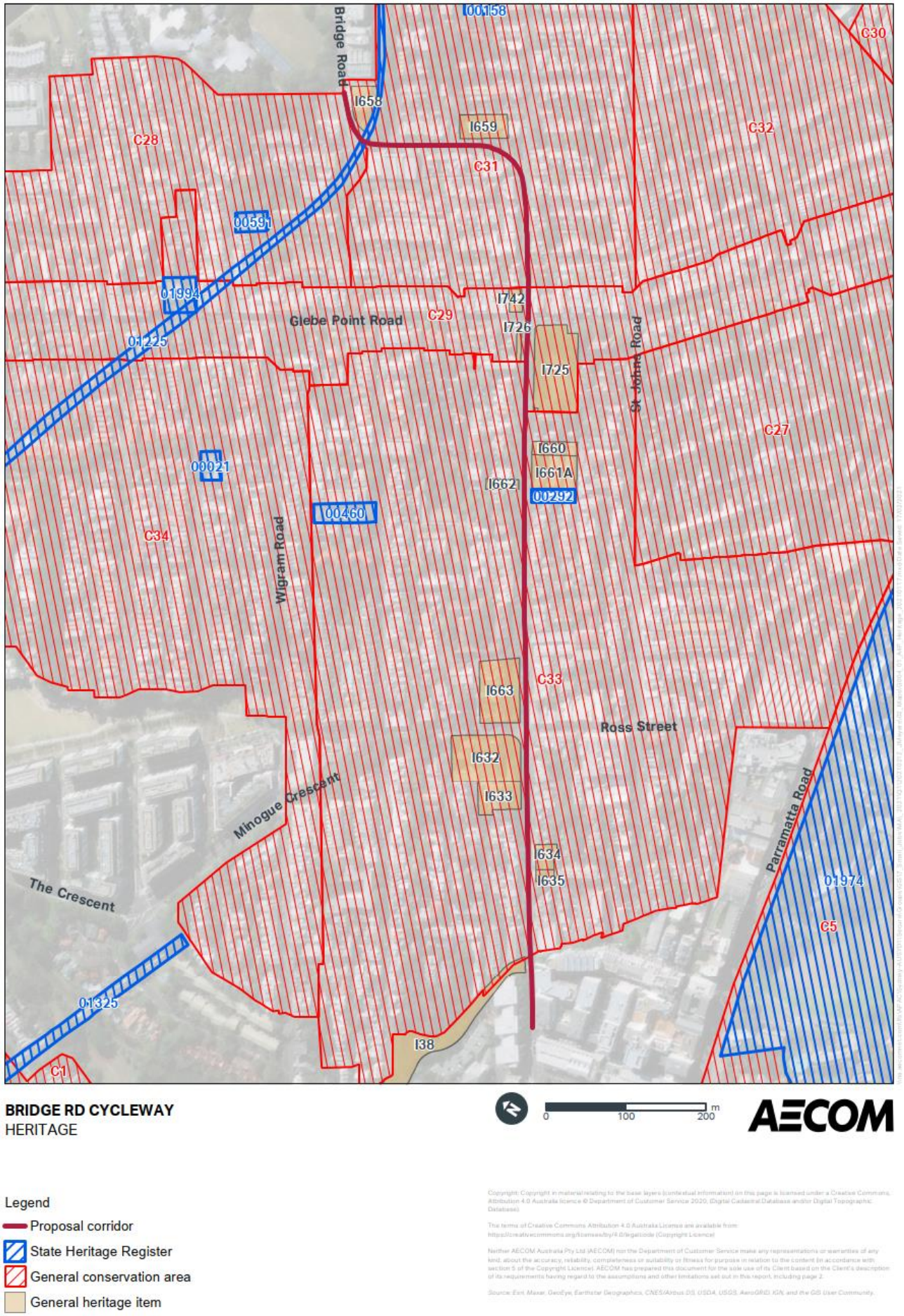


Figure 6-11 Listed heritage items and conservation areas located along the Proposal corridor

6.4.2 Potential impacts

For the purpose of this assessment, impacts on heritage are identified as either:

- Direct impacts – resulting in the demolition or alteration of fabric of heritage significance
- Indirect impacts – resulting in changes to the setting or curtilage of heritage items or places, historic streetscapes, or views.

Construction impacts are more related to direct impacts, while operational impacts are more related to indirect impacts.

Construction

As the pop-up cycleway has already been installed, possible construction impacts are limited to the modification of the existing cycleway such as the replacement of the current Klemmfix barrier. There would be limited direct impacts resulting from the replacement of the Klemmfix barrier, which does not require any ground breaking or compaction machinery and therefore would have negligible vibration impacts.

Operation

There would be no indirect operational impacts on most of the individual heritage items identified in Table 6-6. There may be some indirect impacts of the Proposal on the heritage conservation areas from the retention of the cycleway on a permanent basis and the modification of the exiting Klemmfix barrier.

Table 6-7 describes the heritage conservation areas and provides an assessment of the potential impacts to these areas.

Table 6-7 Potential operational impacts to heritage items and conservation areas as a result of the Proposal

Heritage item	Significance	Description	Indirect heritage impact assessment
Glebe Point Conservation Area (Sydney LEP C28)	Local	*"Glebe Point has historic significance for its grand residential development which evidences Glebe Point as a prestigious address in the mid-19th century. The development reflects the effect of the Allen family on this precinct in its early development. The subdivision and residential development of the Marine Villa Estates, following the exodus of the upper classes to the suburbs in the late 19th century and early 20th century is evidenced in the early Federation period development. The area has historic values in its evolving relationship to the water, evidenced through natural landscape reclamation, industrial development, residential and landscape reinstatement.* *Glebe Point has aesthetic significance for its landscape qualities and relationship to the water, for its ability to illustrate various periods of development and architectural styles and building types, and its predominant Victorian and Federation character. The diverse social mix is reflected in the building stock and inherent to the character of the suburb."* (Office of Environment and Heritage, 2007a)	The Proposal compliments the following aspects of the heritage conservation area: Residential character of the conservation area: • Increasingly, populations located in inner-city locations are choosing not to own motor vehicles and therefore provision of a cycleway provides an alternative for these populations from public transport. • The Glebe and Forest Lodge suburb is characterised by a younger demographic, with a higher proportion of people who do not own motor vehicles than in other Sydney areas • Bike riding supports residential communities, especially younger communities, by providing them with a low-cost, low-emission transport mobility option. Based on the points above, retaining the existing pop-up cycleway would enhance the social significance of the conservation area. Other operational impacts regarding visual changes are assessed in Section 6.2 (visual amenity).
Lyndhurst Conservation Area	Local	*"Lyndhurst has historic significance for its ability to provide evidence of the first period of European development in Glebe. Bowman's 'Lyndhurst' 1833 - 1837 is one of two surviving marine villas from the 1830s. The subdivisions of Lyndhurst Estate from 1854 and the Wilderness Estate in*	The Proposal compliments the following aspects of the heritage conservation area. Representative of dense, working-class development:

Heritage item	Significance	Description	Indirect heritage impact assessment
(Sydney LEP C31)		*1882, and the subsequent subdivision and sale of Palmerston Estate in 1885 and 1900 are reflected in the dense working-class speculative terrace development that dominates the Conservation Area. The terrace development has a predominantly Victorian character and reflects the historic association of the precinct with prominent local builders Thornley, Jarratt and Elphinstone.* *Lyndhurst has aesthetic significance for its landscape qualities and its ability to illustrate various periods of development and architectural styles and building types high degree of architectural intactness. Lyndhurst has aesthetic and historic values for its landscape qualities and the evolving relationship to the water which has developed through natural landscape reclamation, industrial development, residential and landscape reinstatement.* *The area has a high level of integrity of building stock.* *The area is also significant for its history of protection of original buildings through resident action, and the subsequent protection of the Glebe Area generally"* (Office of Environment and Heritage, 2007b)	• The Glebe and Forest Lodge suburb is characterised by a younger demographic, and with a higher proportion of people who do not own motor vehicles than in other Sydney areas • Bike riding supports residential communities, especially younger communities, by providing them with a low-cost, low-emission transport mobility option. • Supporting the terrace building stock typical of an inner-city neighbourhood by provision of a cycleway which would encourage cycling and lessen the demand for motor vehicles and parking spaces within the neighbourhood with an increasing population Based on the points above, retaining the existing pop-up cycleway would enhance the social significance of the conservation area. Other operational impacts regarding visual changes are assessed in Section 6.2 (visual amenity).
Glebe Point Road Conservation Area (Sydney LEP C29)	Local	*"Glebe Point Road has historical significance as the earliest road in Glebe, created by the subdivision of the church lands in 1828. It provided access to the marine villas built during the colonial period, two of which survive, becoming a major transportation route, as evidence by the positions of the major public buildings (Post Office, St John's Church and Hotels) and as evidenced by the former tramways route along the street. Glebe Point Road has historic significance as the focus of early retail and commercial developments to*	The Proposal compliments the following aspects of the heritage conservation area. Former tramways along the street: • the previous tramways on Glebe Point Road acknowledge the road a main thorough fare. The removal of the tramway in Sydney's history has recently seen a reversal by the addition of several

Heritage item	Significance	Description	Indirect heritage impact assessment
		serve the early residential estates either side of Glebe Point Road. It has historic associations with important local developers and prominent architects including George Allen, David Elphinstone, James Barnet and Edmund Blacket. *Glebe Point Road has aesthetic significance for its ability to illustrate various periods of development and architectural styles and building types. Elements such as shop fronts, first floor facades, pediment details, parapet details, remain in the street. The street is important for its collection of Victorian row shops, for its wide variety of attached and detached housing, and for the number of public and ecclesiastical buildings designed by distinguished architects. The street retains a large number of original and later interwar shopfronts and several hotels which reflect the working-class history of the suburb. Glebe Point Road is important for its landscape component resulting from street and private garden planting which provides a green and attractive environment.* *The survival of early residences along the street allows a clear understanding of the physical development of Glebe Point Road and its changing pattern of use over time. Glebe Point Road is significant as one of Sydney's most important intact 19th century townscapes remaining from a variety of periods"* (Office of Environment and Heritage, 2012a)	light rail tracks in surrounding suburbs. The cycleway only briefly traverses the Glebe Point Road Conservation area, but more generally fits within the idea of supporting public and other forms of transport in the area. Retail and commercial development, and working class history: • As described in the *Cycling Strategy Action Plan* (City of Sydney, 2018), walking and cycling remain the most efficient and sustainable ways to make short trips to work, schools, shops, and parks in our area. This is especially true in a constrained and crowded inner city environment. Based on the points above, retaining the existing pop-up cycleway would enhance the retail significance of the conservation area. Other operational impacts regarding visual changes are assessed in Section 6.2 (visual amenity).
Hereford and Forest Lodge Conservation Area	Local	*"Hereford and Forest Lodge Conservation Area has historic significance for its rare surviving early residential development Swiss Cottages (c. 1842) and Glenwood (c. 1837). The area possesses the ability to evidence early villa*	The Proposal compliments the following aspects of the heritage conservation area.

Heritage item	Significance	Description	Indirect heritage impact assessment
(Sydney LEP C33)		*estates; Hereford (c. 1829), Rosebank (c. 1832) and Forest Lodge (c. 1836) and their incremental subdivision.* *The conservation area is also of historic significance for a number of important civic and institutional buildings such as St James' Church and School, Forest Lodge Public School, Glebe Fire Station and Glebe Town Hall. Considerable social significance arises out of the presence and use of these buildings for over 100 years. The Town Hall also provides evidence of the incorporation of the Municipality of Glebe in 1859.* *Hereford and Forest Lodge Conservation Area has aesthetic significance for its ability to illustrate various periods of development and architectural styles and building types (some of a very early date), and its landscape qualities. Residential development, encouraged by the tram extension in Hereford/ Forest Lodge, reflects the varied character of historic subdivisions, divided by the historic and aesthetically important Bridge Road. The predominant Victorian character is supported by several other important historic layers. The diverse social mix that is reflected in the building stock and inherent to the character of the suburb.* *The area contains a number of aesthetically significant and prominent buildings such as the Glebe Town Hall, Glebe Fire Station, St James' Church, the former Glebe Presbyterian Church as well as a number of villas particularly in Bridge Road such as Reussdale.* *The area has rarity value for the survival of early pre 1860s residential development so close to the city centre."* (Office of Environment and Heritage, 2012b)	Social significance of this conservation area as represented by important civic and institutional buildings: • Bike riding supports social integration through providing more opportunities to engage with socio-economic and recreational infrastructure along travel routes. Bike riders are easily able to stop at shops, parks, and other infrastructure within the community. Historical addition of tram lines to support public and low-cost form of transport: • Bike riding is easily integrated with other modes of transport and therefore supports intermodal journeys. • Bike riding supports residential communities by providing them with a low-cost, low-emission transport mobility option. Increasingly, populations located in inner-city locations are choosing not to own motor vehicles and therefore the provision of a cycleway provides an alternative to public transport for these populations. Diverse social mix inherent to the character of the suburb. • Bike riding is a low-cost form of mobility and a more accessible form of transport. Based on the points above, retaining the existing pop-up cycleway would enhance the social significance of the conservation area. Other operational impacts regarding visual changes are assessed in Section 6.2 (visual amenity).

6.4.3 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Non-Aboriginal heritage	For the replacement of the current Klemmfix barrier, according to Section 4.10 of QA *G36 Environment Protection,* a Non-Aboriginal Heritage Management Plan (NAHMP) will be prepared and implemented as part of the CEMP. It will provide specific guidance on measures and controls to be implemented to avoid and mitigate impacts to Non-Aboriginal heritage.	Contactor	Detailed design / pre-construction
Non-Aboriginal heritage	For the replacement of the current Klemmfix barrier, according to Section 4.10 of QA *G36 Environment Protection* • *The Standard Management Procedure - Unexpected Heritage Items* (Transport for NSW, 2015) will be followed in the event that any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. • Work will only re-commence once the requirements of that Procedure have been satisfied.	Contactor	Construction
Non-Aboriginal Heritage	For the replacement of the current Klemmfix barrier, safeguards and management measures for visual impacts take into account the surrounding heritage landscapes. Further safeguards and management measures related to this effect can be found in Section 6.4.3	TfNSW	Detailed design / pre-construction
Non-Aboriginal heritage	Continued monitoring of community feedback regarding visual impacts on non-Indigenous heritage items	Transport for NSW	Operation

Other safeguards and management measures that would address non-Aboriginal heritage impacts are identified in sections 6.2 (visual impacts) and 6.3 (noise and vibration).

6.5 Socio-economic impacts

6.5.1 Existing environment

Population and growth

At the 2019 Census, the suburbs of Forest Lodge and Glebe had a population of 18,907, while the wider Sydney LGA had a population of 246, 343 people. The population is relatively young, with the largest age group being 25 to 29 year old's (Australian Bureau of Statistics, 2019). The industry in the area is mainly comprised of cafes and restaurants, hotels, art, and culture, light industrial, medical and education. According to the ABS, about 58% of residents have a registered vehicle. In Glebe-Forest Lodge on the day of the 2016 Census, 28.5% of people travelled to work in a private car, 32.8% took public transport and 21.5% rode a bike or walked and 5.1% worked at home (Australian Bureau of Statistics, 2016). This is likely not representative of the current state as more people are likely working from home due to COVID-19 and there is now greater access for bike riders to adjoining cycleways such that commuting on bike would likely be higher.

Between 2018 and 2019, the population growth in the Sydney LGA was 2.60%. Natural increase is estimated to drive future population growth in the Sydney LGA. Over the longer term, people would also continue to move into the City, especially students and young workers.

Social infrastructure

Social infrastructure refers to community facilities, services and networks which help individuals, families, groups, and communities meet their social needs, maximise their potential for development and enhance community wellbeing.

The suburbs of Glebe and Forest Lodge provide a range of community services and facilities catering to local residents, workers, and visitors. This includes education, transport, health and medical, parks and gardens and community support services and facilities.

As shown Section 3.1, the Proposal sits within a highly urbanised environment and there is various social infrastructure located along the Proposal corridor including schools, recreational parks, religious places and residences.

Key sensitive social infrastructure and land uses situated along the Proposal corridor includes:

- Educational facilities including:
  - Forest Lodge Public School at 231-233 Bridge Road, Forest Lodge
  - St James Catholic Primary School at 2 Woolley Street, Glebe
  - Only About Children Glebe Child Care Centre at 163/165 Bridge Road, Glebe
  - Glebe Montessori Academy Child Care Centre at 158 Bridge Road, Glebe
- Dr H J Foley Rest Park at 140 Glebe Point Road, Glebe
- Residential properties fronting the Proposal on Bridge Road.

Economic infrastructure

As shown in Section 3.1, there are various businesses located along the Proposal corridor. Key businesses located along the Proposal corridor include:

- Pyrmont Bridge Convenience Store at 19 Pyrmont Bridge Rd, Camperdown
- Forest Lodge Child & Family Health Centre at 300 Bridge Road, Forest Lodge
- Breezy Forest Lodge at 284 Bridge Road, Forest Lodge

- New Frontier Publishing at 48 Ross Street, Forest Lodge
- Glebe City Convenience at 37 Ross Street, Forest Lodge
- Budget Lodge Glebe Guest House at 197 Bridge Road, Glebe
- Thai Street Food Restaurant at 151B Bridge Road, Glebe
- Nawaz Flavour of India at 142A Glebe Point Road, Glebe
- AB Hotel at 225 Glebe Point Road, Glebe
- Vinnies Charity Shop at 223 Glebe Point Road, Glebe
- Liberty Industrial at 95-99 Bridge Road, Glebe
- Warwick Fabrics at 55 Bridge Road, Glebe
- Orient House at 45 Bridge Rd, Glebe
- Glebe Auto Repairs at 21 Bridge Rd, Glebe
- The Wild Vet at 22a Bridge Rd, Glebe.

As the Proposal sits within a highly urbanised environment, there is also a variety of other economic infrastructure including retail, eateries, and service shops nearby the Proposal corridor.

6.5.2 Potential impacts

Construction

As the existing cycleway is already installed, possible construction impacts are limited to the modification of the cycleway including the replacement of the current Klemmfix barrier.

Given the limited scope and duration of construction activities for the replacement of the Klemmfix barrier, socio-economic impacts of the Proposal during construction is likely to be minimal. This would include minimal traffic disruptions including a temporary lane closure and temporary traffic flow management of a contraflow lane completed out of standard working hours. Businesses are likely to be closed during the hours of the replacement. Nearby social infrastructure including parks are unlikely to be used during these hours. The replacement of the Klemmfix barrier would have various amenity impacts on residences through noise and light emissions during the out of hours work schedule.

Mitigation measures to limit the impact to nearby receivers are addressed in Section 6.2 and Section 6.3 for visual and noise impacts respectively. Additional standard mitigation measures for socio-economic impacts are summarised in Section 0.

Operation

To meet the needs of the residents, the City of Sydney has committed to be green, global, and connected. Relevantly, the City of Sydney intends to make the city easy to get around, with a local network for walking and cycling, connecting the city's villages, city centre and the rest of inner Sydney (City of Sydney Council, 2020b).

The Proposal would maintain part of an existing and expanding cycling network within the Sydney LGA. It would support longer term modal shifts away from the use of private motor vehicles towards walking and bike riding, in response to the growing number of residents and workers who prefer the convenience, mobility and sustainability benefits that cycling provides. This would bring with it, improvements in air quality, noise, the streetscape, and equality in transport access. Increases in walking and bike riding would also bring broader (and more subtle) public health benefits.

The continued operation of the existing pop-up cycleway would benefit the public domain of Glebe and Forest Lodge by:

- maintaining improved connectivity for residents and businesses
- providing ongoing infrastructure for locals to transition to cycling as a primary mode of transport
- avoiding the decommissioning of the cycleway and associated construction impacts on the local receivers.

6.5.3 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Socio-economic	For the replacement of the current Klemmfix barrier, a Communication Plan (CP) will be prepared and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The CP will include (as a minimum): • mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions • contact name and number for complaints. The CP will be prepared in accordance with the *Community Involvement and Communications Resource Manual* (RTA, 2008).	Contactor	Detailed design / pre-construction
Socio-economic	For the replacement of the current Klemmfix barrier, all businesses, and residences likely to be affected by the proposed works must be notified in writing at least 5 working days prior to the commencement of the proposed construction activities. The Notification letter would include (as a minimum): • contact name and phone number • working hours and proposed construction period • complaints process	Transport for NSW	Pre-construction
Socio-economic	For the replacement of the current Klemmfix barrier, road users, pedestrians and bike riders would be informed of changed conditions, including likely disruptions to access during construction.	Contractor	Construction
Socio-economic	For the replacement of the current Klemmfix barrier, fencing with material attached (e.g. shade cloth) would be provided around the construction compounds and other areas to screen views from adjoining properties.	Contractor	Construction
Socio-economic	Continued monitoring of community feedback relating to the ongoing operation of the pop-up cycleway	Transport for NSW	Operation

Other safeguards and management measures that would address socio-economic impacts are identified in sections 6.1 (traffic and transport), 6.2 (visual impacts), 6.3 (noise and vibration) and 6.6 (cumulative impacts).

6.6 Cumulative impacts

This section assesses whether collectively, if the Proposal and other nearby developments could result in increased cumulative impacts on the local community.

A desktop-based search of the following websites was done to identify potential cumulative impacts from nearby projects within Glebe and Forest Lodge and within the Sydney LGA:

- NSW major projects planning portal
- Transport for NSW's major projects page
- City of Sydney council's project page

6.6.1 Study area

The Proposal is within the suburbs of Glebe and Forest Lodge, within the wider Sydney LGA.

The following cumulative construction impacts were considered for any potential surrounding projects occurring within the suburbs of Glebe and Forest Lodge:

- Traffic and transport impacts including local traffic congestion, access, and parking in the area
- Noise and vibration impacts
- Visual impact and heritage impacts.

For operational impacts (including the positive effect of various cycleway projects), the wider area of Sydney LGA was considered, including those near to the Proposal corridor and those that connect inner-city suburbs to the CBD.

6.6.2 Broader program of work

The Proposal would facilitate the integrated movement of people on bikes, consistent with City of Sydney's '*Cycling strategy and action plan*'. The Proposal is also part of a wider program to manage traffic congestion and provide transport systems for Sydney's future growth.

There are no cycleway routes nearby the Proposal that would have negative cumulative impacts due to construction timeframes.

According to the City of Sydney Council's Projects page, cycleways that are currently being developed around neighbouring suburbs and the CBD include:

- Liverpool Street, College Street, Oxford Street Cycleway in Darlinghurst
- Lawson Street pedestrian and cycling improvements in Redfern
- Saunders and Miller streets cycling improvements in Pyrmont
- The Beach to Bay Connection, Waverly to Woollahra
- King Street Cycleway, Sydney

According to https://www.rms.nsw.gov.au/projects/popup-covid-19-infrastructure/index.htm, the following cycleways have just been completed by Transport for NSW and their relevant local councils:

- Petersham to Newtown, Inner West
- Wigram Street, Parramatta

- High Street, Randwick

In addition, many cycleways already exist in the Sydney LGA. A number of these projects include:

- Pop-up cycleways at
  - Pitt Street, from King Street to Reiby Place, city centre
  - Henderson Road, Eveleigh
  - Dunning Ave, Rosebery
  - Moore Park Road to Fitzroy Street, Bondi Junction to Central
  - Pyrmont Bridge Road, Pyrmont
  - Sydney Park Road, Erskineville.
- Permanent cycleways at
  - Campbell Street, Surry Hills
  - Kent Street, city centre
  - Castlereagh Street, city centre
  - Liverpool Street, city centre
  - Jones Street, Ultimo
  - Union Street, Pyrmont
  - Pyrmont Bridge
  - Chapman Road, Annandale.

6.6.3 Other projects and developments

There are currently no other known projects currently proposed to take place at the same time of the Proposal or currently under construction within the study area.

Some future plans for the area, taken from the City of Sydney's website, include the:

- Blackwattle Bay renewal project, a State Significant Precinct project anticipated to undertake public exhibition and community feedback in early 2021
- Blackwattle Playground upgrade in Glebe as part of City of Sydney Council's parks upgrade program with consultation planned for early 2021
- Planning Proposal for 17–31 Cowper Street & 2A–2D Wentworth Park Road, Glebe for 74 new dwellings in two new eight storey blocks, currently working through community feedback

6.6.4 Potential impacts

At the time of writing, there were no cumulative construction impacts identified with projects planned in possible proximity to the Proposal corridor. The projects identified are still in the conceptual stage and have no published commencement dates.

From an operational perspective, the predicted increase in daily bicycle movements along the Bridge Street cycleway and broader network of bike lanes may be expected to translate into a reduction in vehicle volumes in the surrounding area. This would result in cumulative improvements in traffic congestion and safety as well as overall health benefits from improved air quality and a greater number of individuals participating in walking and bike riding in the local area.

6.6.5 Safeguards and management measures

Impact	Environmental safeguards	Responsibility	Timing
Cumulative impacts	The CEMP would be revised to consider potential cumulative impacts from surrounding development activities as they become known. This would include a process to review and update mitigation measures as new works begin or if complaints are received. If required, the project manager would prepare a Community Liaison Management Plan which would include consultation with proponents other nearby projects to: • Increase awareness of construction timeframes and impacts • Coordinate impact mitigation and management (e.g. respite periods)	Transport for NSW	Pre-construction and Construction

7. Environmental management

This chapter describes how the Proposal will be managed to reduce potential environmental impacts throughout detailed design, construction and operation. A framework for managing the potential impacts is provided. A summary of site-specific environmental safeguards is provided and the licence and/or approval requirements required prior to construction are also listed.

7.1 Environmental management plans (or system)

A number of safeguards and management measures have been identified in the REF in order to minimise adverse environmental impacts, including social impacts, which could potentially arise as a result of the Proposal. Should the Proposal proceed with the replacement of the Klemmfix barrier, these safeguards and management measures would be incorporated into the detailed design and applied during the construction and operation of the Proposal. The safeguards and management measures are shown in Table 7-1.

A Construction Environmental Management Plan (CEMP) will be prepared to describe the safeguards and management measures identified. The CEMP will provide a framework for establishing how these measures will be implemented and who would be responsible for their implementation.

The CEMP will be prepared prior to construction of the Proposal and must be reviewed and certified by the Transport for NSW Environment Officer, Sydney, prior to the commencement of any on-site works. The CEMP will be a working document, subject to ongoing change and updated as necessary to respond to specific requirements.

7.2 Summary of safeguards and management measures

Environmental safeguards and management measures outlined in this REF will be incorporated into the detailed design phase of the Proposal and during construction and operation of the Proposal, should it proceed. These safeguards and management measures will minimise any potential adverse impacts arising from the proposed works on the surrounding environment. The safeguards and management measures are summarised in Table 7-1.

Table 7-1: Summary of safeguards and management measures

No.	Impact	Environmental safeguards	Responsibility	Timing
GEN1	General - minimise environmental impacts during construction	A CEMP will be prepared and submitted for review and endorsement of the Transport for NSW Environment Manager prior to commencement of the activity. As a minimum, the CEMP will address the following: • any requirements associated with statutory approvals • details of how the project will implement the identified safeguards outlined in the REF • issue-specific environmental management plans • roles and responsibilities • communication requirements • induction and training requirements • procedures for monitoring and evaluating environmental performance, and for corrective action • reporting requirements and record-keeping • procedures for emergency and incident management • procedures for audit and review. The endorsed CEMP will be implemented during the undertaking of the activity.	Contractor / Transport for NSW project manager	Pre-construction / detailed design
GEN1	General - notification	All businesses, residential properties and other key stakeholders (e.g. schools, local councils) affected by the activity will be notified at least five days prior to commencement of the activity.	Contractor / Transport for NSW project manager	Pre-construction
GEN2	General – environmental awareness	All personnel working on site will receive training to ensure awareness of environment protection requirements to be implemented during the project. This will include up-front site induction and regular "toolbox" style briefings.	Contractor / Transport for	Pre-construction / detailed design

No.	Impact	Environmental safeguards	Responsibility	Timing
		Site-specific training will be provided to personnel engaged in activities or areas of higher risk. These include • identification of sensitive receivers	NSW project manager	
TSP1	Traffic and Transport	According to Section 4.8 of QA *G36 Environment Protection,* a Traffic Management Plan (TMP) will be prepared and implemented as part of the CEMP for construction works. The TMP will be prepared in accordance with the Transport for NSW *Traffic Control at Work Sites Manual* (RTA, 2010) and *QA Specification G10 Control of Traffic* (Transport for NSW, 2008). The TMP will include: • measures to maintain access to local roads and properties • site specific traffic control measures (including signage) to manage and regulate traffic movement • measures to maintain pedestrian and bike rider access • requirements and methods to consult and inform the local community of impacts on the local road network • access to construction sites including entry and exit locations and measures to prevent construction vehicles queuing on public roads. • a response plan for any construction traffic incident • consideration of other developments that may be under construction to minimise traffic conflict and congestion that may occur due to the cumulative increase in construction vehicle traffic • monitoring, review and amendment mechanisms.	Contractor	Detailed design / Pre-construction
TSP2	Traffic and Transport	Consultation with emergency service authorities including NSW Rural Fire Service and Fire Rescue would be undertaken during development of the detailed design of the replacement safety barrier	Transport for NSW	Detailed Design
TSP3	Traffic and Transport	Vehicular property access would be maintained including access to pre-schools, places of worship and all commercial premises during construction works. Where property access would have to be temporarily closed during construction: • property owners would be notified at least seven calendar days prior to the access closure	Contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		• alternative access would be provided if available • access closure would be minimised and access would be returned to the property owners as soon as possible		
TSP4	Traffic and Transport	Pedestrian and bike rider access is to be maintained throughout construction. Provision of signposted outlining the pedestrians and bike rider diversion routes would be displayed during construction. There would be advance notification of any construction works that affect pedestrians and bike riders.	Contractor	Construction
TSP5	Traffic and Transport	Access to appropriate bus stop locations would be maintained during construction in consultation with bus operators. Ongoing updates on locations and access to bus stops would be provided to the community during construction period to ensure that disruption is minimised.	Contractor	Construction
TSP6	Traffic and Transport	Monitoring of roadway and cycleway traffic to track possible congestion impacts and cycleway usage.	Transport for NSW	Operation
VIS1	Visual impacts	Visual coherence with heritage conservation areas aesthetics are to be incorporated into the final design of the safety barriers.	TfNSW	Detailed design / pre-construction
VIS2	Visual impacts	A high level of housekeeping will be maintained by ensuring that the work site is kept in a clean and tidy condition. Waste materials, from construction, will be removed from site.	Contactor	Construction
VIS3	Visual impacts	Klemmfix barriers to be adequately secured to the roadway, until Klemmfix barriers replaced with a more permanent structure, to maintain cycleway visual cleanliness.	TfNSW	Operation
NSV1	Noise and vibration	As per Section 4.6 of QA *G36 Environment Protection,* noise impacts are to be minimised in accordance with Transport for NSW's Construction Noise and Vibration Guideline (CNVG).	Contactor	Construction
NSV2	Noise and vibration	All sensitive receivers (local residents) likely to be affected will be notified at least seven (7) day prior to commencement of any works associated with the activity that may have an adverse noise impact. The following mitigation measures will be in place.	Contractor	Pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		• Notification (N) - Letterbox drops for receivers within a 95 m radius. Notifications should detail work activities, dates, and hours, impacts and mitigation measures, indication of work schedule over the night-time period (if any), any operational noise benefits from the works (where applicable) and contact telephone number. Notification will be sent a minimum of 7 calendar days prior to the start of works. • Respite Period 2 (R2) – Night-time construction noise should be limited to two consecutive nights except for where there is a Duration Respite. For night-time work these periods of work should be separated, by not less than one week, and no more than 6 evenings per month.		
HRG1	Non-Aboriginal heritage	For the replacement of the current Klemmfix barrier, according to Section 4.10 of QA *G36 Environment Protection,* a Non-Aboriginal Heritage Management Plan (NAHMP) will be prepared and implemented as part of the CEMP. It will provide specific guidance on measures and controls to be implemented to avoid and mitigate impacts to Non-Aboriginal heritage.	Contactor	Detailed design / pre-construction
HRG2	Non-Aboriginal heritage	For the replacement of the current Klemmfix barrier, according to Section 4.10 of QA *G36 Environment Protection* • *The Standard Management Procedure - Unexpected Heritage Items* (Transport for NSW, 2015) will be followed in the event that any unexpected heritage items, archaeological remains or potential relics of Non-Aboriginal origin are encountered. • Work will only re-commence once the requirements of that Procedure have been satisfied.	Contactor	Construction
HRG3	Non-Aboriginal Heritage	For the replacement of the current Klemmfix barrier, safeguards and management measures for visual impacts take into account the surrounding heritage landscapes. Further safeguards and management measures related to this effect can be found in Section 6.4.3	TfNSW	Detailed design / pre-construction
HRG4	Non-Aboriginal heritage	Continued monitoring of community feedback regarding visual impacts on non-Indigenous heritage items	Transport for NSW	Operation

No.	Impact	Environmental safeguards	Responsibility	Timing
SOE1	Socio-economic	For the replacement of the current Klemmfix barrier, a Communication Plan (CP) will be prepared and implemented as part of the CEMP to help provide timely and accurate information to the community during construction. The CP will include (as a minimum): • mechanisms to provide details and timing of proposed activities to affected residents, including changed traffic and access conditions • contact name and number for complaints. The CP will be prepared in accordance with the *Community Involvement and Communications Resource Manual* (RTA, 2008).	Contactor	Detailed design / pre-construction
SOE2	Socio-economic	For the replacement of the current Klemmfix barrier, all businesses, and residences likely to be affected by the proposed works must be notified in writing at least 5 working days prior to the commencement of the proposed construction activities. The Notification letter would include (as a minimum): • contact name and phone number • working hours and proposed construction period • complaints process	Transport for NSW	Pre-construction
SOE3	Socio-economic	For the replacement of the current Klemmfix barrier, road users, pedestrians and bike riders would be informed of changed conditions, including likely disruptions to access during construction.	Contractor	Construction
SOE4	Socio-economic	For the replacement of the current Klemmfix barrier, fencing with material attached (e.g. shade cloth) would be provided around the construction compounds and other areas to screen views from adjoining properties.	Contractor	Construction
SOE5	Socio-economic	Continued monitoring of community feedback relating to the ongoing operation of the pop-up cycleway	Transport for NSW	Operation
CMT1	Cumulative impacts	The CEMP would be revised to consider potential cumulative impacts from surrounding development activities as they become known. This would include a process to review and update mitigation measures as new works begin or if complaints are received. If required, the project manager would design a Community Liaison Management Plan which would include consultation with proponents other nearby projects to:	Transport for NSW	Pre-construction and Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		• Increase awareness of construction timeframes and impacts • Coordinate impact mitigation and management (e.g. respite periods)		
AHER1	Aboriginal heritage	If Aboriginal heritage items are uncovered during the works, all works in the vicinity of the find must cease and the Roads and Maritime Services Aboriginal cultural heritage officer and regional environment manager contacted immediately. Steps in the Roads and Maritime *Standard Management Procedure: Unexpected Heritage Items* must be followed.	Contractor	During construction
BIO1	Biodiversity	If unexpected threatened fauna or flora species are discovered, stop works immediately and follow the Transport for NSW Services *Unexpected Threatened Species Find Procedure in the Roads and Maritime Services Biodiversity Guidelines 2011 — Guide 1 (Pre-clearing process)*.	Contractor	Pre-construction / construction
BIO2	Trees	• Any tree trimming will not be more than minor (no more than 10% of the canopy). • All pruning and trimming of trees is to be in accordance with the *Australian Standard 4373-2007 Pruning of amenity trees*. Pruning of mature trees is to be undertaken by a qualified arborist.	Contractor	Detailed design / Construction
AIR1	Air quality	The management measures would include but not limited to the following: • vehicles transporting waste or other materials that have a potential to produce odours or dust are to be covered during transportation. • dust would be suppressed on stockpiles and unsealed or exposed areas using methods such as water trucks, temporary stabilisation methods, soil binders or other appropriate practices. • plant, vehicles and equipment would be maintained in good condition and in accordance with manufacturer's specifications. • plant and machinery would be turned off when not in use	Contractor	Construction
SOL1	Soil and Contamination	Any material transported onto pavements would be swept and removed at the end of each working shift and prior to rainfall	Contractor	Construction

No.	Impact	Environmental safeguards	Responsibility	Timing
SOL3	Soil and Contamination	The Soil and Water Management Plan would include a contingency plan for any acid sulfate soils or salinity identified during the construction phase.	Contractor	Construction
SOL4	Soil and Contamination	In the event that indications of contamination are encountered (known and unexpected, such as odorous or visually contaminated materials), work in the area would cease until an contamination assessment can be prepared to advise on the need for remediation or other action, as deemed appropriate.	Contractor	Construction
WAT1	Water and flooding	A contingency plan would be prepared in preparation for a potential flood event during construction and would outline evacuation procedures. The plan would include: • evaluation of what flood event would trigger the plan. • evacuation procedures. • a map indicating the area that is flood prone and the locations where to evacuate.	Contractor	Pre-construction
WAT2	Water and flooding	Temporary drainage or drainage diversions will be installed so that stormwater function is not impeded during construction. An Erosion and Sedimentation Control Plan (ESCP) will be prepared in accordance with the Landcom Managing Urban Stormwater, Soils and Construction Guidelines (the Blue Book) prior to construction.	Contractor	Pre-Construction
WST1	Waste	With regard to possible replacement of the Klemmfix cycleway barrier: A Waste Management Plan (WMP) will be prepared and implemented as part of the CEMP. The WMP will include but not be limited to: • Measures to avoid and minimise waste associated with the project • Classification of wastes and management options (re-use, recycle, stockpile, disposal) • Statutory approvals required for managing both on and off-site waste, or application of any relevant resource recovery exemptions • Procedures for storage, transport, and disposal • Monitoring, record keeping and reporting.	Contractor	Detailed design / pre-construction

No.	Impact	Environmental safeguards	Responsibility	Timing
		The WMP will be prepared taking into account the *Environmental Procedure - Management of Wastes on Roads and Maritime Services Land* (Roads and Maritime, 2014) and relevant Roads and Maritime Waste Fact Sheets.		
WST2	Waste	With regard to the stockpiled general solid waste material: • Where practicable, recyclable fractions of the construction and demolition waste (e.g. concrete and asphalt) would be separated for off-site disposal to an appropriately licensed recycling facility.	Contractor	Construction
WST3	Waste	A far as practicable, construction materials would be sourced within the Sydney region so as to reduce transport costs, including fuel usage.	Contractor	Pre-construction / construction
WAT1	Water	The future design of the replacement barrier in flood prone areas would allow flood waters to pass underneath the installed structure.	Transport for NSW	Detailed design / pre-construction

7.3 Licensing and approvals

The Proposal would require a ROL (*The Roads Act 1993*) in order to replace the Klemmfix barrier as this activity may have an impact on traffic flow. The ROL would need to be acquired prior to the start of any replacement activities.

8. Conclusion

This chapter provides the justification for the Proposal taking into account its biophysical, social and economic impacts, the suitability of the site and whether or not the Proposal is in the public interest. The Proposal is also considered in the context of the objectives of the EP&A Act, including the principles of ecologically sustainable development as defined in Schedule 2 of the Environmental Planning and Assessment Regulation 2000.

8.1 Justification

This REF has assessed the potential, biophysical, social and economic impacts of the preferred option. The retainment of the existing cycleway would result in a minimal amount of environmental impact including the use of plant and equipment out of hours for the removal of the existing barrier paddles and associated fixtures, delivery and installation of new barriers over about a period of three to four weeks. This would result in

- Disruptions to traffic during out-of-hours for the replacement of the Klemmfix barrier, which would include
  - temporary lane closure and
  - temporary traffic flow management of a contraflow lane
- Temporary visual impacts due to construction machinery and vehicles
- Temporary construction noise and vibration impacts
- Temporary socio-economic impacts during construction works, such as the effect of construction noise and lighting on surrounding businesses.

Appropriate safeguards have been proposed as part of this REF to minimise these impacts.

8.1.1 Social factors

The Proposal recognises the need to improve facilities accessed by the local community, enabled through providing greater means of walking and cycling through the provision of appropriate infrastructure. The Proposal would continue to:

- Provide a safe and efficient cycleway connection between Lyons Road, Camperdown and Taylor Street, Glebe that continues to become the route of choice for bike riders, demonstrated by an increase in the number of cycling based trips
- Enable access to schools, workplaces, recreational areas including parks and other services by bicycle.

Overall, the Proposal is believed to be justified in meetings its objectives with regard to increasing the social benefit of the local community.

8.1.2 Public interest

The cycleway was brought by a COVID 2020 health order in order to facilitate safe cycling to support travel during the COVID-19 recovery. The Proposal recognises the need to improve the provision of cycleway infrastructure in Sydney, including:

- Contribute to building the cycleway network in Inner Sydney
- Providing cycleway infrastructure between where surrounding cycleways were discontinuous, where there was demand for cycling infrastructure, and where there was a recognised route to key employment areas
- Providing an alternative means of transport where there was a recognised hot spot of congestion requiring more transport choices including access to recreation
- Improving and maximising bike rider safety
- Minimising environmental impacts through retaining the Proposal (and therefore limited environmental construction impacts), and longer-term environmental benefits by continuing to support walking and bike riding and healthy lifestyles, possibly ease road congestion and thereby minimise motorist emissions.

Overall, the Proposal is believed to be justified in meeting its objectives with few residual long-term impacts and is therefore in the public interest.

8.2 Objects of the EP&A Act

Object	Comment
1.3(a) To promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.	The Proposal would promote the social and economic welfare of the community and a better environment by widening the range of transport modes offered to people in the area or travelling through the area. This may result in a reduction of motorist forms of transport which would contribute conservation of natural resources through not contributing to greenhouse gas emissions.
1.3(b) To facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.	The Proposal would facilitate ESD by providing a mode of transport that is environmentally beneficial, socially accessible and affordable to most people, in an area where previous cycling infrastructure was lacking and therefore bike riders were not provided a safe and efficient environment to ride.
1.3(c) To promote the orderly and economic use and development of land.	Not relevant to the Proposal
1.3(d) To promote the delivery and maintenance of affordable housing.	Not relevant to the proposal
1.3(e) To protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.	The Proposal would indirectly protect the environment through a possible reduction in greenhouse gas emissions by an encouraging an increased amount of bike riders. Directly, the Proposal would protect the environment as there would be limited construction associated with retaining the cycleway. The Proposal would not involve the removal of vegetation or disturbance of ecological habitats.
1.3(f) To promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).	Not relevant to the Proposal. Direct and indirect impacts to Aboriginal heritage are unlikely as a result of this Proposal.
1.3(g) To promote good design and amenity of the built environment.	The cycleway increased on-road road furniture and clearer sightlines as a result of reduced number of parked cars. The Proposal's replacement of the Klemmfix barriers with a potentially different, low lying barrier may allow a less visually intrusive colour to be considered for the cycleway barrier. This is not expected to substantially change the overall visual environment.
1.3(h) To promote the proper construction and maintenance of buildings, including the protection of the health and safety of their occupants.	Not relevant to the Proposal
1.3(i) To promote the sharing of the responsibility for environmental planning and assessment	Not relevant to the proposal

Object	Comment
between the different levels of government in the State.	
1.3(j) To provide increased opportunity for community participation in environmental planning and assessment.	TfNSW have consulted the community and stakeholders in March 2021 about the Proposal and sought feedback. TNSW has committed to continuing its consultation in developing the Proposal's design, while planning to build the Proposal, while the Proposal is being built and once it is operational. Chapter 5 describes the detail of how the public has been consulted and would participate in the environmental planning and assessment process moving forward.

8.2.1 Ecologically sustainable development

Ecologically sustainable development (ESD) is development that improves the total quality of life, both now and in the future, in a way that maintains the ecological processes on which life depends. The principles of ESD have been an integral consideration throughout the development of the project.

ESD requires the effective integration of economic and environmental considerations in decision-making processes. The four main principles supporting the achievement of ESD are discussed below.

The precautionary principle

The precautionary principle deals with reconciling scientific uncertainty about environmental impacts with certainty in decision-making. The Proposal has been designed to ensure that no serious or irreversible environmental damage would arise from the proposed activities. The work methods were designed to minimise the impact on the surrounding environment including trees on the streetscape, utilities and the visual amenity of the area. The safeguards that would be implemented to minimise or mitigate any potential impacts provide a high degree of certainty the Proposal would not result in significant impacts.

A construction environment management plan would be prepared prior to commencing construction. This requirement would ensure that the proposed activities achieve a high-level of environmental performance. No mitigation measures or management mechanisms would be postponed as a result of a lack of information.

Intergenerational equity

Inter-generational equity introduces a temporal element with a focus on minimising the distribution of costs to future generations. The Proposal would provide an affordable and no-emission form of transport for current and future generations. The Proposal may also help to encourage bike riding, which could subsequently reduce traffic congestion in the area and reduce greenhouse gas emissions more generally.

Conservation of biological diversity and ecological integrity

The Proposal is not considered to have a significant impact on biological diversity and ecological integrity due to the limited works associated with the Klemmfix barrier replacement.

Improved valuation, pricing and incentive mechanisms

The principle of internalising environmental costs into decision making requires consideration of all environmental resources which may be affected by the carrying out of a project, including air, water, land and living things.

Requirements imposed in terms of implementation of these mitigation measures would result in an economic cost to TfNSW. The implementation of management measures and safeguards would increase the capital cost of the Proposal. This signifies that environmental resources have been given appropriate valuation.

The design for the Proposal has been developed with an objective of minimising potential impacts on the surrounding environment. This indicates that the design for the Proposal has been developed with an environmental objective in mind.

8.3 Conclusion

The proposed retainment of the Bridge Road cycleway and possible Klemmfix barrier replacement on Bridge Road/Pyrmont Bridge Road in Glebe is subject to assessment under Division 5.1 of the EP&A Act. The REF has examined and taken into account to the fullest extent possible all matters affecting or likely to affect the environment by reason of the proposed activity.

This has included consideration (where relevant) of conservation agreements and plans of management under the NPW Act, biodiversity stewardship sites under the BC Act, wilderness areas, areas of outstanding value, impacts on threatened species and ecological communities and their habitats and other protected fauna and native plants. It has also considered potential impacts to matters of national environmental significance listed under the Federal EPBC Act.

A number of potential environmental impacts from the Proposal have been avoided or reduced during the concept design development and options assessment. The Proposal as described in the REF best meets the project objectives but would still result in some minor and temporary traffic and transport, noise and vibration, visual and socio-economic impacts. Safeguards and management measures as detailed in this REF would ameliorate or minimise these expected impacts. The Proposal would continue to enable safe bike riding in the area and continue to enable safe accessibility to schools, workplaces, recreational areas. It would also contribute to the cycleway network in inner Sydney by minimising gaps between cycleway routes. It would also provide an alternative means of transport in an area of road and/or public transport congestion and create positive long-term environmental impacts associated with cycling. The Proposal would also minimise any negative short-term environmental impacts through retaining the existing cycleway infrastructure rather than removing it. On balance the Proposal is considered justified and the following conclusions are made.

Significance of impact under NSW legislation

The Proposal would be unlikely to cause a significant impact on the environment. Therefore it is not necessary for an environmental impact statement to be prepared and approval to be sought from the Minister for Planning and Public Spaces under Division 5.2 of the EP&A Act. A Biodiversity Development Assessment Report or Species Impact Statement is not required. The Proposal is subject to assessment under Division 5.1 of the EP&A Act. Consent from Council is not required.

Significance of impact under Australian legislation

The Proposal is not likely to have a significant impact on matters of national environmental significance or the environment of Commonwealth land within the meaning of the *Environment Protection and Biodiversity Conservation Act 1999*. A referral to the Australian Department of Agriculture, Water and the Environment is not required.

9. Certification

This review of environmental factors provides a true and fair review of the Proposal in relation to its potential effects on the environment. It addresses to the fullest extent possible all matters affecting or likely to affect the environment as a result of the Proposal.

Mia Willows

Environment officer

AECOM

Date: 11/03/2022

I have examined this review of environmental factors and accept it on behalf of Transport for NSW.

Leon Paap

Active Transport Manager

Greater Sydney

Date:

10. References

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Terms and acronyms used in this REF

Term / Acronym	Description
ABS	Australian Bureau of Statistics
BC Act	*Biodiversity Conservation Act 2016* (NSW).
CBD	Central Business District
CEMP	Construction environmental management plan
CM SEPP	State Environmental Planning Policy (Coastal Management) 2018
dB	Decibel
EIA	Environmental impact assessment
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW). Provides the legislative framework for land use planning and development assessment in NSW
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth). Provides for the protection of the environment, especially matters of national environmental significance, and provides a national assessment and approvals process.
ESD	Ecologically sustainable development. Development which uses, conserves and enhances the resources of the community so that ecological processes on which life depends, are maintained and the total quality of life, now and in the future, can be increased
FM Act	*Fisheries Management Act 1994* (NSW)
FT 2056	Future Transport Strategy 2056
Heritage Act	*Heritage Act 1977* (NSW)
ISEPP	State Environmental Planning Policy (Infrastructure) 2007
LEP	Local Environmental Plan. A type of planning instrument made under Part 3 of the EP&A Act.
LGA	Local Government Area
LGA	Local Government Area
LSPS	Local Strategic Planning Statement
MNES	Matters of national environmental significance under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999.*
NCA	Noise Catchment Area
NML	Noise Management Levels
NPW Act	*National Parks and Wildlife Act 1974* (NSW)
QA Specifications	Specifications developed by Transport for NSW for use with road work and bridge work contracts let by Transport for NSW.

Term / Acronym	Description
REF	Review of Environmental Factors
Roads and Maritime	NSW Roads and Maritime Services, now known as Transport for NSW
ROL	Road Occupancy Licence
SEPP	State Environmental Planning Policy. A type of planning instrument made under Part 3 of the EP&A Act.
SHR	State Heritage Register
Temporary Cycleways Order	*Environmental Planning and Assessment (COVID-19 Development – Temporary Cycleways) Order 2020*
TfNSW	Transport for New South Wales

Appendices

Appendix A

Consideration of clause 228(2) factors and matters of national environmental significance and Commonwealth land

Clause 228(2) Checklist

In addition to the requirements of the *Is an EIS required?* guideline (DUAP 1995/1996) and the *Roads and Related Facilities EIS Guideline* (DUAP 1996) as detailed in the REF, the following factors, listed in clause 228(2) of the Environmental Planning and Assessment Regulation 2000, have also been considered to assess the likely impacts of the Proposal on the natural and built environment.

Factor	Impact
a) Any environmental impact on a community? The Proposal is located within a highly modified urban area and would not result in any environmental impact on a community. The Proposal may decrease road traffic in the area and provide a positive contribution to the environment.	Minor
b) Any transformation of a locality? There is no transformation of the locality anticipated with the Proposal.	Negligible
c) Any environmental impact on the ecosystems of the locality? The Proposal exists in a highly modified urban area with limited natural environmental areas or values. There are no identified threatened species or habitats and no affected heritage items within the Proposal area.	Negligible
d) Any reduction of the aesthetic, recreational, scientific or other environmental quality or value of a locality? The Proposal area has a distinct cultural aesthetic with heritage items which would not be impacted by the Proposal.	Negligible
e) Any effect on a locality, place or building having aesthetic, anthropological, archaeological, architectural, cultural, historical, scientific or social significance or other special value for present or future generations? The Proposal would have minor, indirect impacts upon items of heritage significance. In addition, the Proposal would have a minor positive impact on Bridge Road/Pyrmont Bridge Road and the adjoining areas serviced by the interconnected cycleway for future generations through the provision of needed active transport infrastructure.	Minor
f) Any impact on the habitat of protected fauna (within the meaning of the *National Parks and Wildlife Act 1974)?* The Proposal exists in a highly modified urban environment that is unlikely to contain any habitat of protected fauna. In addition the scope in works required to replace the Klemmfix barrier are minimal.	Minor/Negligible

Factor	Impact
g) Any endangering of any species of animal, plant or other form of life, whether living on land, in water or in the air? The Proposal exists in a highly modified urban environment that is unlikely to contain any habitat of protected fauna. In addition the scope in works required to replace the Klemmfix barrier are minimal.	Minor
h) Any long-term effects on the environment? The Proposal is proposed as a transport solution to improve access in the area and active transport networks. The Proposal is aimed at encouraging a modal shift of transport to active transport, reducing the volume of vehicles within the City, thereby reducing vehicle emissions.	Minor
i) Any degradation of the quality of the environment? The Proposal would not degrade the quality of the environment.	Negligible
j) Any risk to the safety of the environment? The Proposal poses no risks to the safety of the environment. This REF has proposed a number of mitigation measures aimed at reducing any risks to the environment during construction.	Minor
k) Any reduction in the range of beneficial uses of the environment? The Proposal would provide for an increase in sustainable transport use and public domain enhancements would provide increased value to the area. The Proposal would ensure long term access improvements in the area.	Minor
l) Any pollution of the environment? The Proposal would not result in increase in air pollution.	Negligible
m) Any environmental problems associated with the disposal of waste? A minimal amount of waste (the Klemmfix barrier) will be generated in association with the Proposal	Minor
n) Any increased demands on resources (natural or otherwise) that are, or are likely to become, in short supply? The Proposal is unlikely to increase demand on resources (natural or otherwise) that are, or are likely to become, in short supply.	Negligible
o) Any cumulative environmental effect with other existing or likely future activities? The Proposal would not coincide with the construction of any other projects as known at the time of writing. This would have to be reassessed before construction. Cumulative impacts as a result of concurrent development are unlikely.	Minor
p) Any impact on coastal processes and coastal hazards, including those under projected climate change conditions?	Negligible

Factor	Impact
The Proposal is located approximately 200 m from the coastline at Blackwattle Bay. However, given the minimal construction scope items, the Proposal is unlikely to impact on coastal processes.	

Appendix B

Matters of National Environmental Significance and Commonwealth land

Under the environmental assessment provisions of the EPBC Act 1999, the following matters of national environmental significance and impacts on Commonwealth land are required to be considered to assist in determining whether the Proposal should be referred to the Australian Government Department of Agriculture, Water and the Environment.

A referral is not required for proposed actions that may affect nationally listed threatened species, endangered ecological communities and migratory species. Impacts on these matters are still assessed as part of the REF in accordance with Australian Government significant impact criteria and taking into account relevant guidelines and policies.

Factor	Impact
a) Any impact on a World Heritage property? N	Nil
b) Any impact on a National Heritage place?	Nil
c) Any impact on a wetland of international importance?	Nil
d) Any impact on a listed threatened species or communities?	Nil
e) Any impacts on listed migratory species?	Nil
f) Any impact on a Commonwealth marine area?	Nil
g) Does the Proposal involve a nuclear action (including uranium mining)?	Nil
h) Additionally, any impact (direct or indirect) on the environment of Commonwealth land?	Nil

Appendix C

Statutory consultation checklists

Infrastructure SEPP

Certain development types

Development type	Description	Yes / No	ISEPP clause
Car Park	Does the project include a car park intended for the use by commuters using regular bus services?	No	ISEPP cl. 95A
Bus Depots	Does the project propose a bus depot?	No	ISEPP cl. 95A
Permanent road maintenance depot and associated infrastructure	Does the project propose a permanent road maintenance depot or associated infrastructure such as garages, sheds, tool houses, storage yards, training facilities and workers' amenities?	No	ISEPP cl. 95A

Development within the Coastal Zone

Issue	Description	Yes / No / NA	ISEPP clause
Development with impacts on certain land within the coastal zone	Is the Proposal within a coastal vulnerability area and is inconsistent with a certified coastal management program applying to that land?	No	ISEPP cl. 15A

Note: See interactive map here: ***https://www.planning.nsw.gov.au/policy-and-legislation/coastal-management***. Note the coastal vulnerability area has not yet been mapped.

Note: a certified coastal zone management plan is taken to be a certified coastal management program

Council related infrastructure or services

Issue	Potential impact	Yes / No	ISEPP clause
Stormwater	Are the works likely to have a *substantial* impact on the stormwater management services which are provided by council?	No	ISEPP cl.13(1)(a)

Issue	Potential impact	Yes / No	ISEPP clause
Traffic	Are the works likely to generate traffic to an extent that will *strain* the capacity of the existing road system in a local government area?	No	ISEPP cl.13(1)(b)
Sewerage system	Will the works involve connection to a council owned sewerage system? If so, will this connection have a *substantial* impact on the capacity of any part of the system?	No	ISEPP cl.13(1)(c)
Water usage	Will the works involve connection to a council owned water supply system? If so, will this require the use of a *substantial* volume of water?	No	ISEPP cl.13(1)(d)
Temporary structures	Will the works involve the installation of a temporary structure on, or the enclosing of, a public place which is under local council management or control? If so, will this cause more than a *minor* or *inconsequential* disruption to pedestrian or vehicular flow?	No, any temporary structures would not likely cause more than a minor or inconsequential disruption to pedestrian or vehicle flow.	ISEPP cl.13(1)(e)
Road & footpath excavation	Will the works involve more than *minor* or *inconsequential* excavation of a road or adjacent footpath for which council is the roads authority and responsible for maintenance?	No	ISEPP cl.13(1)(f)

Local heritage items

Issue	Potential impact	Yes / No	ISEPP clause
Local heritage	Is there is a local heritage item (that is not also a State heritage item) or a heritage conservation area in the study area for the works? If yes, does a heritage assessment indicate that the potential impacts to the heritage significance of the item/area are more than *minor* or *inconsequential?*	No, potential impacts to the heritage significance of the item/area are likely to be minor or inconsequential	ISEPP cl.14

Flood liable land

Issue	Potential impact	Yes / No	ISEPP clause
Flood liable land	Are the works located on flood liable land? If so, will the works change flood patterns to more than a *minor* extent?	No, the works would not likely change flood patterns to more than a minor extent	ISEPP cl.15
Flood liable land	Are the works located on flood liable land? (to any extent). If so, do the works comprise more than minor alterations or additions to, or the demolition of, a building, emergency works or routine maintenance	No, the works would not comprise of more than minor alterations or additions	ISEPP cl.15AA

Note: Flood liable land means land that is susceptible to flooding by the probable maximum flood event, identified in accordance with the principles set out in the manual entitled *Floodplain Development Manual: the management of flood liable* land published by the New South Wales Government.

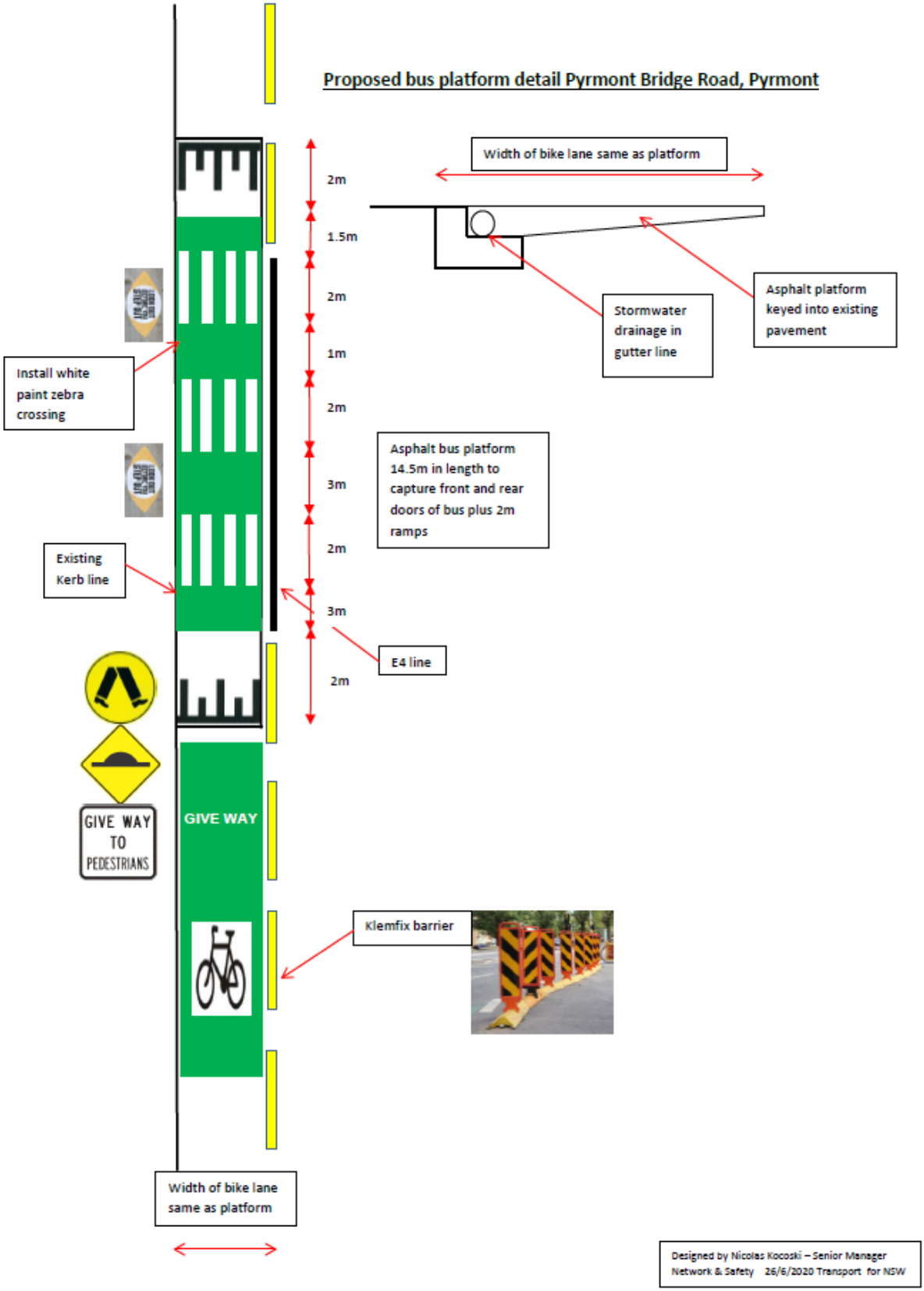
Public authorities other than councils

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
National parks and reserves	Are the works adjacent to a national park or nature reserve, or other area reserved under the *National Parks and Wildlife Act 1974*, or on land acquired under that Act*?*	No	Environment, Energy and Science, DPIE	ISEPP cl.16(2)(a)
National parks and reserves	Are the works on land in Zone E1 National Parks and Nature Reserves or in a land use zone equivalent to that zone?	No	Environment, Energy and Science, DPIE	ISEPP cl. 16(2)(b)
Aquatic reserves	Are the works adjacent to an aquatic reserve or a marine park declared under the *Marine Estate Management Act 2014*?	No	Department of Planning, Industry and Environment	ISEPP cl.16(2)(c)
Sydney Harbour foreshore	Are the works in the Sydney Harbour Foreshore Area as defined by the *Sydney Harbour Foreshore Authority Act 1998?*	No	Property NSW	ISEPP cl.16(2)(d)
Bush fire prone land	Are the works for the purpose of residential development, an educational establishment, a health services facility, a correctional centre or group home in bush fire prone land?	No	Rural Fire Service	ISEPP cl.16(2)(f)

Issue	Potential impact	Yes / No	If 'yes' consult with	ISEPP clause
Artificial light	Would the works increase the amount of artificial light in the night sky and that is on land within the dark sky region as identified on the dark sky region map? (Note: the dark sky region is within 200 kilometres of the Siding Spring Observatory)	No	Director of the Siding Spring Observatory	ISEPP cl.16(2)(g)
Defence communications buffer land	Are the works on buffer land around the defence communications facility near Morundah? (Note: refer to Defence Communications Facility Buffer Map referred to in clause 5.15 of Lockhardt LEP 2012, Narrandera LEP 2013 and Urana LEP 2011.	No	Secretary of the Commonwealth Department of Defence	ISEPP cl. 16(2)(h)
Mine subsidence land	Are the works on land in a mine subsidence district within the meaning of the *Mine Subsidence Compensation Act 1961*?	No	Mine Subsidence Board	ISEPP cl. 16(2)(i)

Appendix D

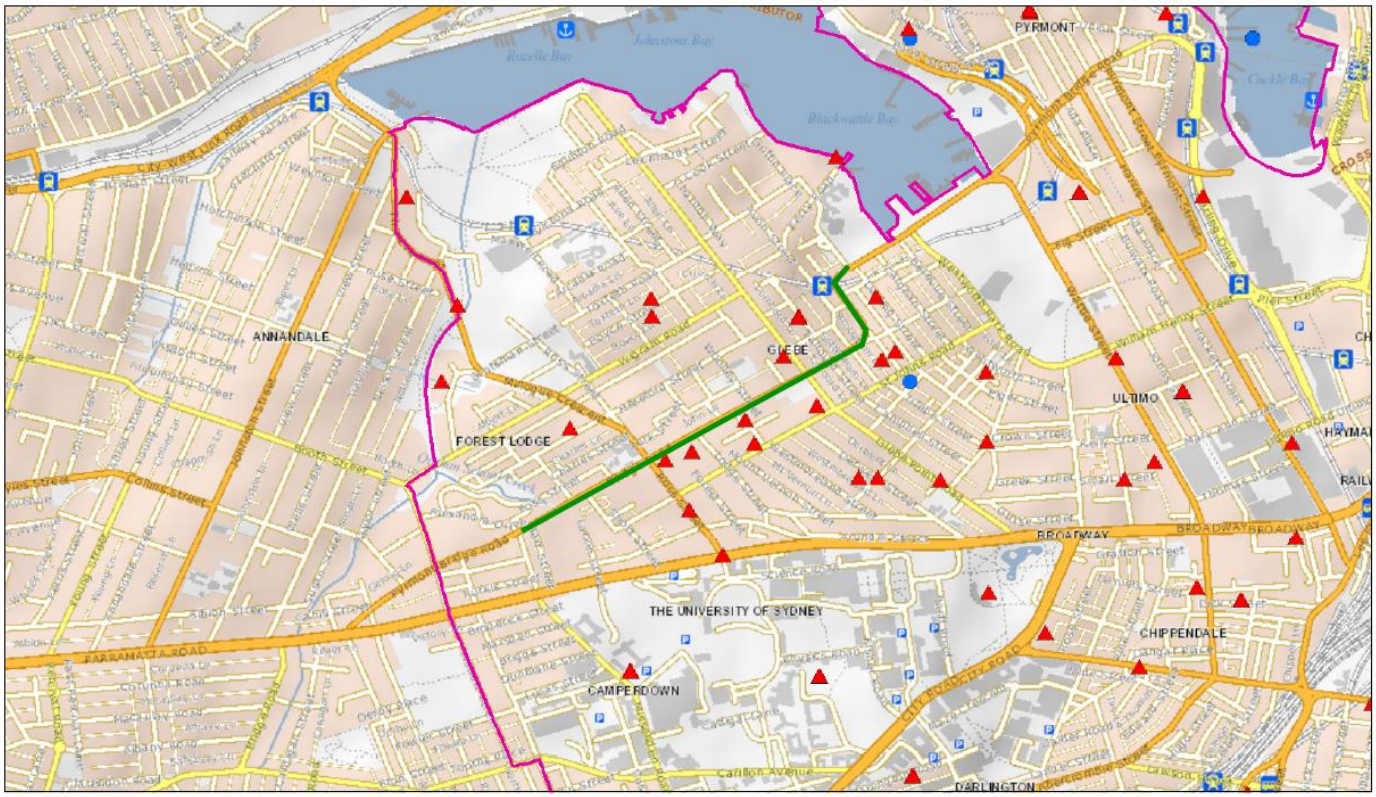
Concept Design



Appendix E

EPBC Act Protected Matters Report and Bionet Species Search

Bionet Species Sightings for Sydney LGA 2011-2021



February 19, 2021

spc0
spc2
LGA
Proposal corridor

1:16,000

0 0.125 0.25 0.5 mi

0 0.2 0.4 0.8 km

EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other mattersprotected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in thecaveat at the end of the report.

Information is available about Environment Assessments and the EPBC Act including significance guidelines,forms and application process details.

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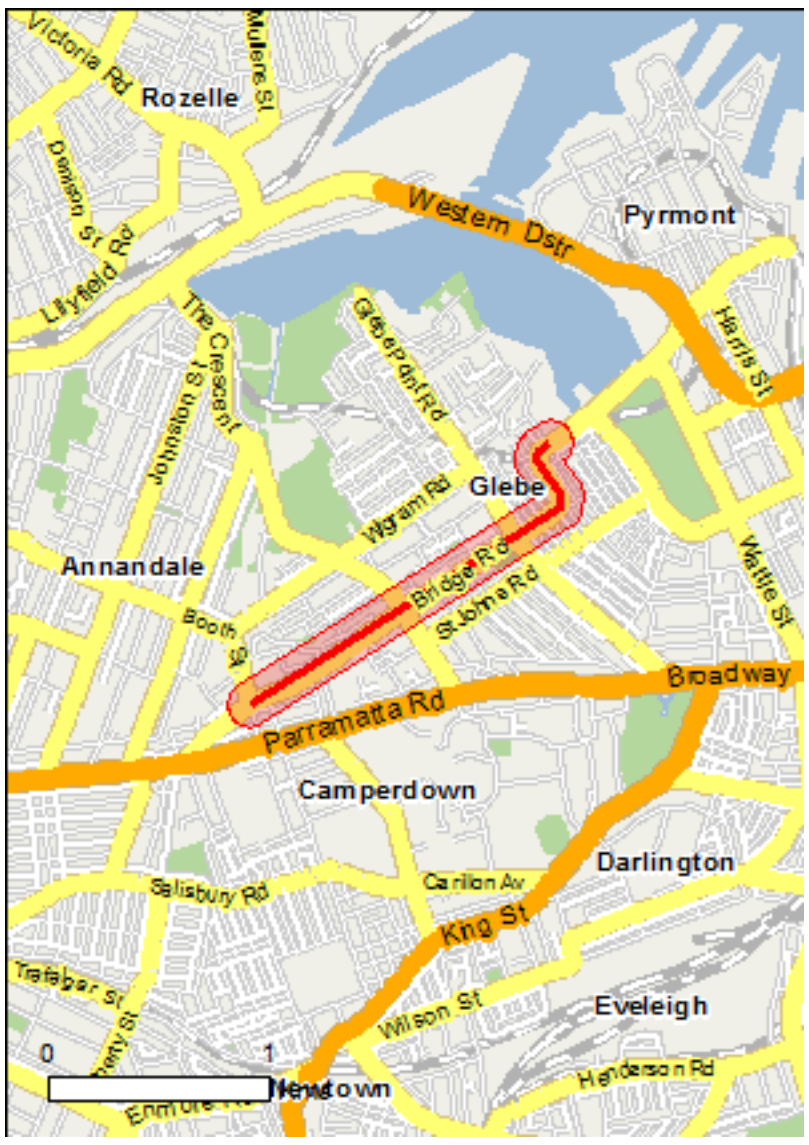

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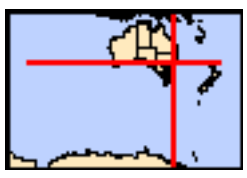


SUMMARY

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or mayrelate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	None
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	6
Listed Threatened Species:	60
Listed Migratory Species:	49

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing totake an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of aplace are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member ofa listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	50
Whales and Other Cetaceans:	3
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	48
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Listed Threatened Ecological Communities [Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recoveryplans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
Castlereagh Scribbly Gum and Agnes BanksWoodlands of the Sydney Basin Bioregion	Endangered	Community may occurwithin area
Coastal Swamp Oak (Casuarina glauca) Forest of NewSouth Wales and South East Queensland ecological community	Endangered	Community may occurwithin area
Coastal Upland Swamps in the Sydney Basin Bioregion	Endangered	Community may occurwithin area
Cooks River/Castlereagh Ironbark Forest of theSydney Basin Bioregion	Critically Endangered	Community may occur within area
River-flat eucalypt forest on coastal floodplains of southern New South Wales and eastern Victoria Western Sydney Dry Rainforest and Moist Woodlandon Shale	Critically Endangered	Community may occur within area
	Critically Endangered	Community may occur within area

Listed Threatened Species [Resource Information]

Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Species or species habitat known to occur within area
Botaurus poiciloptilus Australasian Bittern [1001]	Endangered	Species or species habitat likely to occur within area
Calidris canutus Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Diomedea antipodensis Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea antipodensis gibsoni Gibson's Albatross [82270]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea epomophora Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
Diomedea exulans Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Name	Status	Type of Presence
Diomedea sanfordi		
Northern Royal Albatross [64456]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Falco hypoleucos		
Grey Falcon [929]	Vulnerable	Species or species habitatmay occur within area
Grantiella picta		
Painted Honeyeater [470]	Vulnerable	Species or species habitatlikely to occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitatknown to occur within area
Limosa lapponica baueri		
Bar-tailed Godwit (baueri), Western Alaskan Bar-tailedGodwit [86380]	Vulnerable	Species or species habitatknown to occur within area
Macronectes giganteus		
Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli		
Northern Giant Petrel [1061]	Vulnerable	Species or species habitatmay occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur subantarctica		
Fairy Prion (southern) [64445]	Vulnerable	Species or species habitatknown to occur within area
Rostratula australis		
Australian Painted Snipe [77037]	Endangered	Species or species habitatlikely to occur within area
Sternula nereis nereis		
Australian Fairy Tern [82950]	Vulnerable	Breeding likely to occurwithin area
Thalassarche bulleri		
Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche bulleri platei		
Northern Buller's Albatross, Pacific Albatross [82273]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta		
Shy Albatross [89224]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche eremita		
Chatham Albatross [64457]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross[64459]	Vulnerable	Species or species habitatmay occur within area
Thalassarche melanophris		
Black-browed Albatross [66472]	Vulnerable	Species or species habitatmay occur within area
Thalassarche salvini		
Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or

Name	Status	Type of Presence
		related behaviour likely tooccur within area
[Thinornis cucullatus cucullatus](#) Hooded Plover (eastern), Eastern Hooded Plover[90381]	Vulnerable	Species or species habitatlikely to occur within area
Fish		
[Epinephelus daemelii](#) Black Rockcod, Black Cod, Saddled Rockcod [68449]	Vulnerable	Species or species habitatlikely to occur within area
[Macquaria australasica](#) Macquarie Perch [66632]	Endangered	Species or species habitatmay occur within area
Frogs		
[Heleioporus australiacus](#) Giant Burrowing Frog [1973]	Vulnerable	Species or species habitatmay occur within area
[Litoria aurea](#) Green and Golden Bell Frog [1870]	Vulnerable	Species or species habitatlikely to occur within area
Mammals		
[Chalinolobus dwyeri](#) Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitatlikely to occur within area
[Dasyurus maculatus maculatus (SE mainland population)](#) Spot-tailed Quoll, Spotted-tail Quoll, Tiger Quoll(southeastern mainland population) [75184]	Endangered	Species or species habitatlikely to occur within area
[Isoodon obesulus obesulus](#) Southern Brown Bandicoot (eastern), Southern BrownBandicoot (south-eastern) [68050]	Endangered	Species or species habitatmay occur within area
[Petauroides volans](#) Greater Glider [254]	Vulnerable	Species or species habitatlikely to occur within area
[Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)](#) Koala (combined populations of Queensland, NewSouth Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitatmay occur within area
[Pteropus poliocephalus](#)		

Name	Status	Type of Presence
Grey-headed Flying-fox [186]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area

Plants

[Acacia pubescens](#)

Downy Wattle, Hairy Stemmed Wattle [18800]	Vulnerable	Species or species habitat may occur within area

[Acacia terminalis subsp. terminalis MS](#)

Sunshine Wattle (Sydney region) [88882]	Endangered	Species or species habitat

may occur within area

[Allocasuarina glareicola](#)

[21932]	Endangered	Species or species habitatmay occur within area

[Caladenia tessellata](#)

Thick-lipped Spider-orchid, Daddy Long-legs [2119]	Vulnerable	Species or species habitat

likely to occur within area

[Cryptostylis hunteriana](#)

Leafless Tongue-orchid [19533]	Vulnerable	Species or species habitat likely to occur within area

[Eucalyptus camfieldii](#)

Camfield's Stringybark [15460]	Vulnerable	Species or species habitat likely to occur

[Genoplesium baueri](#)

Yellow Gnat-orchid, Bauer's Midge Orchid, BrittleMidge Orchid [7528]		

within area

	Endangered	Species or species habitatlikely to occur within area

Name	Threatened	Type of Presence
Persicaria elatior		
Knotweed, Tall Knotweed [5831]	Vulnerable	Species or species habitatmay occur within area
Persoonia hirsuta		
Hairy Geebung, Hairy Persoonia [19006]	Endangered	Species or species habitat may occur within area
Pimelea curviflora var. curviflora		
[4182]	Vulnerable	Species or species habitatmay occur within area
Pimelea spicata		
Spiked Rice-flower [20834]	Endangered	Species or species habitatmay occur within area
Rhodamnia rubescens		
Scrub Turpentine, Brown Malletwood [15763]	Critically Endangered	Species or species habitat likely to occur within area
Rhodomyrtus psidioides		
Native Guava [19162]	Critically Endangered	Species or species habitatmay occur within area
Syzygium paniculatum		
Magenta Lilly Pilly, Magenta Cherry, Daguba, ScrubCherry, Creek Lilly Pilly, ush Cherry [20307]	Vulnerable	Species or species habitatlikely to occur within area
Thesium australe		
Austral Toadflax, Toadflax [15202]	Vulnerable	Species or species habitatmay occur within area
Reptiles Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitatknown to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitatknown to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitatknown to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitatknown to occur within area
Hoplocephalus bungaroides		
Broad-headed Snake [1182]	Vulnerable	Species or species habitatmay occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Species or species habitatknown to occur within area
Sharks Carcharodon carcharias White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area

Listed Migratory Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.

Name	Threatened	Type of Presence
Migratory Marine Birds		
Anous stolidus		
Common Noddy [825]		Species or species habitat likely to occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardenna grisea		
Sooty Shearwater [82651]		Species or species habitat likely to occur within area
Calonectris leucomelas		
Streaked Shearwater [1077]		Species or species habitat known to occur within area
Diomedea antipodensis		
Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Diomedea epomophora		

Name	Threatened	Type of Presence
Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Diomedea exulans		
Wandering Albatross [89223]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Diomedea sanfordi		
Northern Royal Albatross [64456]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Fregata ariel		
Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitatlikely to occur within area
Fregata minor		
Great Frigatebird, Greater Frigatebird [1013]		Species or species habitatmay occur within area
Macronectes giganteus		
Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli		
Northern Giant Petrel [1061]	Vulnerable	Species or species habitatmay occur within area
Thalassarche bulleri		
Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta		
Shy Albatross [89224]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche eremita		
Chatham Albatross [64457]	Endangered	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross [64459]	Vulnerable	Species or species habitatmay occur within area
Thalassarche melanophris		
Black-browed Albatross [66472]	Vulnerable	Species or species habitatmay occur within area
Thalassarche salvini		
Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Migratory Marine Species		
Balaenoptera edeni		
Bryde's Whale [35]		Species or species habitat may occur within area
Caperea marginata		
Pygmy Right Whale [39]		Foraging, feeding or related behaviour may occur withinarea
Carcharodon carcharias		
White Shark, Great White Shark [64470]	Vulnerable	Species or species habitat likely to occur within area
Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitatknown to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitatknown to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitat known to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitatknown to occur within area
Lagenorhynchus obscurus		
Dusky Dolphin [43]		Species or species habitat may occur within area
Lamna nasus		
Porbeagle, Mackerel Shark [83288]		Species or species habitatlikely to occur within area
Manta alfredi		
Reef Manta Ray, Coastal Manta Ray, Inshore Manta Ray, Prince Alfred's Ray, Resident Manta Ray [84994]		Species or species habitatknown to occur within area

Manta birostris

Giant Manta Ray, Chevron Manta Ray, Pacific MantaRay, Pelagic Manta Ray, Oceanic Manta Ray [84995] Species or species habitatmay occur within area

Natator depressus

Flatback Turtle [59257] Vulnerable Species or species habitatknown to occur within area

Migratory Terrestrial Species Cuculus optatus

Oriental Cuckoo, Horsfield's Cuckoo [86651] Species or species habitatmay occur within area

Hirundapus caudacutus

White-throated Needletail [682] Vulnerable Species or species habitatknown to occur within area

Monarcha melanopsis

Black-faced Monarch [609] Species or species habitat known to occur within area

Monarcha trivirgatus

Spectacled Monarch [610] Species or species habitat may occur within area

Motacilla flava

Yellow Wagtail [644] Species or species habitat likely to occur

Myiagra cyanoleuca

Satin Flycatcher [612] Species or species habitat known to occur within area

Rhipidura rufifrons

Rufous Fantail [592] Species or species habitat known to occur within area

Migratory Wetlands Species Actitis hypoleucos

Common Sandpiper [59309] Species or species habitat known to occur within area

Calidris acuminata

Sharp-tailed Sandpiper [874] Species or species habitatknown to occur within area

Calidris canutus

Red Knot, Knot [855] Endangered Species or species habitatknown to occur within area

Calidris ferruginea

Curlew Sandpiper [856] Critically Endangered Species or species habitatmay occur within area

Calidris melanotos

Pectoral Sandpiper [858] Species or species habitat known to occur within area

Gallinago hardwickii

Latham's Snipe, Japanese Snipe [863] Species or species habitatlikely to occur within area

Limosa lapponica

Bar-tailed Godwit [844] Species or species habitat known to occur within area

Numenius madagascariensis

Eastern Curlew, Far Eastern Curlew [847] Critically Endangered Species or species habitat may occur within area

Pandion haliaetus

Osprey [952] Species or species habitat may occur within area

Pluvialis fulva

Pacific Golden Plover [25545] Species or species habitatlikely to occur within area

Tringa nebularia

Common Greenshank, Greenshank [832] Species or species habitatlikely to occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species [Resource Information]

* Species is listed under a different scientific name on the EPBC Act - Threatened Species list. Name Threatened Type of Presence

Birds Actitis hypoleucos

Common Sandpiper [59309] Species or species habitat known to occur within area

Anous stolidus

Common Noddy [825] Species or species habitat likely to occur

[Apus pacificus](#) Fork-tailed Swift [678]		Species or species habitat likely to occur within area
[Ardea alba](#) Great Egret, White Egret [59541]		Species or species habitat known to occur within area
[Ardea ibis](#) Cattle Egret [59542]		Species or species habitat may occur within area
[Calidris acuminata](#) Sharp-tailed Sandpiper [874]		Species or species habitat known to occur within area
[Calidris canutus](#) Red Knot, Knot [855]	Endangered	Species or species habitat known to occur within area
[Calidris ferruginea](#) Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
[Calidris melanotos](#) Pectoral Sandpiper [858]		Species or species habitat known to occur within area
[Calonectris leucomelas](#) Streaked Shearwater [1077]		Species or species habitat known to occur within area
[Diomedea antipodensis](#) Antipodean Albatross [64458]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea epomophora](#) Southern Royal Albatross [89221]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea exulans](#) Wandering Albatross [89223]	Vulnerable	Foraging, feeding or related behaviour likely to occur within area
[Diomedea gibsoni](#) Gibson's Albatross [64466]	Vulnerable*	Foraging, feeding or related behaviour likely to occur within area
[Diomedea sanfordi](#) Northern Royal Albatross [64456]	Endangered	Foraging, feeding or related behaviour likely to occur within area
[Fregata ariel](#) Lesser Frigatebird, Least Frigatebird [1012]		Species or species habitat likely to occur within area
[Fregata minor](#) Great Frigatebird, Greater Frigatebird [1013]		Species or species habitat may occur within area
[Gallinago hardwickii](#) Latham's Snipe, Japanese Snipe [863]		Species or species habitat likely to occur within area
[Haliaeetus leucogaster](#) White-bellied Sea-Eagle [943]		Species or species habitat likely to occur within area
[Hirundapus caudacutus](#) White-throated Needletail [682]	Vulnerable	Species or species habitat

Name	Threatened	Type of Presence
Limosa lapponica		
Bar-tailed Godwit [844]		Species or species habitat known to occur within area
Macronectes giganteus		
Southern Giant-Petrel, Southern Giant Petrel [1060]	Endangered	Species or species habitat may occur within area
Macronectes halli		
Northern Giant Petrel [1061]	Vulnerable	Species or species habitat may occur within area
Merops ornatus		
Rainbow Bee-eater [670]		Species or species habitat may occur within area
Monarcha melanopsis		
Black-faced Monarch [609]		Species or species habitat known to occur within area
Monarcha trivirgatus		
Spectacled Monarch [610]		Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat likely to occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area
Numenius madagascariensis		
Eastern Curlew, Far Eastern Curlew [847]	Critically Endangered	Species or species habitat may occur within area
Pachyptila turtur		
Fairy Prion [1066]		Species or species habitat known to occur within area
Pandion haliaetus		
Osprey [952]		Species or species habitat may occur within area
Pluvialis fulva		
Pacific Golden Plover [25545]		Species or species habitat likely to occur within area
Puffinus griseus		
Sooty Shearwater [1024]		Species or species habitat likely to occur within area
Rhipidura rufifrons		
Rufous Fantail [592]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato)		
Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area
Thalassarche bulleri		
Buller's Albatross, Pacific Albatross [64460]	Vulnerable	Species or species habitat may occur within area
Thalassarche cauta		
Shy Albatross [89224]	Endangered	Foraging, feeding or related behaviour likely to occur within area
Thalassarche eremita		
Chatham Albatross [64457]	Endangered	Foraging, feeding or related behaviour likely to occur within area

Name	Threatened	Type of Presence
Thalassarche impavida		
Campbell Albatross, Campbell Black-browed Albatross[64459]	Vulnerable	Species or species habitatmay occur within area
Thalassarche melanophris		
Black-browed Albatross [66472]	Vulnerable	Species or species habitatmay occur within area
Thalassarche salvini		
Salvin's Albatross [64463]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Thalassarche sp. nov.		
Pacific Albatross [66511]	Vulnerable*	Species or species habitatmay occur within area
Thalassarche steadi		
White-capped Albatross [64462]	Vulnerable	Foraging, feeding or relatedbehaviour likely to occur within area
Thinornis rubricollis rubricollis		
Hooded Plover (eastern) [66726]	Vulnerable*	Species or species habitatlikely to occur within area
Tringa nebularia		
Common Greenshank, Greenshank [832]		Species or species habitatlikely to occur within area
Reptiles Caretta caretta		
Loggerhead Turtle [1763]	Endangered	Species or species habitatknown to occur within area
Chelonia mydas		
Green Turtle [1765]	Vulnerable	Species or species habitatknown to occur within area
Dermochelys coriacea		
Leatherback Turtle, Leathery Turtle, Luth [1768]	Endangered	Species or species habitatknown to occur within area
Eretmochelys imbricata		
Hawksbill Turtle [1766]	Vulnerable	Species or species habitatknown to occur within area
Natator depressus		
Flatback Turtle [59257]	Vulnerable	Species or species habitatknown to occur within area

Whales and other Cetaceans	[Resource Information]
Name Status	Type of Presence
Mammals Balaenoptera edeni	
Bryde's Whale [35]	Species or species habitat may occur within area
Caperea marginata	
Pygmy Right Whale [39]	Foraging, feeding or related behaviour may occur withinarea
Lagenorhynchus obscurus	
Dusky Dolphin [43]	Species or species habitat may occur within area

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps fromLandscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis		
Common Myna, Indian Myna [387]		Species or species habitatlikely to occur within area
Alauda arvensis		
Skylark [656]		Species or species habitatlikely to occur within area
Anas platyrhynchos		
Mallard [974]		Species or species habitatlikely to occur within area
Carduelis carduelis		
European Goldfinch [403]		Species or species habitatlikely to occur within area
Carduelis chloris		
European Greenfinch [404]		Species or species habitatlikely to occur within area
Columba livia		
Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitatlikely to occur within area
Lonchura punctulata		
Nutmeg Mannikin [399]		Species or species habitatlikely to occur within area
Passer domesticus		
House Sparrow [405]		Species or species habitatlikely to occur within area
Passer montanus		
Eurasian Tree Sparrow [406]		Species or species habitatlikely to occur within area
Pycnonotus jocosus		
Red-whiskered Bulbul [631]		Species or species habitatlikely to occur within area
Streptopelia chinensis		
Spotted Turtle-Dove [780]		Species or species habitatlikely to occur within area
Sturnus vulgaris		
Common Starling [389]		Species or species habitatlikely to occur within area
Turdus merula		
Common Blackbird, Eurasian Blackbird [596]		Species or species habitatlikely to occur within area
Frogs	Rhinella marina	
Cane Toad [83218]	Species or species habitat known to occur within area	
Mammals		
	Canis lupus familiaris	

Name	Status	Type of Presence
Domestic Dog [82654]	Species or species habitat likely to occur within area	Species or species habitatlikely to occur within ar
Bos taurus Domestic Cattle [16]		Species or species habitatlikely to occur within area
Felis catus		
Cat, House Cat, Domestic Cat [19]	Species or species habitatlikely to occur within area	Species or species habitatlikely to occur within ar
Lepus capensis		
Brown Hare [127]	Species or species habitat likely to occur within area	Species or species habitatlikely to occur within ar
Mus musculus		
House Mouse [120]	Species or species habitat likely to occur within area	
Oryctolagus cuniculus		
Rabbit, European Rabbit [128]	Species or species habitatlikely to occur within area	
Rattus norvegicus		
Brown Rat, Norway Rat [83]	Species or species habitat likely to occur within area	
Rattus rattus		
Black Rat, Ship Rat [84]	Species or species habitat likely to occur within area	
Vulpes vulpes		
Red Fox, Fox [18]	Species or species habitat likely to occur within area	
Plants	Alternanthera philoxeroides	
Alligator Weed [11620]	Species or species habitat likely to occur within area	
Anredera cordifolia		
Madeira Vine, Jalap, Lamb's-tail, Mignonette Vine, Anredera, Gulf Madeiravine, Heartleaf Madeiravine,Potato Vine [2643]		
Asparagus aethiopicus		
Asparagus Fern, Ground Asparagus, Basket Fern, Sprengi's Fern, Bushy Asparagus, Emerald Asparagus[62425]		
Asparagus asparagoides		
Bridal Creeper, Bridal Veil Creeper, Smilax, Florist'sSmilax, Smilax Asparagus [22473]		
Asparagus plumosus		
Climbing Asparagus-fern [48993]	Species or species habitatlikely to occur within area	Species or species habitatlikely to occur within ar
Asparagus scandens		
Asparagus Fern, Climbing Asparagus Fern [23255]	Species or species habitatlikely to occur within area	
Cabomba caroliniana		
Cabomba, Fanwort, Carolina Watershield, Fish Grass,Washington Grass, Watershield, Carolina Fanwort, Common Cabomba [5171]		
Chrysanthemoides monilifera		
Bitou Bush, Boneseed [18983]	Species or species habitatmay occur within area	
		Species or species habitatlikely to occur within ar
Chrysanthemoides monilifera subsp. monilifera		
Boneseed [16905]	Species or species habitat likely to occur within area	
Cytisus scoparius		
Broom, English Broom, Scotch Broom, CommonBroom, Scottish Broom, Spanish Broom [5934]		
Dolichandra unguis-cati		
Cat's Claw Vine, Yellow Trumpet Vine, Cat's ClawCreeper, Funnel Creeper [85119]		Species or species habitatlikely to occur within ar
Eichhornia crassipes		
Water Hyacinth, Water Orchid, Nile Lily [13466]	Species or species habitatlikely to occur within area	

Name	Status	Type of Presence
Genista linifolia Flax-leaved Broom, Mediterranean Broom, Flax Broom[2800]		Species or species habitatlikely to occur within ar
Genista monspessulana Montpellier Broom, Cape Broom, Canary Broom, Common Broom, French Broom, Soft Broom [20126]		Species or species habitatlikely to occur within ar
Genista sp. X Genista monspessulana Broom [67538]	Species or species habitat	Species or species habitatlikely to occur within ar
may occur within area Lantana camara Lantana, Common Lantana, Kamara Lantana, Large- leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage[10892]		
Lycium ferocissimum African Boxthorn, Boxthorn [19235]	Species or species habitatlikely to occur within area	
Opuntia spp. Prickly Pears [82753]	Species or species habitat likely to occur within area	
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, WildingPine [20780]		Species or species habitatmay occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]	Species or species habitatlikely to occur within area	
Sagittaria platyphylla Delta Arrowhead, Arrowhead, Slender Arrowhead[68483]		Species or species habitatlikely to occur within ar
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtiiWillows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitatlikely to occur within ar
Salvinia molesta Salvinia, Giant Salvinia, Aquarium Watermoss, KaribaWeed [13665]		Species or species habitatlikely to occur within ar
Senecio madagascariensis Fireweed, Madagascar Ragwort, MadagascarGroundsel [2624]		Species or species habitatlikely to occur within ar

Name	Status	Type of Presence
Chrysanthemoides monilifera subsp. rotundataBitou Bush [16332]		Species or species habitatlikely to occur within area

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at variousresolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in makinga referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remotesensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and pointlocation data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and iftime permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental datalayers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull);or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliabledistribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped: migratory and marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

threatened species listed as extinct or considered as vagrants some species and ecological communities that have only recently been listed

some terrestrial species that overfly the Commonwealth marine area migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species: non-threatened seabirds which have only been mapped for recorded breeding sites

seals which have only been mapped for breeding sites near the Australian continent Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-33.88541 151.17613,-33.8788 151.18868,-33.87834 151.18875,-33.87718 151.18774,-33.87688 151.18785,-33.87659 151.18832

This database has been compiled from a range of data sources. The department acknowledges the followingcustodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales

-Department of Environment and Primary Industries, Victoria

-Department of Primary Industries, Parks, Water and Environment, Tasmania

-Department of Environment, Water and Natural Resources, South Australia

-Department of Land and Resource Management, Northern Territory

-Department of Environmental and Heritage Protection, Queensland

-Department of Parks and Wildlife, Western Australia

-Environment and Planning Directorate, ACT

-Birdlife Australia

-Australian Bird and Bat Banding Scheme

-Australian National Wildlife Collection

-Natural history museums of Australia

-Museum Victoria

-Australian Museum

-South Australian Museum

-Queensland Museum

-Online Zoological Collections of Australian Museums

-Queensland Herbarium

-National Herbarium of NSW

-Royal Botanic Gardens and National Herbarium of Victoria

-Tasmanian Herbarium

-State Herbarium of South Australia

-Northern Territory Herbarium

-Western Australian Herbarium

-Australian National Herbarium, Canberra

-University of New England

-Ocean Biogeographic Information System

Australian Government, Department of DefenceForestry Corporation, NSW

-Geoscience Australia

-CSIRO

-Australian Tropical Herbarium, Cairns

-eBird Australia

-Australian Government – Australian Antarctic Data Centre

-Museum and Art Gallery of the Northern Territory

-Australian Government National Environmental Science Program

-Australian Institute of Marine Science

-Reef Life Survey Australia

-American Museum of Natural History

-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania

-Tasmanian Museum and Art Gallery, Hobart, Tasmania

-Other groups and individuals

The Department is extremely grateful to the many organisations and individuals who provided expert adviceand information on numerous draft distributions.

Please feel free to provide feedback via the Contact Us page.

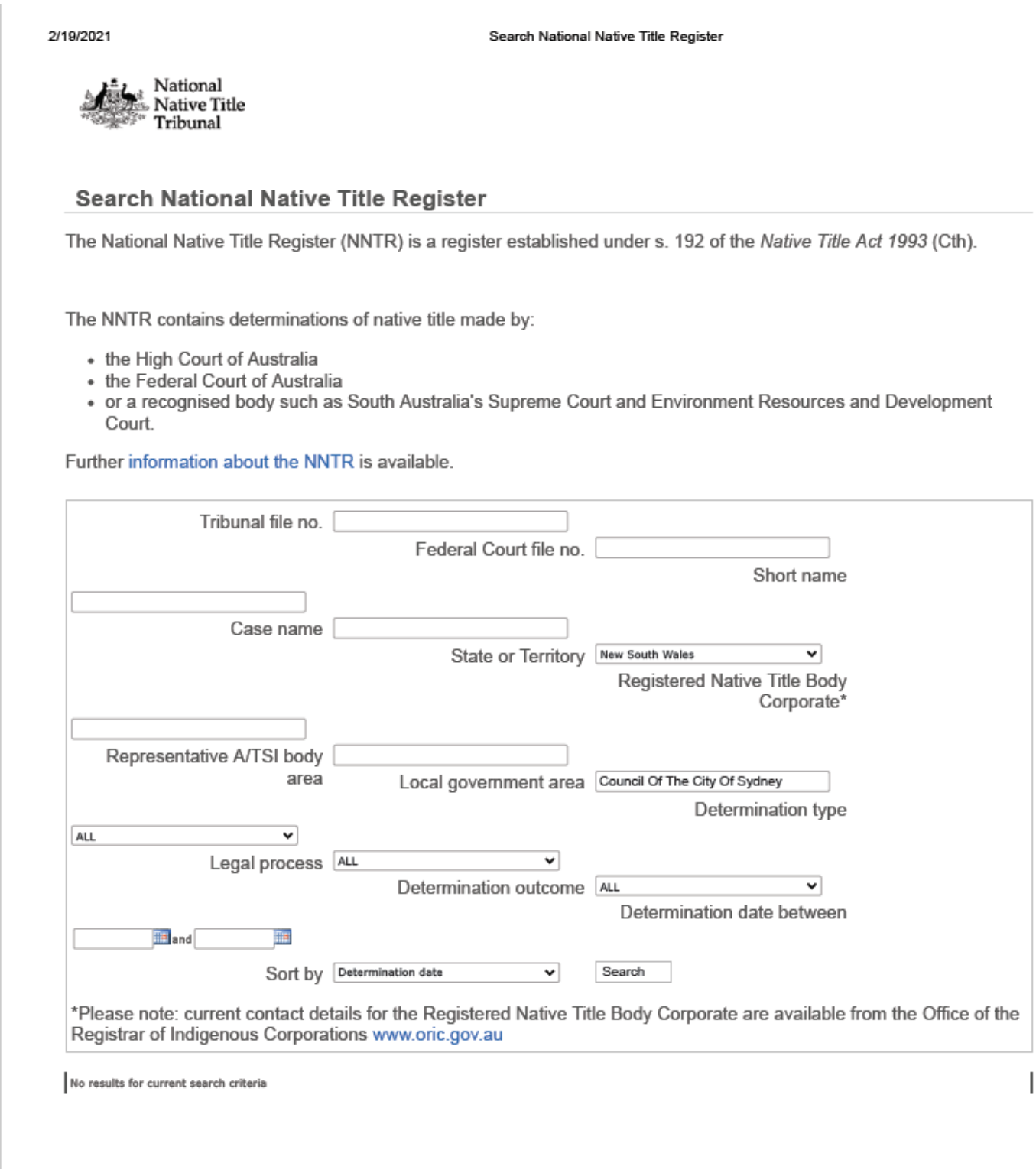
Commonwealth of Australia Department of Agriculture Water and the Environment

GPO Box 858

Canberra City ACT 2601 Australia

Appendix F

Aboriginal Heritage including Native Title Register and Aboriginal Heritage Information Management System Searches



2/19/2021 Search National Native Title Register

National Native Title Tribunal

Search National Native Title Register

The National Native Title Register (NNTR) is a register established under s. 192 of the *Native Title Act 1993* (Cth).

The NNTR contains determinations of native title made by:

- the High Court of Australia
- the Federal Court of Australia
- or a recognised body such as South Australia's Supreme Court and Environment Resources and Development Court.

Further information about the NNTR is available.

Tribunal file no.

Federal Court file no.

Short name

Case name

State or Territory: New South Wales

Registered Native Title Body Corporate*

Representative A/TSI body area

Local government area: Council Of The City Of Sydney

Determination type: ALL

Legal process: ALL

Determination outcome: ALL

Determination date between and

Sort by: Determination date

Search

*Please note: current contact details for the Registered Native Title Body Corporate are available from the Office of the Registrar of Indigenous Corporations www.oric.gov.au

No results for current search criteria

Appendix G

National Pollutant Inventory Data search

Australian Government
Department of the Environment and Energy

National Pollutant Inventory

You are here: NPI Home » NPI data » Search NPI data » Search by Map » View data

- Summary
- Sources
- Emissions
- Transfers
- Download
- Map

2018/2019 data within Australia - All Substances from Facilities (Industry)

A list of all reporting facilities included in the search results. Click on a Facility Name to view the facility's annual report.

One item found.

Registered Business Name	Facility Name	Suburb	State
HAHN BREWING COMPANY (LION)	Malt Shovel Brewery	Camperdown	NSW

One item found. Records per page: 10
Export to: CSV

NPI

- NPI Home
- NPI Database Search

Search Criteria

- Source Type = Facility (Industry)
- Include subthreshold facility data = Yes
- Reporting year = 2018/2019
- State = National
- Substance = All
- Destination type = All

Edit Criteria

Key

Links to an another web site
Opens a pop-up window

Appendix H

NSW Environment Protection Authority Record of Contaminated Lands Search

Home Public registers Contaminated land record of notices

Search results

Your search for:LGA: COUNCIL OF THE CITY OF SYDNEY

Matched 60 notices relating to 14 sites.

Search Again

Refine Search

Suburb	Address	Site Name	Notices related to this site
ALEXANDRIA	Off Huntley STREET	Alexandra Canal Sediments	2 current
ALEXANDRIA	10-24 Ralph STREET	Australia Post	2 former
ALEXANDRIA	49-59 O'Riordan STREET	Former Cadbury Schweppes	1 former
ALEXANDRIA	10-20 Botany ROAD	Formerly Gas N Go Alexandria (fully redeveloped into residential apartment as of September 2016)	3 former
ALEXANDRIA	Sydney Park ROAD	Sydney Park	3 current
CHIPPENDALE	Wellington STREET	Frasers Development	3 current and 4 former
EVELEIGH	Burren STREET	Macdonaldtown Triangle	2 former
MILLERS POINT	Berths 5, 6 and 7 (already demolished) and part Hickson ROAD	Former AGL Gasworks	11 former
MILLERS POINT	36 Hickson ROAD	Former AGL Gasworks 36 Hickson Road	2 former
NEWTOWN	79 Wilson STREET	Adjacent to Former Service Station	3 former
NEWTOWN	81 Wilson STREET	Former Service Station	4 former
PADDINGTON	59 Oxford STREET	7-Eleven Service Station	2 current and 2 former
PYRMONT	Pyrmont ROAD	Pyrmont Power Station	7 former
WATERLOO	887-893 Bourke STREET	Lawrence Dry Cleaners	8 current and 3 former

Page 1 of 1

12 February 2021

For business and industry

For local government

Contact us

131 555 (tel:131555)

Online (https://yoursay.epa.nsw.gov.au/epa-website-feedback)

Info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)

EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

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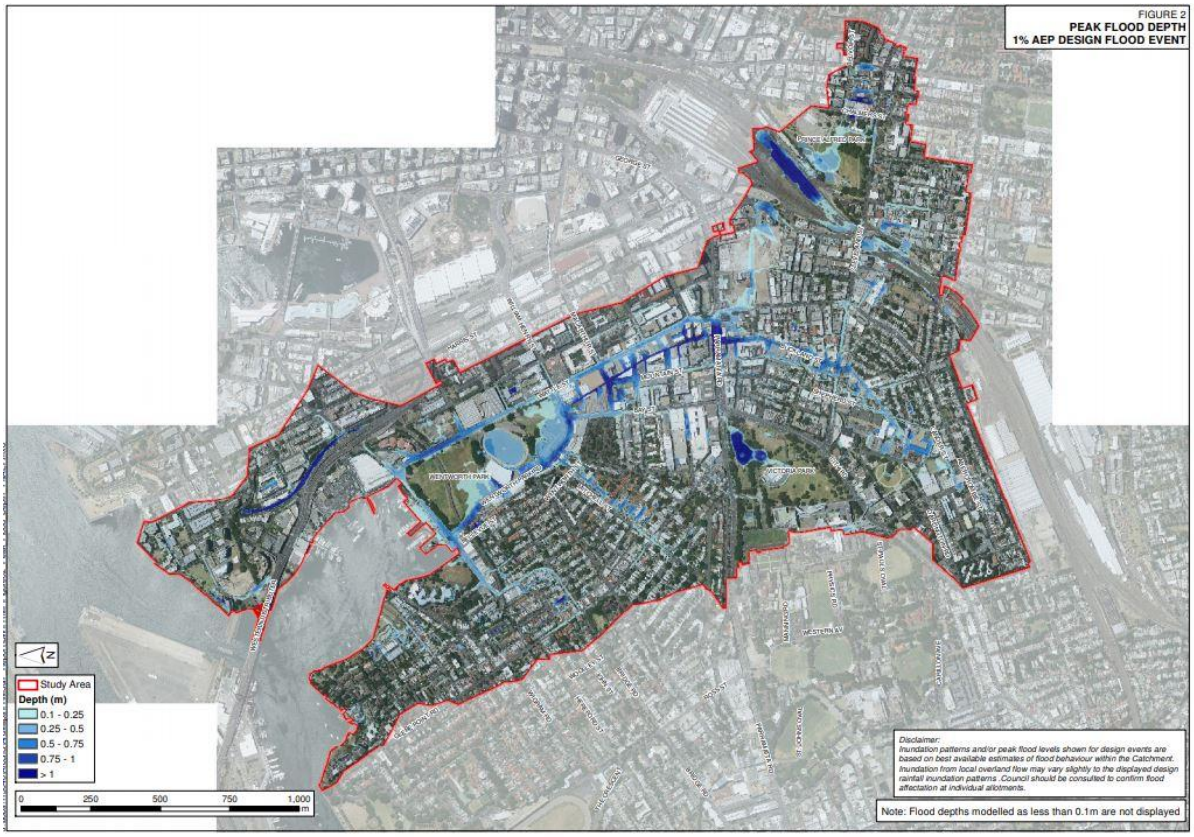
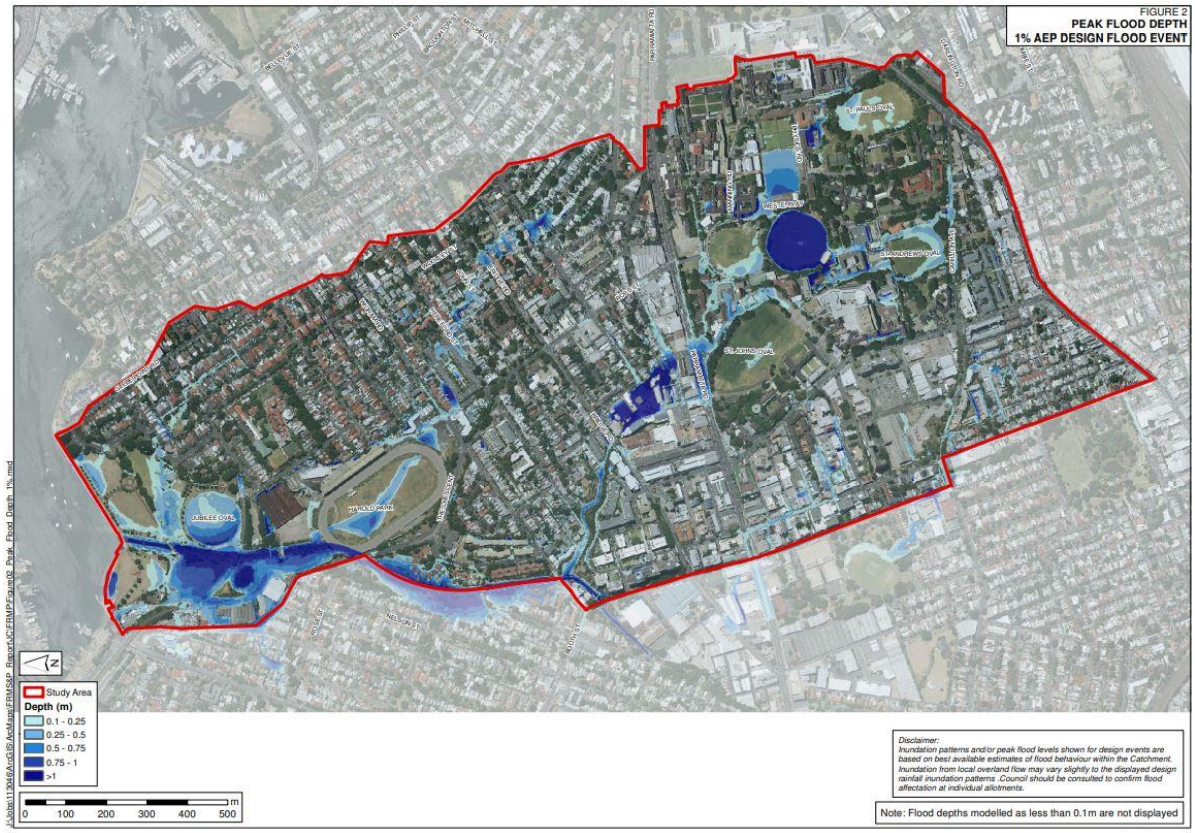
in (https://au.lin environment-protection-auth rity-(https://twitter.co

Appendix I

City of Sydney Council 1% AEP Flood Maps





Appendix J

Bridge Road Pop-Up Cycleway Consultation Report

Bridge Road Pop-up Cycleway

Community Consultation Report

March 2022 | Version: 1

Contents

Date: March 2022
Version: 1
Reference: Transport: 21.253
ISBN: 978-1-922549-32-7
Division: Greater Sydney

1. Executive summary

1.1 Overview

This report provides a summary of Transport for NSW's (Transport) March 2021 Have Your Say community consultation about the Bridge Road / Pyrmont Bridge Road Pop-up Cycleway (Bridge Road Pop-up Cycleway). It puts this consultation in the context of the wider delivery of pop-up cycleways in Sydney from July 2020 onwards and also of engagement carried out to inform the local community about the cycleway's installation in 2020.

Transport recognises that due to the rapid installation of the cycleway, to protect public health, we did not consult extensively in 2020 and we have acknowledged this from the outset. However, we also committed to community consultation before a decision about whether to install a cycleway permanently on Bridge Road. We did so through the March 2021 consultation and the careful consideration of the feedback we received.

Extra resources were invested in this consultation to publicise it in a number of ways, to give people multiple opportunities to find out about it and to maximise participation. This included, but was not limited to:

- distribution of over 10,700 four page Have Your Say community updates, including information about how to give feedback through the consultation and how to get in contact for more information
- sponsored and locally targeted Facebook posts, which reached over 30,000 users
- 12 eye-catching Have Your Say signs placed along the route, on both sides of the road.

This resulted in a large response, with 1,083 completed online surveys through the pop-up transport webpage, which suggests this investment was successful.

Section 4 - Consultation summary, focuses on the feedback received and includes Transport's responses to the main themes and questions that emerged. 981 responses were given to the final question, 'Please provide your feedback about the cycleway', which provided the best opportunity for respondents to give any comments they wished and to make their overall views about the cycleway known. All comments received in response to this question were categorised as being either generally 'Positive' about the cycleway, generally 'Negative' about it, or generally 'Neutral / Mixed'. 493 (or just over half) were positive, 337 were negative and 151 were 'Neutral / Mixed'.

1.2 Decision and next steps

All of the feedback received, which includes 2,915 open-ended responses to the final three survey questions, was carefully considered. A wide range of matters were raised and the majority of feedback about them was positive, neutral or mixed. This has been taken into account, with ongoing monitoring and evaluation data gathered since installation of the cycleway, as well as the views of the cycleway's users, who were surveyed separately. Based on the benefits identified – including improved safety, the cycleway's growing use and delivery of a more sustainable travel option

consistent with Transport's Future Transport 2056 vision[1] – the decision has been taken to keep it on Bridge Road permanently.

However, we will upgrade the current low-cost and temporary cycleway barrier, with its light-weight orange plastic paddles, to a more appropriate design. This will help achieve a better balance between moving people in a safe environment, while creating a cycleway that is less visually intrusive and generally better suited to the local area. We will also investigate the installation of a new parking bay for deliveries. This is a direct response to feedback.

As shown in 4. Consultation summary, a large amount of feedback focused specifically on safety. Much of this was very positive and given by respondents, particularly bike riders, who felt the cycleway and its associated changes have brought significant improvements. In many cases the introduction of a barrier, separating the cycleway from the road, has given people the confidence to either start bike riding or to take it up again.

On the other hand, many respondents felt the cycleway is unsafe or needs further safety improvements. Feedback about safety includes, but is not limited to, comments about: new traffic calming road safety measures, turning at intersections, merging of the cycleway and road, bus users' crossing of the cycleway and road surface and maintenance matters. All relevant feedback has been passed on to the project team for further consideration.

Transport will also continue to look at ways of improving more sustainable travel options locally, including walking and bike riding. Many respondents were eager for the cycleway to be expanded, including to the Sydney Fish Market and beyond, as well as for it to be more fully connected to Sydney's expanding cycleway network. Transport is actively working to do both and will continue to update the local community about progress.

[1] Future Transport Strategy 2056: **https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf**

2. Introduction

2.1 Background

In May 2020 the Minister for Transport and Roads and the Lord Mayor of the City of Sydney announced new temporary initiatives across Sydney to give people more options to safely walk and bike ride. These included six new pop-up cycleways in key commuter areas west, east and south of the Central Business District, as well as new safe speed limits. The locations of the pop-up cycleways were:

- Bridge Road / Pyrmont Bridge Road in Glebe (the subject of this report)
- Pitt Street north in the Central Business District
- Moore Park Road in Paddington / Moore Park
- Dunning Avenue at Rosebery
- Sydney Park Road in Alexandria / Erskineville
- Henderson Road at Eveleigh.

The cycleways were installed as part of the NSW Government's emergency response to COVID-19. They were a key public health measure, delivered on the advice of government health experts. They provide safer and physically distanced travel options, free up capacity on public transport and encourage bike riding as a healthy way to travel and exercise.

All six of the cycleways above were successfully installed between July and September 2020, with the Bridge Road cycleway officially opening in September. A new cycleway opened on High Street, Randwick in April 2021 and a new cycleway in the Inner West, between Petersham and Newtown, opened in May 2021. Installation of another pop-up cycleway, on Wigram Street, Harris Park was completed in September 2021. Transport has either installed, or funded and supported local councils to install, all these cycleways.

The cycleways were delivered in a time when bike riding was and is significantly increasing. In March 2021 the Minister for Transport and Roads said there has been up to a 40% increase in Greater Sydney since the start of 2020. In June 2021 Transport analysis showed that over the past year more than 700,000 trips had been made on the pop-up cycleways.

This report will consider the feedback received about the Bridge Road Pop-up Cycleway in some detail. It is important to note at the outset that strong opinions both in support of and in opposition to pop-up cycleways exist, including about that on Bridge Road. It is also important to note that, contrary to some comments received and some media reporting, although sentiment is split, the majority of feedback received was positive, neutral or mixed. Significant supportive feedback was received[2] from across the community, not only from bike riders.

[2] This does seem consistent with other feedback. For example, City of Sydney pop-up cycleway research, carried out in October 2020 by Micromex research, showed 71% of City of Sydney residents surveyed were supportive or very supportive of more space being made for people to ride bikes. This included a telephone survey of 609 residents, weighted by age and gender to reflect the 2016 Australian Bureau of Statistics community profile of the City of Sydney.

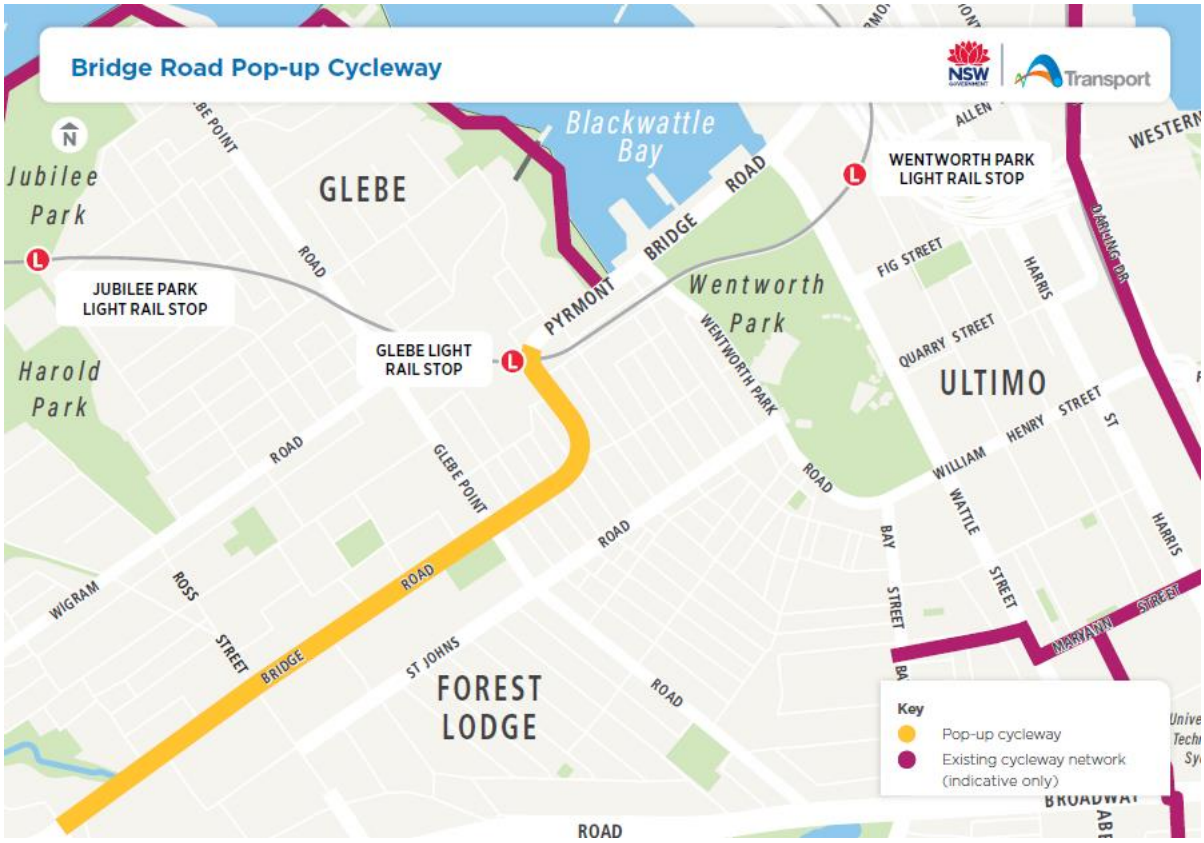
2.2 The Bridge Road Pop-up Cycleway

The 1.2 km Bridge Road Pop-up Cycleway was installed between Lyons Road and Taylor Street, along Bridge Road, Glebe and Pyrmont Bridge Road, Camperdown. This is a direct route to support bike riding from the Inner West to the Sydney Central Business District (see Figure 1 below), of particular use to commuters and can be used for journeys to the Royal Prince Alfred Hospital. It is also part of the NSW Co-Designed Bicycle Network Blueprint and the City of Sydney bicycle network.

The cycleway was installed as a uni-directional cycleway on both sides of the road, with light-weight barriers separating bike riders from traffic along most of its length (see Figure 2 below). The speed limit on the road next to the cycleway was also reduced to 40 km/h to improve safety.

No permanent parking spaces were removed, as the whole route was subject to clearways. 46 temporary spaces were removed in total, from both sides of the road along the route. The disability parking space fronting 180 and 182 Bridge Road was removed and reinstated nearby on Jarocin Avenue. After a resident meeting another was also created on Clare Street. Both are permanent spaces. The cycleway operates as a 24 hour a day clearway because changes to its operation to allow temporary parking were not considered workable.

2.2.1 Figure 1: Map of the Bridge Road Pop-up Cycleway



2.2.2 Figure 2: Photos of the Bridge Road Pop-up Cycleway in use

2.3 Benefits

As outlined above (see 2.1 Background) the pop-up cycleways were installed as part of the NSW Government's emergency response to COVID-19. Routes were carefully selected because they were generally:

- located on busy bike riding routes
- connected to existing bike riding infrastructure
- located where public transport was likely to become overcrowded
- able to give access to schools, workplaces and other services.

As outlined in Transport's March 2021 Have Your Say community update, people are using the cycleway more and they feel safer[3]:

- since its completion there has regularly been between 2,000 and 3,000 trips per week on it

[3] City of Sydney Council carried out intercept surveys to understand bike rider behaviour, safety perceptions, journey details etc between October and November 2020. In total 602 people were surveyed across all of the pop-up cycleways, with 100 surveyed using the Bridge Road Pop-up Cycleway.

- more than 30% of the bike riders surveyed using the cycleway said they would have travelled to their destination using another form of transport before it was installed
- 92% of these bike riders felt safer riding on the cycleway than they did riding in the previous road conditions.

The Bridge Road Pop-up Cycleway has the highest number of trips of the pop-up cycleways outside Sydney Central Business District. Since opening in September 2020 the number of bike trips increased by 32%. The percentage of women riding on it has also been observed to be between 20 and 30%, in comparison to the 9% rate of female participation in Sydney, identified in the National Cycling Participation Survey[4].

[4] Observation of women bike riders' use of the cycleway is part of regular monitoring carried out by Transport.

3. Consultation approach and reach

3.1 Engagement and consultation

As mentioned, the pop-up cycleways were installed in unprecedented circumstances, under COVID-19 public health orders, as part of the NSW Government's emergency response to COVID-19. Transport recognises that due to the rapid installation of the cycleway to protect public health we did not consult extensively in 2020 and we have acknowledged this from the outset. However, we also committed to community consultation before a decision about whether to install a cycleway permanently on Bridge Road. We did so through the March 2021 consultation and the careful consideration of feedback.

Importantly, and as shown below, since the cycleway was first announced anybody has been able to contact Transport with enquiries and feedback at any time. Transport responded to enquiries received about it by telephone, email or through the pop-up transport webpage feedback form (see below for more information). Also as shown below, extra resources were invested in the 2021 community consultation to publicise it as widely as possible in a number of ways, to maximise participation. This resulted in a large response, with 1,083 completed online surveys, which suggests this investment was successful.

3.2 Consultation aims

We consulted with the community and key stakeholders to:

- seek comment, ideas and suggestions for consideration when making a decision on the final form and location of the cycleway
- advise the local community and directly affected stakeholders
- continue to build a database of community members interested in the cycleway, to engage with further in the future
- provide an opportunity for the community to learn more, ask questions and provide submissions through online surveys.

3.3 Consultation activities

Have Your Say community consultation was carried out from 15 to 29 March 2021, but a range of communications were issued since the announcement of the cycleway in 2020. Table 1 below shows the main ones, including those carried out to raise awareness of the consultation. Please see the appendix for more information.

Table 1: Consultation approach and reach

Consultation activity	Summary
State and local government	Meetings were held with City of Sydney Council and the Local Member for Balmain has been briefed.
Community updates delivered to local addresses	• **Community update, June 2020**: over 3,500 delivered to addresses closest to the cycleway. • **Community postcard, July 2020**: over 1,400 delivered to addresses closest to the cycleway. • **Have Your Say community update, March 2021**: over 10,700 delivered to addresses closest to the cycleway.
Signs placed along the route	• **Pop-up cycleway information sign, July 2020**: with 'YOU ARE HERE' point tailored for eight different locations along the route. • **No parking sign, July 2020**: placed in multiple locations along the route. • **Pop-up cycleway consultation sign, March 2021**: placed in twelve different locations along the route.
NSW Government Have Your Say webpage	Details about the March 2021 consultation were also uploaded to the website at **https://www.nsw.gov.au/have-your-say**, to maximise awareness.
Social media posts	**Two targeted and sponsored Facebook posts, March 2021**: the first post was aimed at the local community and had a reach of over 17,000 Facebook users and the second post was aimed at bike riders and had a reach of over 13,800 Facebook users.
Pop-up transport webpage	The webpage went live at **nswroads.work/covid-infrastructure** in 2020, shortly after the cycleway was announced.

Consultation activity	Summary
Community information line, community information email address and webpage feedback form	Transport continues to respond to feedback and enquiries through the community information line on **1800 573 193**, community information email address at **covidpopup@transport.nsw.gov.au** and through the dedicated Bridge Road online feedback form at **nswroads.work/covid-infrastructure,** which is sent directly to the project team when completed. Anyone using the feedback form can subscribe for updates and those who had been in contact previously, or subscribed, were informed about the March 2021 Have Your Say community consultation directly by email, along with key stakeholders, such as the schools on the route.
Review of survey responses	We reviewed all survey responses from the community and used this in decision-making about the proposal. The survey used in the March 2021 Have Your Say community consultation was used by 1,083 respondents to give feedback. Each survey included three op-ended questions, allowing for broad and lengthy feedback. Transport has reviewed and carefully considered all feedback, including 2,915 responses to these open-ended questions.

4. Consultation summary

4.1 Feedback received

During the Have Your Say community consultation from 15 to 29 March 2021 we received the responses below. Some responses to the final three open-ended questions were long, or out of scope, or ambiguous. Nevertheless, all responses have been reviewed and grouped thematically where possible, to show the relative levels of interest or feeling about different matters.

The final question below, which simply asked for feedback, provided respondents with the opportunity to say anything about the cycleway they wished. The general sentiment of these responses has been captured as either 'Positive', 'Negative' or 'Neutral / Mixed'.

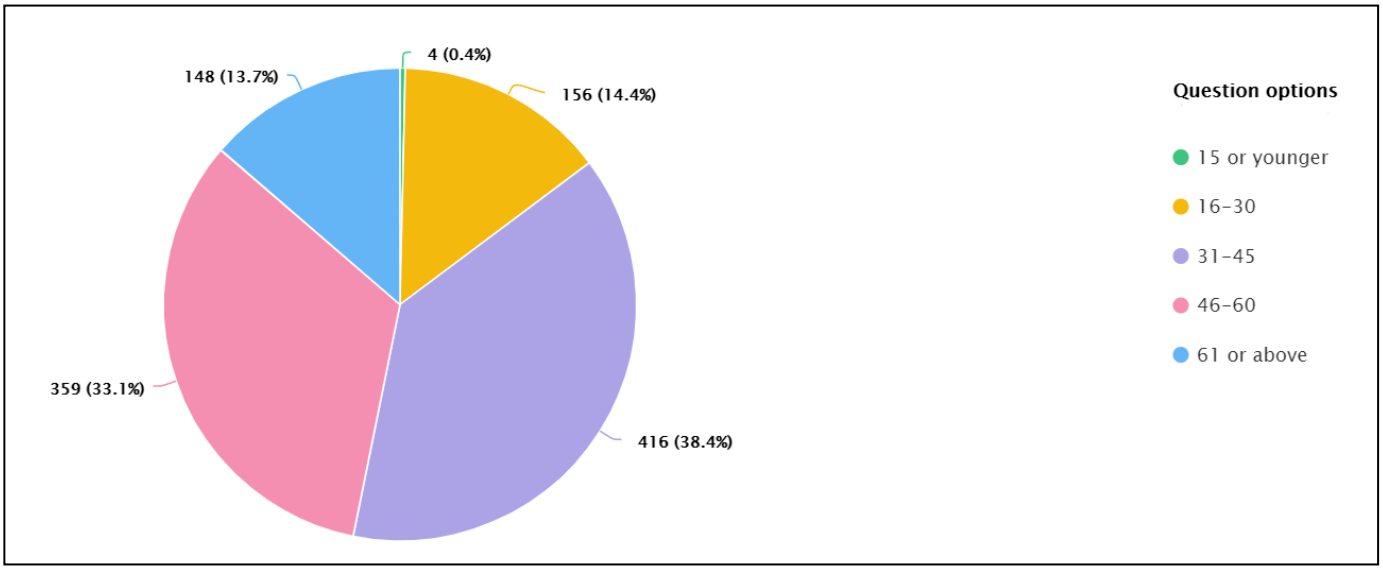
It is not possible here to provide detailed replies to every response to the final three questions, but Table 2: Community survey feedback summarises the main feedback by theme and presents Transport's responses.

4.1.1 Question 1: Email address

Respondents were asked to provide their email addresses. This helped to reduce the risk of people submitting multiple responses and also helps to add to the contact list (the survey ended with an opt-in question for future updates, so only those who wish to be contacted will receive future updates).

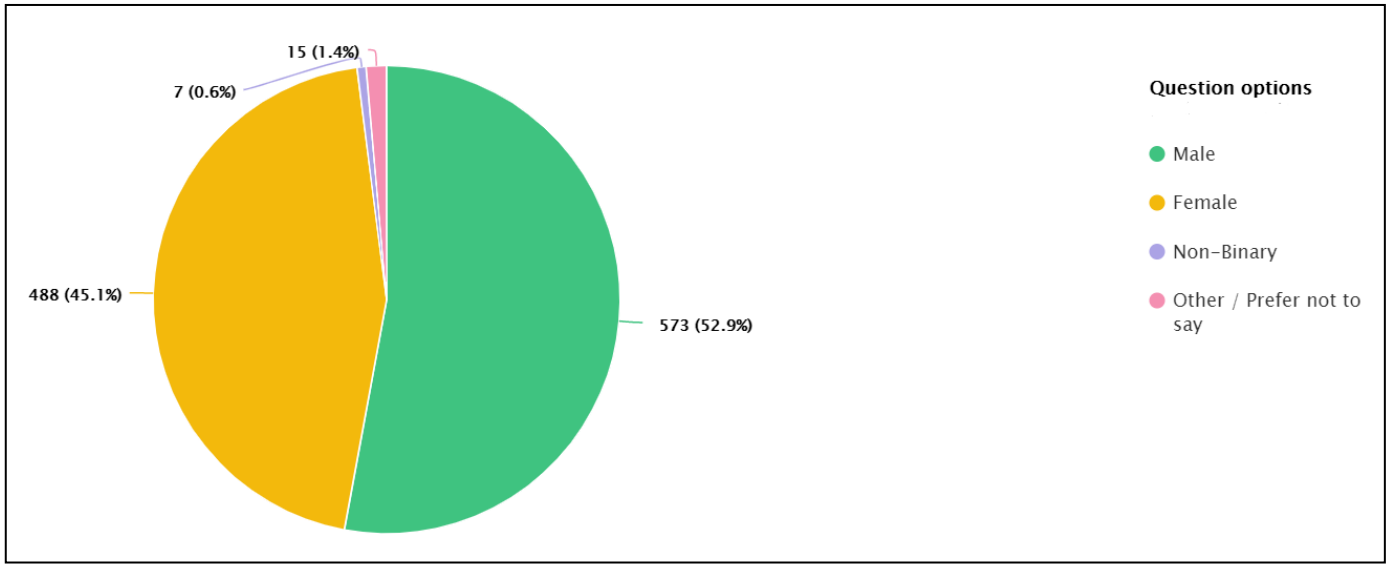
4.1.2 Question 2: Tell me about yourself

This question asked respondents their age. This is helpful in understanding who is engaged in the consultation. It shows that, despite reaching out directly to schools on the route, young people are underrepresented in the feedback. It will be helpful to focus on encouraging them to learn more and to give their feedback in the future, particularly those in the 15 or younger age group.



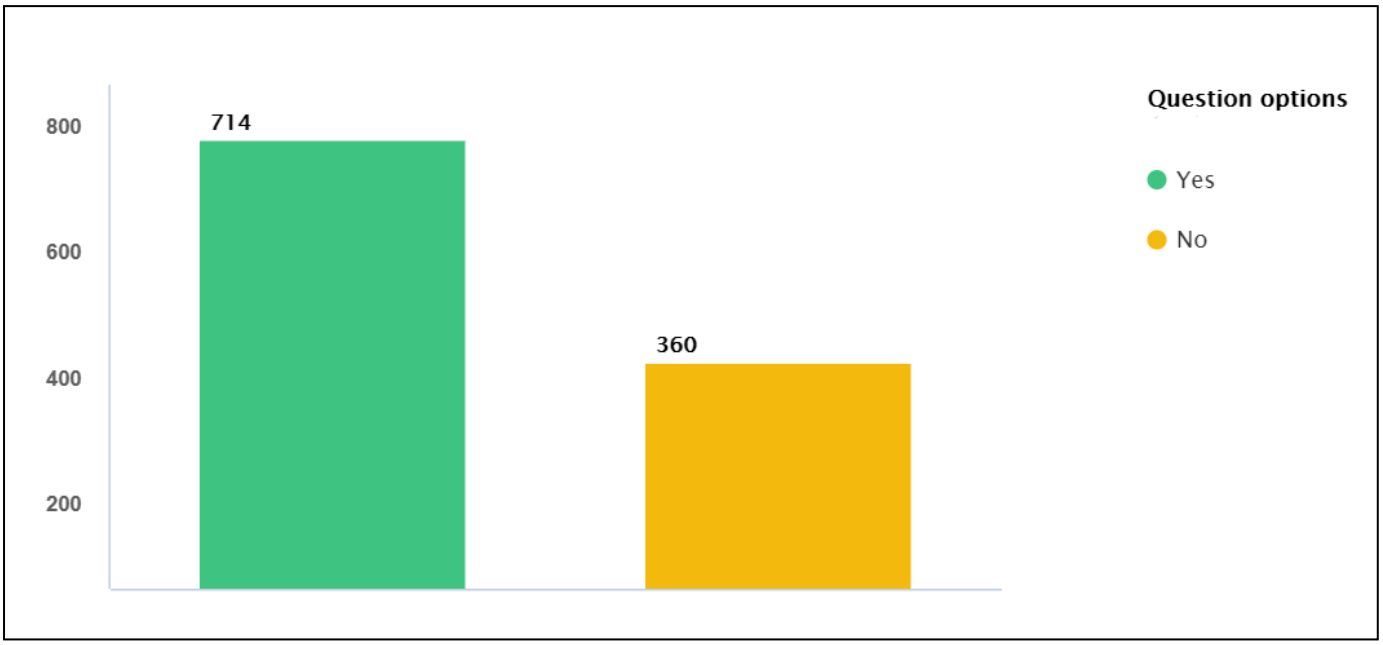
4.1.3 Question 3: Gender

This question asked respondents to give their gender. As mentioned above, generally there are far fewer female bike riders than male ones. However, 45% of respondents were female and female respondents were not significantly underrepresented.



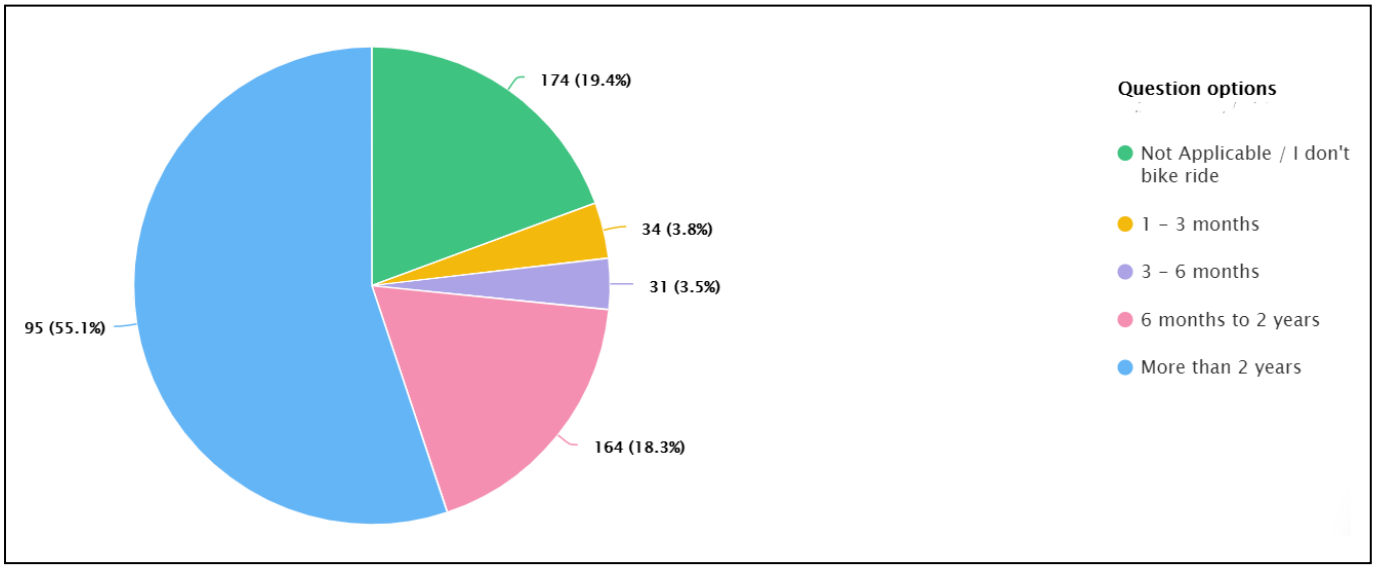
4.1.4 Question 4: Are you a bike rider?

This question asked whether respondents were bike riders. The feedback showed the response from bike riders was almost twice as high as for non-bike riders.



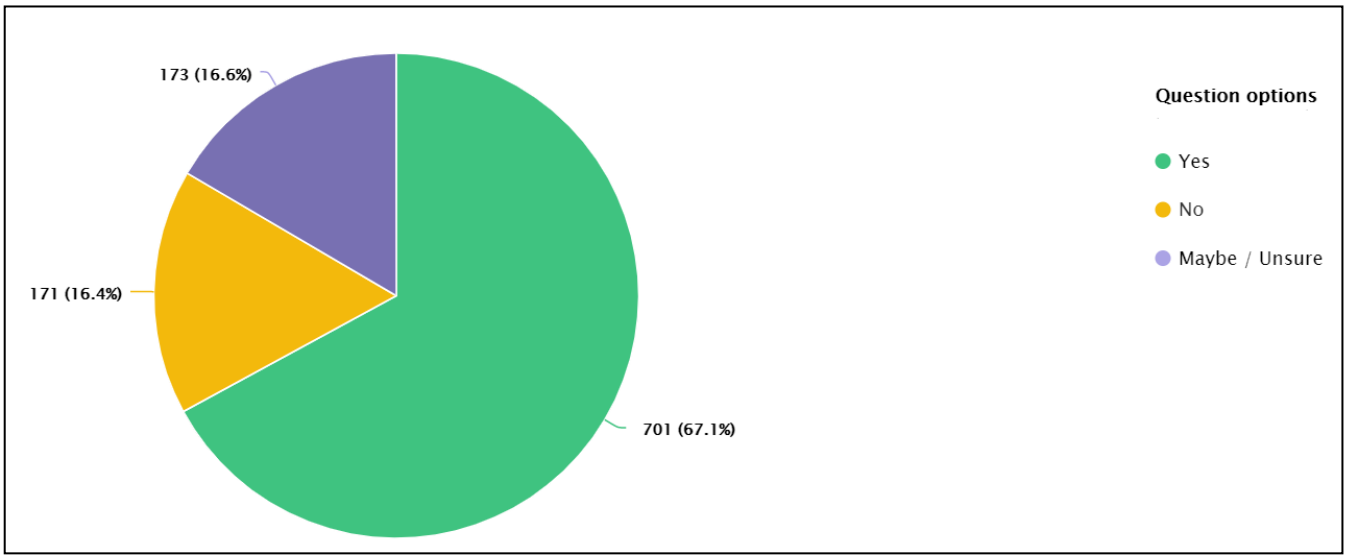
4.1.5 Question 5: If you bike ride, how long have you been bike riding in Sydney?

Question 5 was included to try and get an understanding of bike riders' experience. Although a small majority (55%) of the 898 respondents said they have been bike riding in Sydney for more than two years, 26% said they have been bike riders for less time and at least 7% have only been riding in the time the cycleway was installed, which reinforces some of the written feedback from people who said the cycleway encouraged them to start bike riding.



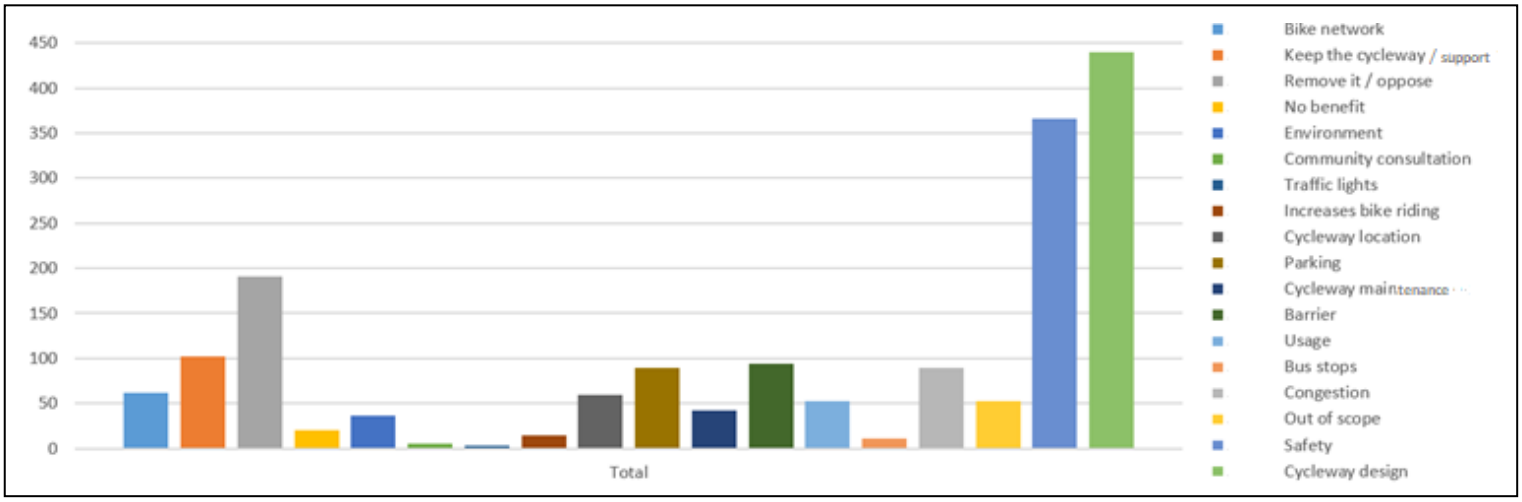
4.1.6 Question 6: If the cycleway was to remain, do you think the temporary barrier should be upgraded to a different material that is more in keeping with the street environment?

Since installation of the cycleway the look and structure of the temporary barrier has been the subject of a lot of the feedback received, including from those who feel that it looks unsightly and could better reflect the character of the local area. Feedback shows a clear majority of the 1,045 respondents believe it should be upgraded.



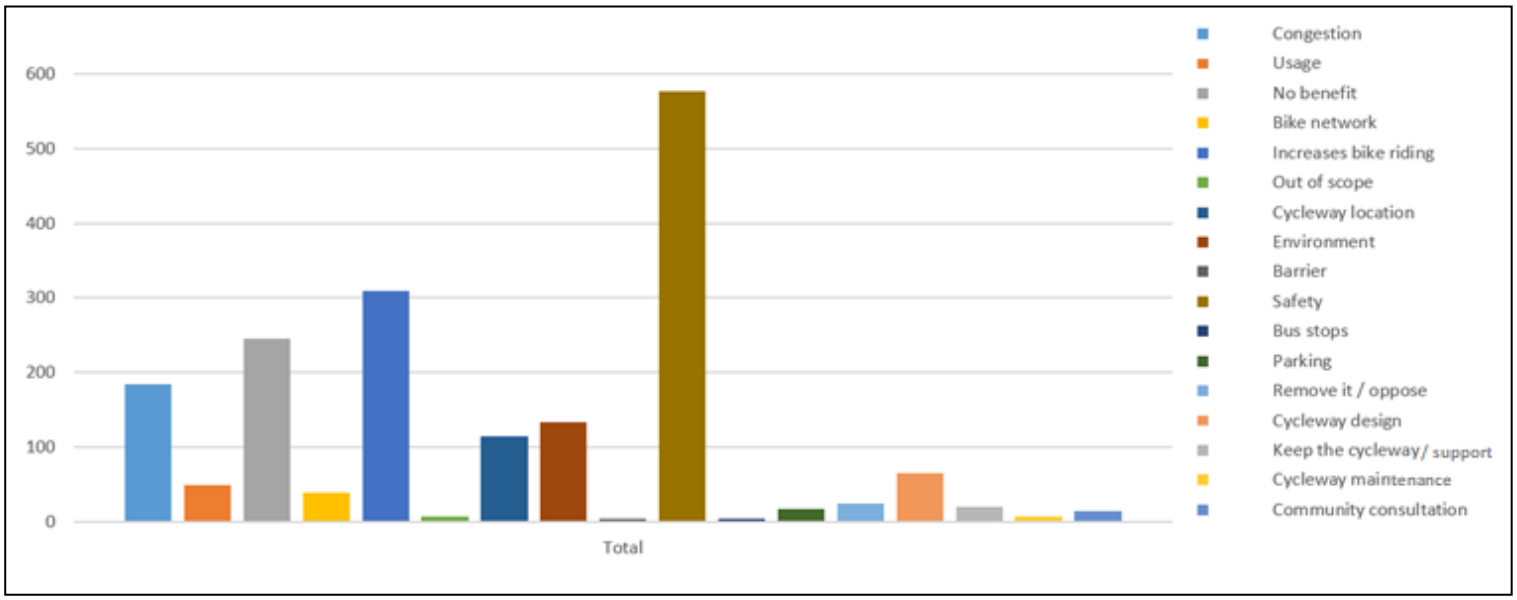
4.1.7 Question 7: Do you have any other suggested improvements to Bridge Road, road safety, or the pop-up cycleway?

The bar chart below indicates responses by the main themes. The figure on the left indicates the number of the 918 respondents who mentioned a theme and the themes are shown in the legend on the right, as is the case with the questions below too. The most popular themes here were 'Cycleway design' (440) and 'Safety' (366). The third was 'Remove it / oppose' with 191 (including feedback to remove it and / or generally in opposition) and all of the other themes received 102 responses or less. 'Keep the cycleway / support' received 102 responses.



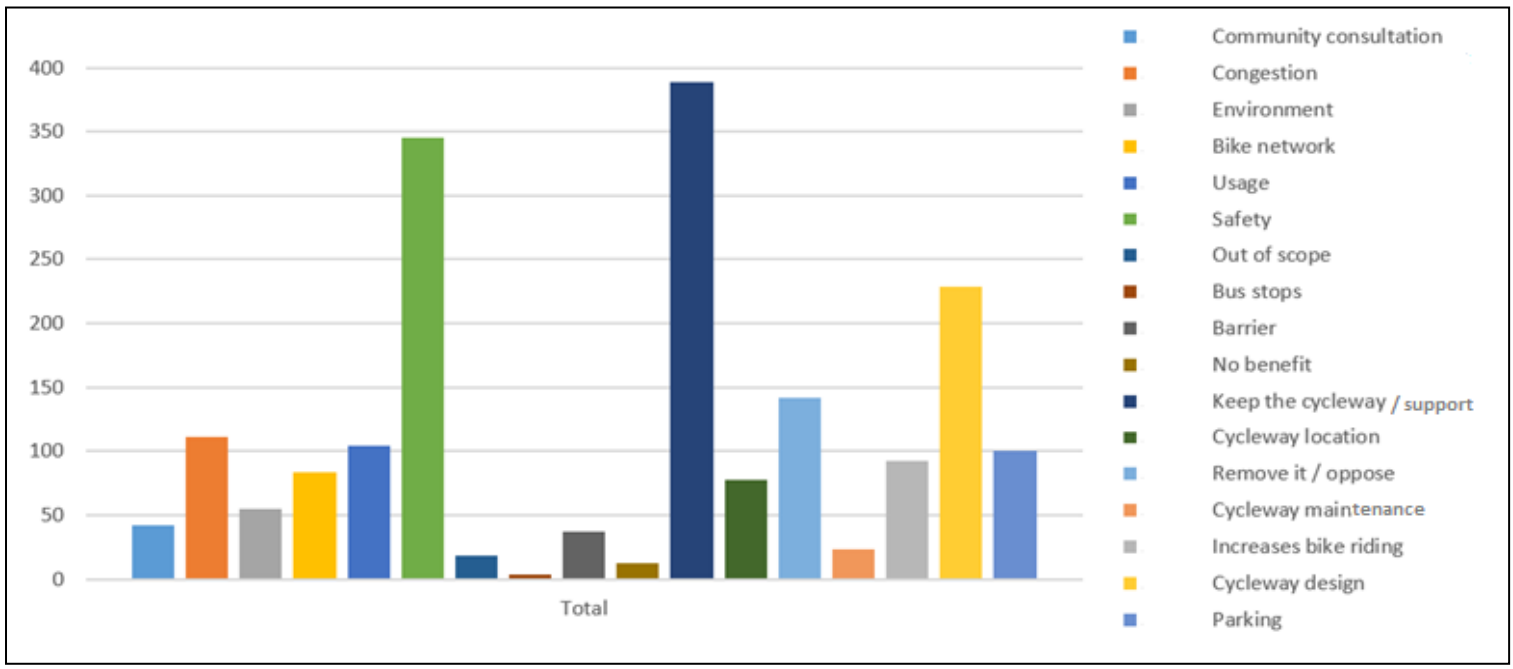
4.1.8 Question 8: What do you see as the greatest benefit of the cycleway remaining?

The most popular theme from the 1,016 responses to this question was 'Safety' (557), with considerably more feedback than next most popular themes. These were 'Increases bike riding' (310), 'No benefit' (245) and 'Congestion' (185). Feedback received on each of the other main themes was given by 134 respondents or fewer.

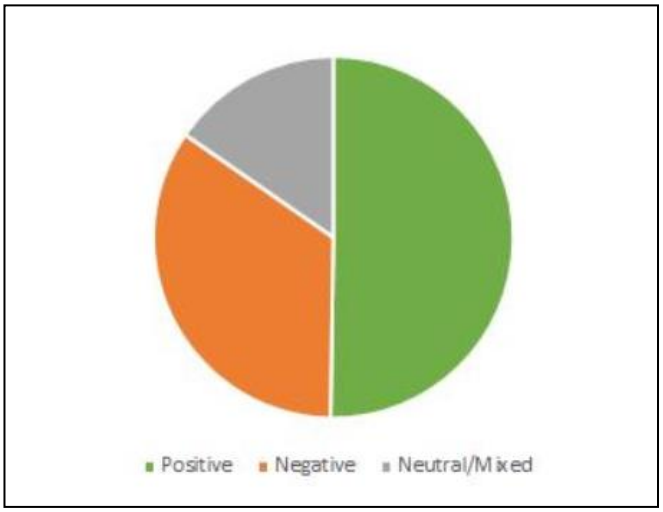


4.1.9 Question 9: Please provide your feedback about the cycleway

Of the 981 responses to this question, which asked for any feedback, 'Keep the cycleway / support' (389) and 'Safety' (345) were the two most popular themes. 'Cycleway design' (229) was also popular. The other themes were covered by fewer than 142 responses each (the largest of these, with 142 responses, was 'Remove it / Oppose').



All of the responses to this questions were reviewed and categorised as either being either generally 'Positive' about the cycleway, 'Negative' about it, or 'Neutral / Mixed'. As indicated in the pie chart below, just over half (493) were generally positive, 337 were generally negative and 151 were 'Neutral / Mixed'.



4.2 Community feedback and Transport's responses

Survey feedback and Transport's responses to the *main* comments received can be seen below in Table 2.

4.2.1 Table 2: Survey feedback and Transport's responses

Feedback on the Bridge Road Pop-up Cycleway	Transport's responses
Safety	
The cycleway has made the road less safe / safer.	We acknowledge that the community feedback about safety was mixed. However, the Road Safety Audit process and the safety upgrades that have been made give Transport confidence the cycleway improves safety. These include: • the reduced 40 km/h speed limit (from 60 km/h, which is a significant reduction) • the introduction of a physical barrier to separate bike riders from vehicles • changes made in conflict areas with all side streets intersecting with Bridge Road, including new warning signs for road users exiting side streets and new painted green road markings for road users entering them, advising them of the cycleway. Feedback from bike riders very clearly shows they feel safer, as described above.
New road safety measures should be introduced, including traffic calming (such as speed humps), signs, lighting, road markings or speed cameras.	As described above, road safety has been improved in a number of ways. Transport will continue to consider further improvements, but does not plan to implement any further at this time (apart from to the cycleway barrier).

Independent Road Safety Audits concluded the cycleway is unsafe.	All cycleways have a Road Safety Audit carried out before opening. Road Safety Audits are commissioned and used by Transport to address safety issues on NSW roads, including cycleways. This process was followed for the cycleway and gave confidence that it would be safe. All issues raised in the audit were addressed by Transport and we also addressed all issues raised in the audit commissioned by residents. For example, we added the new warning signs referred to above.
Turning into and out of side streets is more dangerous for vehicles after the installation of the cycleway.	As described above, changes were made in conflict areas with all side streets intersecting with Bridge Road. These included new warning signs for road users exiting side streets and new painted green road markings for road users entering them, advising them of the cycleway.
Turning into and out of driveways is more dangerous for vehicles after the installation of the cycleway.	Many residents in Sydney already live alongside a cycleway. The cycleway enables access to properties and inevitably requires drivers to take care when crossing it. Similar to the changes made in conflict areas with all side streets intersecting with Bridge Road, new painted green road markings were added outside the major driveways, where vehicle volumes are highest.
Merging of the cycleway with the road at intersections is unsafe.	Gaps in the barriers at intersections are necessary to enable vehicles to turn safely. Due to road width, dedicated cycleway barriers could not be installed at six locations (eastbound and westbound) and appropriate merge treatments were installed with line marking and signs instead.

Vehicles overtaking buses and garbage trucks risk collision with oncoming traffic, now the road is narrower.	Unsafe overtaking should not be attempted anywhere at any time, as stated in NSW road rules. This applied on Bridge Road before and after installation of the cycleway, where a double solid line indicates vehicles should not overtake. City of Sydney Council has adjusted garbage collection times to minimise the impact on road users on the route.
The reduced speed limit is too low / makes the road safer / needs to be enforced.	The new speed limit of 40 km/h applies to all road users, including bike riders. The evidence clearly shows that slower speeds reduce the severity of crashes. Speed reduction and separation of bike riders from traffic both improve safety.
Bike rider behaviour is unsafe (including riding on the footpath or road, speeding, failing to slow for turning vehicles, not using lights at night etc).	In an emergency contact **000**. At other times contact the Transport Management Centre on **131 700** to report an incident or safety risk. Penalties will apply under NSW road rules in the usual way, whether to bike riders, drivers or pedestrians. For example, drivers who drive or park in a cycleway will be fined and vehicles parked in the cycleway will be towed. Although some of the behaviour described is clearly unsafe, some feedback included misperceptions about what is and is not allowed. For example, in some circumstances bike riders are able to ride on the footpath (and are encouraged to do so), such as when accompanying children.
Driver behaviour is unsafe (including failure to give enough space to bike riders at intersections, speeding, riding over the barrier, parking in the cycleway etc).	
The cycleway is misused by motorcyclists and pedestrians.	
Bus users can be in danger from bike riders when crossing the cycleway.	As part of the cycleway's installation a bus platform was constructed east of the Lyons Road intersection. Safety measures have been installed here to alert bike riders to bus passengers. These include signs and road markings.
Visibility is better / worse with the cycleway.	The Road Safety Audit carried out before opening did not identify the creation of unsafe restrictions to visibility.

The cycleway is unnecessary / helpful as a response to COVID-19.	Transport acted quickly to give people safer travel options in response to COVID-19. The cycleways were key public health measures, delivered on the advice of our health experts.
Removal of car parking improves bike rider safety.	This feedback is consistent with previous feedback, in which 92% of the bike riders surveyed felt safer riding on the cycleway than they did riding in the previous road conditions.
Improvements need to be made to the road surface, to drains and to prevent water build-up.	This will be monitored on an ongoing basis and improvement work carried out if needed.
Cycleway design	
Gaps in the cycleway should be filled, so it is continuous.	Gaps in the cycleway (apart from those at intersections) were created for bike riders to enter the cycleway at any point along the route. Some gaps were also left to help with drainage.
The cycleway should be extended, including past Sydney Fish Market and to connect it to other cycleways nearby.	In the longer term this is the intention. However, the redevelopment of the Sydney Fish Market is ongoing and it makes sense to wait for this to be completed first. Also, as part of the Sydney Fish Market redevelopment a cycleway connection is planned through to Wattle Street.
The cycleway should be wider / narrower.	The width is consistent with relevant Austroads guidelines.
Install special road markings / bike boxes at intersections for bike riders.	There is no plan to do so and this is consistent with the Road Safety Audit process. The road is too narrow at the intersections with Ross Street and Glebe Point Road to do this.
Emergency vehicles now lack space to overtake traffic.	The Road Safety Audit process did not identify this as an issue to prevent installation of the cycleway. Drivers should allow emergency vehicles to pass and should pull over where necessary, including in side streets. The cycleway replaces restricted car parking in places. When in use, this space would have been unavailable for overtaking and made it more difficult.

The shared path section of the cycleway close to the light rail station is badly designed.	Space at this section of road is particularly tight because of the bend at the bridge. The shared path is a solution designed to remove conflict between bike riders and vehicles here by maximising space for vehicles, while keeping bike riders separated.
The pedestrian refuge should be removed.	The Road Safety Audit process did not identify this as a safety concern. The pedestrian refuge near Cross Street is used as a crossing point to access the cycleway on Junction Street.
The cycleway should be bi-directional on one side of the road only.	The relevant guidelines make clear that uni-directional cycleways are safer and are the preferred design solution where feasible. They have the significant benefit of creating a better understanding between bike riders and other road users, as both travel in the same direction.
Possible changes to the light rail station should be taken into account.	Transport will continue to work closely with light rail colleagues to understand how any proposed changes may impact the cycleway and whether changes to the cycleway are needed.
The cycleway should be placed between parked cars and the road.	There is not enough space available for this.
Congestion and journey time	
Congestion is worse because vehicles are unable to pass buses and garbage trucks.	We acknowledge this feedback and we accept that minimal delays have resulted. As described above, City of Sydney Council has adjusted garbage collection times to minimise the impact on road users.
Vehicles turning right increase congestion because there is no room to pass on the narrower road.	We acknowledge this feedback and we accept that minimal delays have resulted.
The cycleway has helped to reduce public transport and car use.	This is consistent with previous findings. More than 30% of the people surveyed using the cycleway said they would have travelled to their destination using another form of transport before it was installed.

The cycleway has improved journey times for bike riders.	We acknowledge this feedback.
Parking	
Parking removal has inconvenienced residents, preventing access for them and others to their homes.	No permanent spaces were removed, as the whole route was subject to clearways. 46 temporary spaces were removed in total, from both sides of the road on the route. The disability parking space fronting 180 and 182 Bridge Road was removed and reinstated nearby on Jarocin Avenue. After a resident meeting another was also created on Clare Street. Both are permanent spaces. Emergency service vehicles, taxis and authorised postal vehicles are able to stop in the cycleway. Transport for NSW will investigate the installation of a new parking bay for deliveries.
Parking removed because of the cycleway should be reinstated.	It is not possible to reinstate parking and to have a separated cycleway in this location.
Removal of parking has increased competition for spaces on other streets.	Residents who have permits to park should seek alternatives nearby. City of Sydney Council provides parking permit area maps on its website: **www.cityofsydney.nsw.gov.au**
Loading zones need to be installed in the cycleway.	Transport for NSW will also investigate the installation of a new parking bay for deliveries. Loading and unloading on side streets is encouraged as an alternative.
Parking removal is good and has benefited bike riders in particular.	We acknowledge this feedback.
Increased bike riding / benefits for bike riders	
The cycleway has increased bike riding and given new and less experienced bike riders the confidence to use their bikes.	Since its completion there has regularly been between 2,000 and 3,000 trips per week on it.

The cycleway has improved the experience of existing bike riders.	We acknowledge this feedback.
The cycleway helps to improve bike rider health and encourages exercise.	We acknowledge this feedback.
Cycleway barriers	
The barriers should be made permanent / prevent vehicles crossing.	The barrier will be upgraded, as described.
The barriers should be removed / enable vehicles to cross it / be replaced with a painted cycleway.	Feedback clearly shows that bike riders feel much safer with a separated cycleway. These suggestions would remove the main benefit of the cycleway for many bike riders.
The barriers are dislodged by vehicles colliding with them and are vandalised.	Transport continues to monitor the situation and carries out regular maintenance while the temporary barriers are in place. The upgraded barrier will help prevent this.
Community consultation	
There has been insufficient consultation with the community about the cycleway.	As we said in the March 2021 Have Your Say community update, we recognise that due to the rapid installation of the cycleway to protect public health during the COVID-19 response we did not consult extensively. However, the March 2021 consultation about the cycleway's future was very widely publicised in a number of ways and over 1,083 survey responses were received.
The survey and community updates were flawed.	The survey was designed to enable respondents to give any feedback they wished. The community updates issued provided key information about the cycleway and Transport contact details for anyone with specific questions that were not covered. Since installation we have also spent a large amount of time responding to people who got in contact by telephone, email or through the webpage.

Cycleway cleaning	
Rubbish builds up in the cycleway and is not removed.	Street cleaning is the responsibility of City of Sydney Council and it carries this out regularly. The Council does have smaller street sweepers that can access the cycleway. Residents are asked to leave bins on the kerb, outside pop-up cycleways. Transport will work with City of Sydney Council to ensure rubbish collection can continue as normal.
Garbage trucks and street sweepers are unable to access the cycleway, for rubbish collection and cleaning.	
Bike network	
The cycleway should be better connected to the existing bike network.	This is the intention and Transport is working to do so.
The wider bike network should be improved.	Transport is doing exactly that and new cycleways were installed in 2020 and 2021. New routes are being developed all the time to improve the bike network. Making improvements to walking and bike riding infrastructure is a core focus for Transport, as outlined in relevant policy documents[5].
Location of the cycleway	
The location of the cycleway is good.	We acknowledge there was mixed feedback on this point, but only a small minority of respondents supported relocation to another street. Transport for NSW investigated alternative routes, including St Johns Road, but this clearly showed the current route is most suitable and most direct for bike riders. Bridge Road was chosen after careful consideration and discussion with City of Sydney Council.
The cycleway should be relocated on other streets, including St Johns Road.	

[5] Such as Future Transport Strategy 2056: **https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf**

Environment, sustainability and street scene	
The cycleway reduces emissions and noise, providing a more sustainable travel option / more congestion increases pollution.	Increased bike riding has been proven to have the benefits referred to. However, more congestion would also increase pollution.
Improvements should be made to improve local amenity, including adding vegetation, benches etc near the cycleway.	These suggestions were mostly out of scope and are the responsibility of City of Sydney Council.
Traffic lights	
Install dedicated traffic light signals for bike riders.	This was not something identified through the Road Safety Audit process and Transport does not plan to do so. Also, the road is too narrow at the intersections with Ross Street and Glebe Point Road to do this.
Traffic light sequencing should be improved / sped up, to increase traffic flow.	This was not something identified through the Road Safety Audit process and Transport does not plan to do so. Traffic signal phasing was not altered when the cycleway was installed and continues to run within the optimum times for this route.
Use of the cycleway	
The cycleway is underused / the cycleway is well-used.	Since its completion there has regularly been between 2,000 and 3,000 trips per week on it. Bike riding is increasing in Sydney and new cycleways help accommodate this growth. Use of the cycleway has been measured and captured by an automatic bike counter.
Bus stops	
Bus stop(s) on the cycleway should be moved / removed.	As above, this was not something identified through the Road Safety Audit process and Transport does not plan to do so. Our data shows that bus usage remains high along the route.

Out of scope	
Many comments were out of scope or not feasible e.g.: • Bridge Road should be a single lane for traffic • remove power lines etc and other suggestions.	The Bridge Road Pop-up Cycleway was installed between Lyons Road and Taylor Street and the consultation in March 2021 was about this cycleway only. Feedback about these and other unrelated matters (e.g. changing the law to tax bike riders etc) and transport projects elsewhere (e.g. WestConnex) will not be addressed here.

5. Decision and next steps

All of the feedback received, which includes 2,915 open-ended responses to the final three survey questions, was carefully considered. A wide range of matters were raised and the majority of feedback about them was positive, neutral or mixed. This has been taken into account, with ongoing monitoring and evaluation data gathered since installation of the cycleway, as well as the views of the cycleway's users, who were surveyed separately. Based on the benefits identified – including improved safety, the cycleway's growing use and delivery of a more sustainable travel option consistent with Transport's Future Transport 2056 vision[6] – the decision has been taken to keep it on Bridge Road permanently.

However, we will upgrade the current low-cost and temporary cycleway barrier, with its light-weight orange plastic paddles, to a more appropriate design. This will help achieve a better balance between moving people in a safe environment, while creating a cycleway that is less visually intrusive and generally better suited to the local area. This is a direct response to feedback.

As shown in 4. Consultation summary, a large amount of feedback focused specifically on safety. Much of this was very positive and given by respondents, particularly bike riders, who felt the cycleway and its associated changes have brought significant improvements. In many cases the introduction of a barrier, separating the cycleway from the road, has given people the confidence to either start bike riding or to take it up again.

On the other hand, many respondents felt the cycleway is unsafe or needs further safety improvements. Feedback about safety includes, but is not limited to, comments about: new traffic calming road safety measures, turning at intersections, merging of the cycleway and road, bus users' crossing of the cycleway and road surface and maintenance matters. All relevant feedback has been passed on to the project team for further consideration.

Transport will also continue to look at ways of improving more sustainable travel options locally, including walking and bike riding. Many respondents were eager for the cycleway to be expanded, including to the Sydney Fish Market and beyond, as well as for it to be more fully connected to Sydney's expanding cycleway network. Transport is actively working to do both and will continue to update the local community about progress.

[6] Future Transport Strategy 2056: **https://future.transport.nsw.gov.au/sites/default/files/media/documents/2018/Future_Transport_2056_Strategy.pdf**

6. Appendix A – Community update, June 2020

NSW GOVERNMENT

CITY OF SYDNEY

New pop up cycleway in your neighbourhood

Transport for NSW | City of Sydney | June 2020

These transport initiatives are funded by the NSW Government and are being rolled out by Transport for NSW and City of Sydney.

Transforming Sydney's streets

We are working together with City of Sydney to deliver six new pop up cycleway (see map overleaf) across the city as part of our response to COVID-19, giving you more options to walk and cycle more safely.

Bridge Road / Pyrmont Bridge Road Pop Up

The Bridge Road/ Pyrmont Bridge Road pop up cycleway will be coming soon to your neighbourhood. This corridor will connect you and your community from Camperdown to Pyrmont and the CBD.

Pop-up cycleway on Bridge Road/ Pyrmont Bridge Road

- **This connection will make it safer and easier for people to make the choice to ride to work and school, and to access services and local businesses**
- **It will provide more ways to get around our city also freeing up capacity on public transport and roads**
- **It will provide safe and direct access to Glebe Markets, Wentworth Park, Sydney Fish Market, Darling Harbour and the CBD**

New pathways for active transport

What happens next?

Work includes installing a pop up cycleway in each direction along Bridge Road/ Pyrmont Bridge Road in Camperdown and Glebe, between Lyons Road and Wattle Street, adjacent to the kerb. People riding will be able to cross intersections and key points through short sections of mixed traffic. We will be marking the cycleway with paint and using barriers and flexible posts to seperate it from vehicles.

All existing parking along Bridge Road and Pyrmont Bridge Road will be temporarily removed between Wattle Street and Lyons Road. Transport has recently reduced the speed limit from 60km/h to 40km/h on the cycling route to provide a safer environment for people riding.

Construction

Work will start on **29 June** and we plan to finish by the end of June/start of July. Most work will occur at night, weather permitting.

For construction information please contact our delivery partner VBAJV on 1800 677 700 or at nswenquiries@vbajv.com.au

For more information on the pop up cycleway, visit **nswroads.work/covid-infrastructure**, call **1800 573 193** or email **covidpopup@transport.nsw.gov.au**

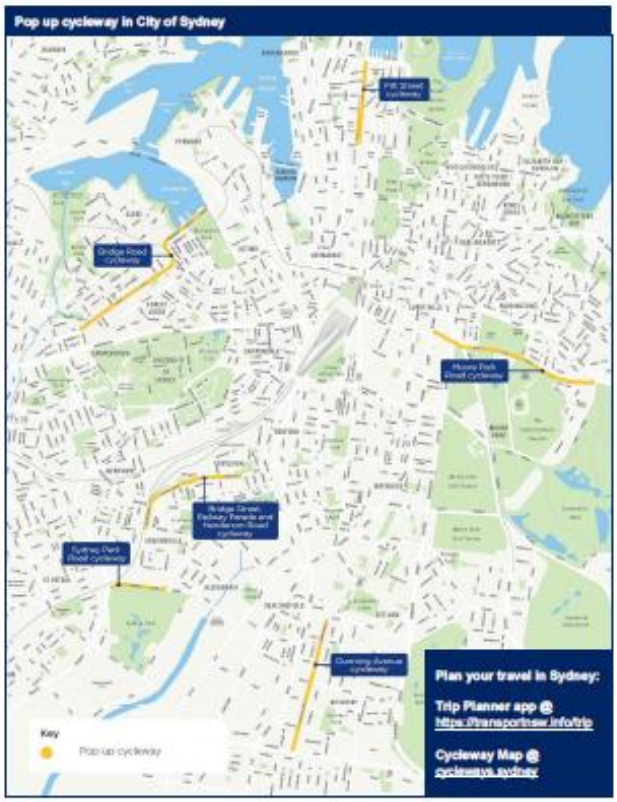
Traffic changes

There will be temporary traffic changes while the cycleway is installed to ensure the work zone is safe.

Please keep to speed limits and follow signs and traffic controller directions.

For the latest traffic updates, you can call 132 701, visit livetraffic.com or download the Live Traffic NSW App.

1

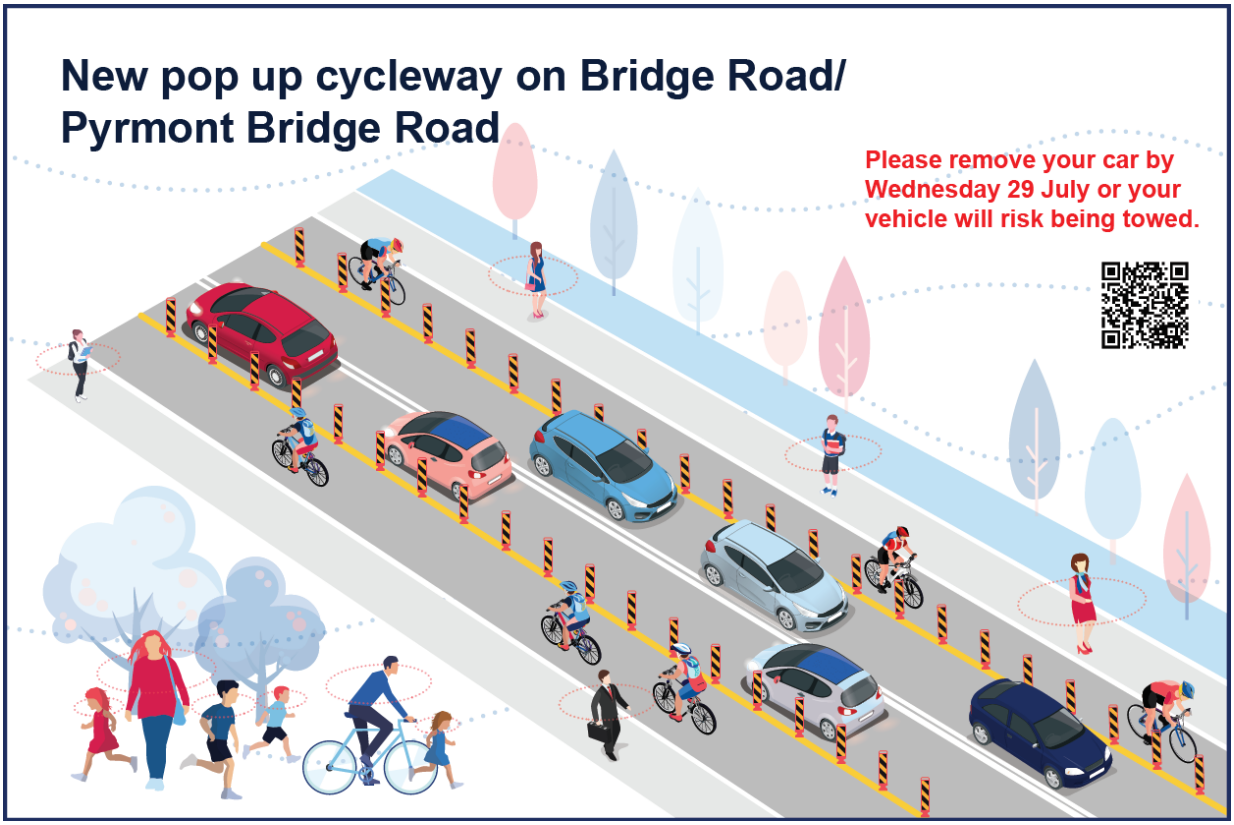


NSW GOVERNMENT

2

7. Appendix B – Community postcard, July 2020

New pop up cycleway on Bridge Road/ Pyrmont Bridge Road



NSW GOVERNMENT

CITY OF SYDNEY

These transport initiatives are funded by the NSW Government and are being rolled out by Transport for NSW and City of Sydney.

What happens next?

We will be installing a pop up cycleway in each direction along Bridge Road/ Pyrmont Bridge Road in Camperdown and Glebe, between Lyons Road and Wattle Street, adjacent to the kerb.

All existing parking along Bridge Road and Pyrmont Bridge Road will be temporarily removed between Wattle Street and Lyons Road.

Clearway hours will be revised to At All Times clearways.

Transport has recently reduced the speed limit from 60km/h to 40km/h on the cycling route to provide a safer environment for people riding.

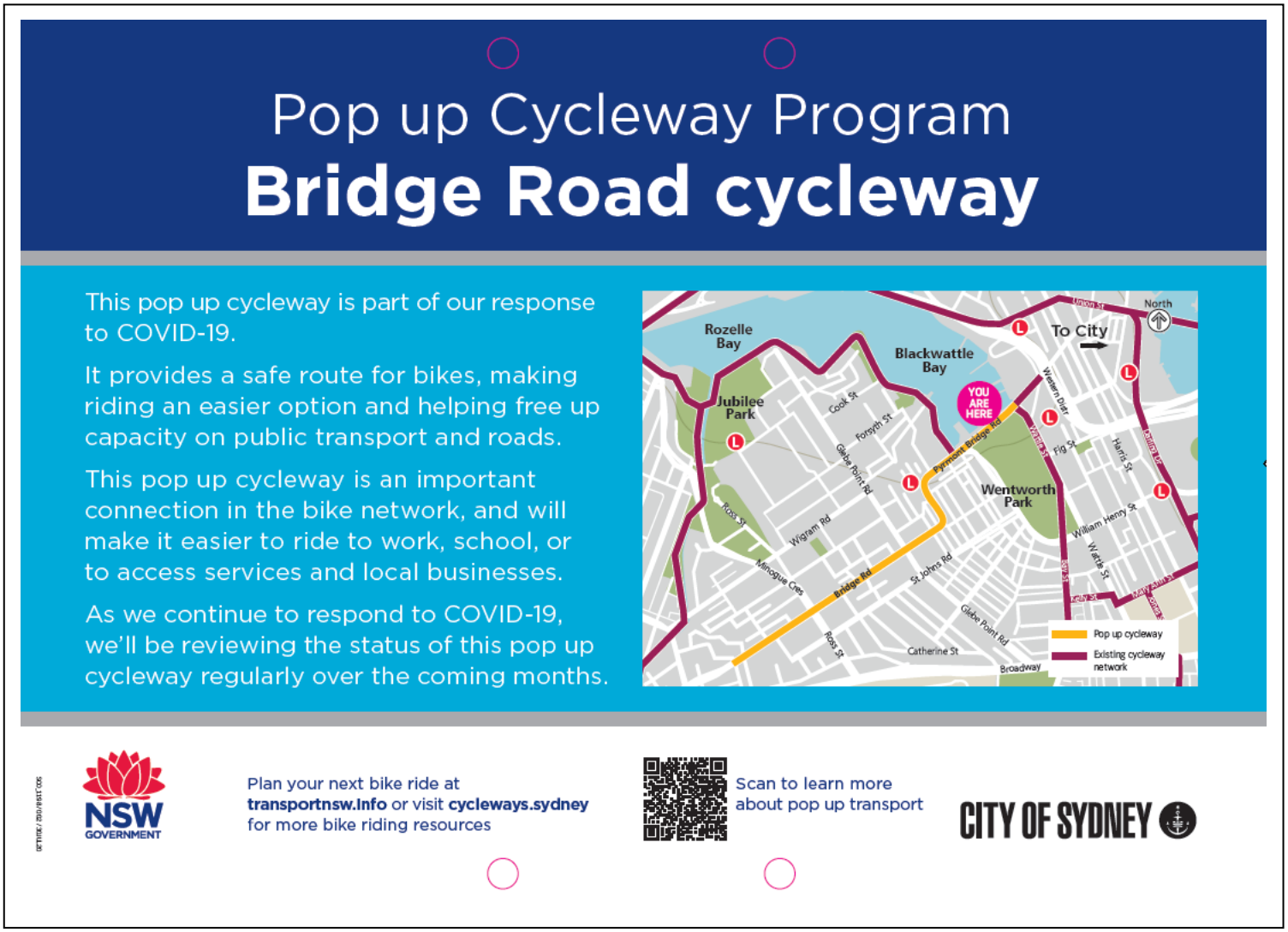
Construction

Work will start on 29 July and we plan to finish by the end of August. Most work will occur at night, weather permitting.

For construction information please contact our delivery partner VBAJV on 1800 677 700 or at nswenquiries@vbajv.com.au.

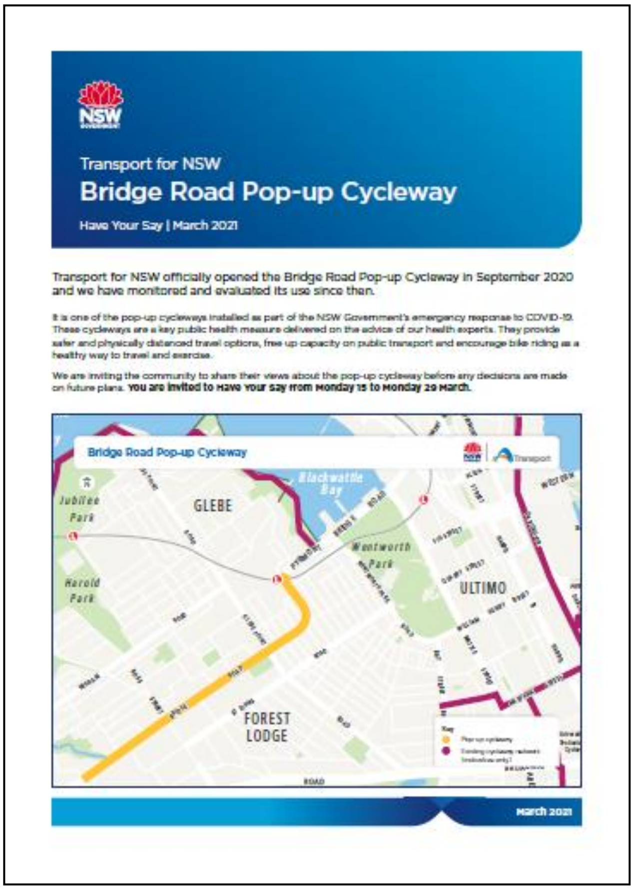
For more information on the pop up cycleway, visit **nswroads.work/covid-infrastructure**, call 1800 573 193 or email covidpopup@transport.nsw.gov.au

8. Appendix C – Pop-up cycleway information sign, July 2020



9. Appendix D – No parking sign, July 2020

10. Appendix E – Have Your Say community update, March 2021



Transport for NSW

Bridge Road Pop-up Cycleway

Have Your Say | March 2021

Transport for NSW officially opened the Bridge Road Pop-up Cycleway in September 2020 and we have monitored and evaluated its use since then.

It is one of the pop-up cycleways installed as part of the NSW Government's emergency response to COVID-19. These cycleways are a key public health measure delivered on the advice of our health experts. They provide safer and physically distanced travel options, free up capacity on public transport and encourage bike riding as a healthy way to travel and exercise.

We are inviting the community to share their views about the pop-up cycleway before any decisions are made on future plans. **You are invited to Have Your Say from Monday 15 to Monday 29 March.**

Why was the pop-up cycleway installed?

Transport for NSW has delivered pop-up cycleways, in consultation with the City of Sydney, as part of the NSW Government's emergency response to COVID-19. You can read more about the wider program at **nswroads.work/covid-infrastructure**

These low-cost and temporary cycleways, with light-weight barriers, give people a safe alternative to catching public transport or driving. They also add important links to the existing bike network and help connect people with employment hubs.

The Bridge Road Pop-up Cycleway, installed between Lyons Road and Taylor Street, supports people travelling from the Inner West to the Sydney Central Business District and is part of the growing bike riding network across Sydney.

What happens next?

Transport for NSW committed to consult the community prior to any decisions being made on whether pop-up cycleways would become permanent. Please look at the Have Your Say information on page four, to learn how you can complete our short survey.

This is your opportunity to give your feedback on the future of the cycleway.

Plan your travel in Sydney **transportnsw.info/trip**

For the latest traffic updates, you can call **132 701**, visit **livetraffic.com** or download the Live Traffic NSW App.

People are using the cycleway more and they feel safer

The cycleway gives people another option to travel safely. Since its completion there have been **3000 trips** made on it every week.

30% More than 30% of the people surveyed using the cycleway said they would have travelled to their destination using another form of transport before it was installed.

92% 92% of the people surveyed felt safer riding on the cycleway than they did riding in the previous road conditions.

Improving safety

New pathways for walking and bike riding

Safer bike connections

We recognise that due to the rapid installation of the cycleway to protect public health during the COVID-19 response we didn't consult extensively.

In the move to make the cycleway permanent, we want to make sure we consider everyone's feedback – from those who live and work in the area to those who use the cycleway – to ensure that we get the best outcome for all. We want bike riders of all levels to feel safe and confident when riding on the cycleway and hope to encourage more people to take up this healthy form of transport.

Above is an artist's impression of a cycleway with a permanent barrier. This is an example of the look and quality of cycleway that could be installed on Bridge Road, as it suits the local environment much better than the temporary orange plastic paddles.

We know this is a local street that is home to many but it is also a busy corridor. So we want to know how you think we can make the area as safe as possible for motorists, bike riders and pedestrians.

Slowing the speed down to 40km/h is one step we have already taken to improve safety in conjunction with the pop-up. Let us know if you think there are other changes we can make to balance moving people around and making it a safe environment for locals.

Have Your Say

Simply scan the QR code and provide your feedback via our short survey at the top of our Pop-up Transport webpage. Please give your feedback from Monday 15 to Monday 29 March.

You will also find more information about walking and bike riding, how to plan your trip and other cycleways in Greater Sydney.

1800 573 193

covidpopup@transport.nsw.gov.au

nswroads.work/covid-infrastructure

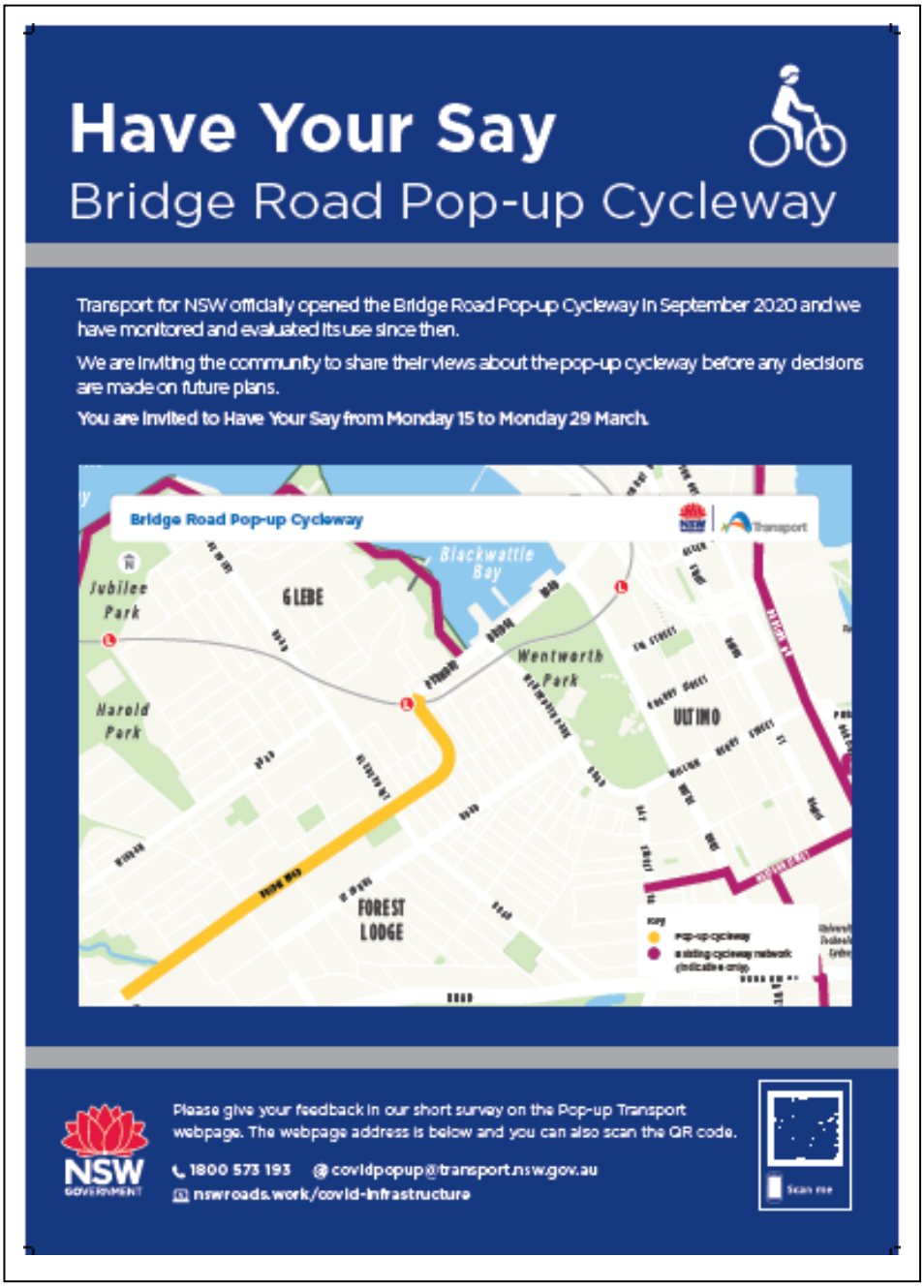
Translating and Interpreting Service

If you need an interpreter, please call the Translating and Interpreting Service (TIS National) on **131 450** and ask them to telephone Transport for NSW on 1800 573 193.

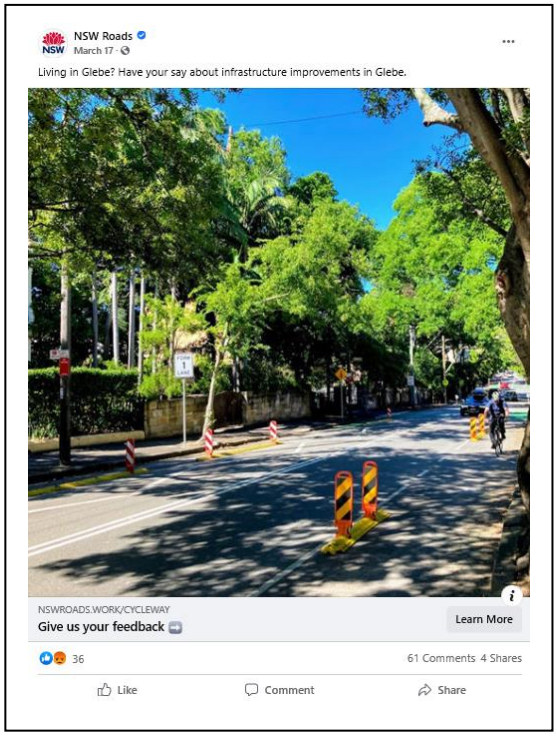
March 2021

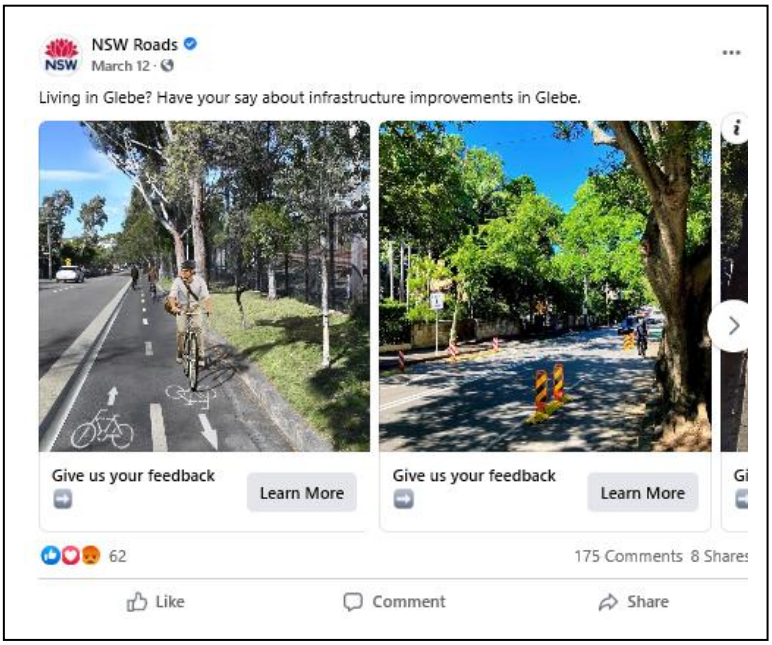
transport.nsw.gov.au

11. Appendix F – Pop-up cycleway consultation sign, March 2021

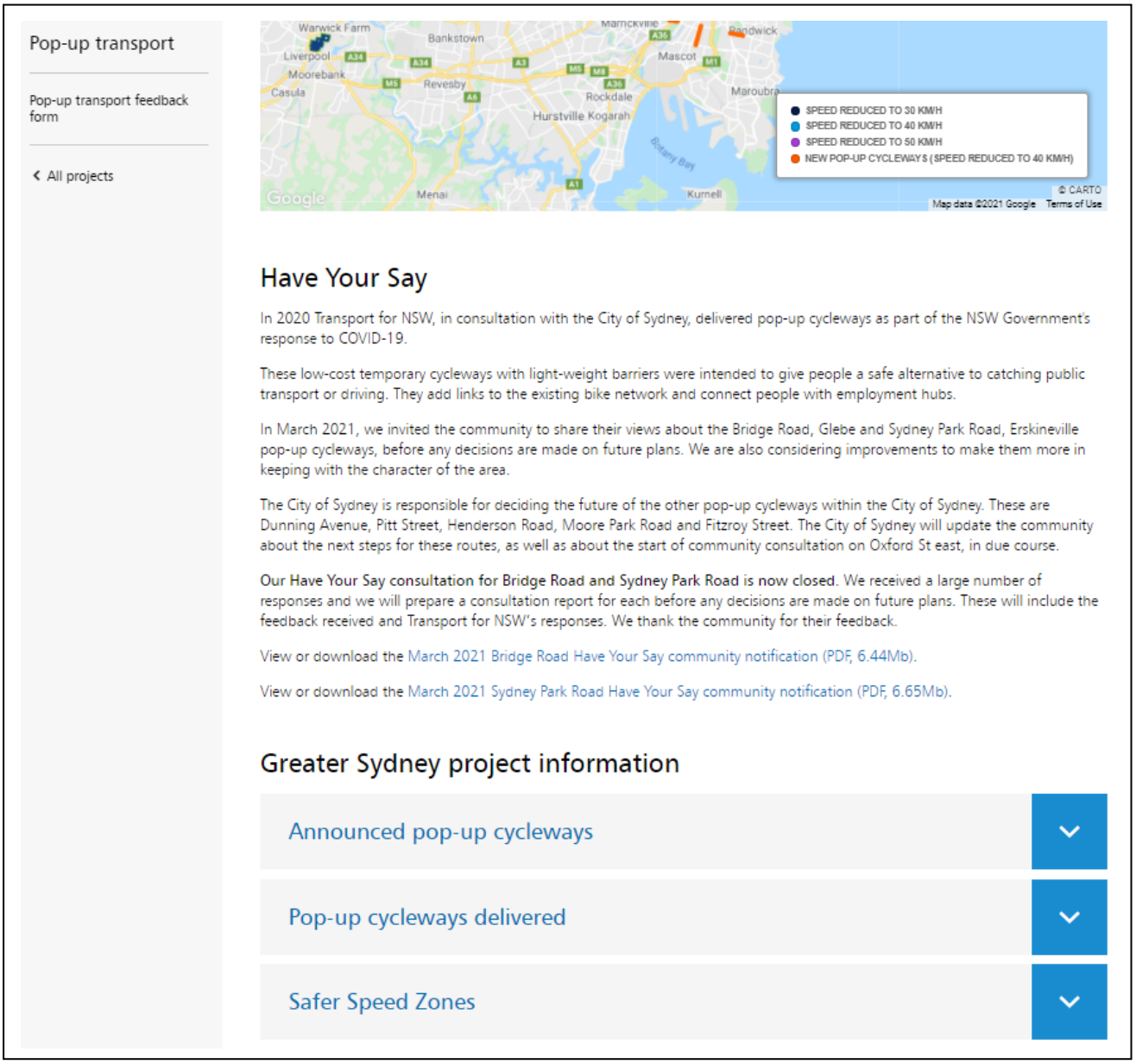


12. Appendix G – Sponsored Facebook posts, March 2021





13. Appendix H – Pop-up transport webpage screenshot, April 2021



Pop-up transport

Pop-up transport feedback form

All projects

Have Your Say

In 2020 Transport for NSW, in consultation with the City of Sydney, delivered pop-up cycleways as part of the NSW Government's response to COVID-19.

These low-cost temporary cycleways with light-weight barriers were intended to give people a safe alternative to catching public transport or driving. They add links to the existing bike network and connect people with employment hubs.

In March 2021, we invited the community to share their views about the Bridge Road, Glebe and Sydney Park Road, Erskineville pop-up cycleways, before any decisions are made on future plans. We are also considering improvements to make them more in keeping with the character of the area.

The City of Sydney is responsible for deciding the future of the other pop-up cycleways within the City of Sydney. These are Dunning Avenue, Pitt Street, Henderson Road, Moore Park Road and Fitzroy Street. The City of Sydney will update the community about the next steps for these routes, as well as about the start of community consultation on Oxford St east, in due course.

Our Have Your Say consultation for Bridge Road and Sydney Park Road is now closed. We received a large number of responses and we will prepare a consultation report for each before any decisions are made on future plans. These will include the feedback received and Transport for NSW's responses. We thank the community for their feedback.

View or download the March 2021 Bridge Road Have Your Say community notification (PDF, 6.44Mb).

View or download the March 2021 Sydney Park Road Have Your Say community notification (PDF, 6.65Mb).

Greater Sydney project information

Announced pop-up cycleways

Pop-up cycleways delivered

Safer Speed Zones