



# *WestConnex M4-M5 Link*

*State Significant  
Infrastructure  
Modification  
Assessment  
(SSI 7485 MOD 2)*



August 2020

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Cover photo

Artist's impression of overpass and green link (Source: Transport for New South Wales)

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# Glossary

Abbreviation	Definition
Approval	Infrastructure Approval
Department	Department of Planning, Industry and Environment
DPIE Water	Department of Planning, Industry and Environment – Water Group
CSSI	Critical State Significant Infrastructure
DPI	Department of Primary industries
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
Green link	Shared pedestrian and cycling bridge connecting the future open space at the Rozelle Rail Yards to the Rozelle Bay light rail station as described in the Modification Report and amended by the Design Amendment Report.
Induced traffic	Increases in traffic encouraged by increases in road capacity.
Land bridge	Approved shared pedestrian and cycling bridge connecting the future open space at the Rozelle Rail Yards to the Rozelle Bay light rail station and Rozelle Bay foreshore as described in the EIS.
LoS	Level of Service
Minister	Minister for Planning and Public Spaces
MOC	Motorways Operation Complex
MOD	Modification
OEH	Office of Environment and Heritage
RtS	Response to Submissions
Secretary	Secretary of the Department of Planning, Industry and Environment
SSI	State Significant Infrastructure
TfNSW	Transport for NSW
UDLP	Urban Design and Landscape Plan



# *Executive Summary*

On 17 April 2018, the then Minister for Planning approved the M4-M5 Link. The approved project is critical State significant infrastructure (CSSI) and comprises the construction and operation of twin multi-lane tunnels between the M4 East Motorway at Wattle Street, Haberfield and the M8 (former New M5) St Peters Interchange, as well as an interchange at Rozelle and a twin tunnel connection from the Rozelle Interchange to the Iron Cove Bridge.

Transport for NSW (formerly Roads and Maritime Services) (the Proponent) lodged a modification application to construct a new elevated vehicular overpass over The Crescent that would allow eastbound traffic heading north on The Crescent from Annandale to bypass the signalised intersection at The Crescent/City West Link junction. This proposed overpass would remove the approved pedestrian and cycling land bridge from the proposal, which would be replaced with a pedestrian and cycling green link further to the west, providing a connection between the future open space at Rozelle Rail Yards and the Rozelle Bay light rail stop. The amended design introduces an upgraded at grade pedestrian and cycling crossing in order to connect to the Rozelle Bay foreshore.

On balance the modification would provide benefits which outweigh potential environmental impacts, and the Department recommends that the modification be approved subject to conditions.

## **Assessment process and community engagement**

The modification application was publicly exhibited for 35 days from 21 August 2019 to 25 September 2019. A total of 1,278 submissions were received during the exhibition period. The Department undertook an inspection of the area surrounding the proposed Rozelle Interchange and Rozelle Bay foreshore to better understand the characteristics of the local environment and the issues raised in submissions by the community, Inner West and City of Sydney Councils and government agencies.

The modification application received 904 public submissions in the nature of objections. Most submissions objected to the construction of the overpass, and the replacement of the approved land bridge with the proposed pedestrian and cycling green link and a horseshoe-shaped shared user bridge, based on the reduced connectivity that would be provided by the modified design, and impacts on visual amenity and the safety of pedestrians and cyclists.

Following concerns raised in submissions from the community, local government and the Department, the Proponent amended the design, as documented in a Design Amendment Report. This Report was publicly exhibited for 14 days from 29 April to 13 May 2020. A total of 251 submissions were received, of which 215 objected to the revised design.

As the modification request received over 25 objections and is objected to by both Inner West and City of Sydney Councils, the Minister is the approval authority.

## Options Assessment

The option of an underpass was considered by the Department as this had the potential to address many of its and the community's concerns. The Department concluded that this option is not viable primarily due to engineering constraints. An underpass would need to dive below existing drainage infrastructure (Whites Creek and the Rozelle Rail Yards drainage channel) and high groundwater levels and the close proximity of Rozelle Bay would result in potentially high levels groundwater inflow into the underpass. The surrounding fill material would also pose a risk to the structural integrity of an underpass. Together, these would form a challenge from a constructability perspective. Tunnelling in this vicinity would also require the relocation of utility infrastructure, including an existing Ausgrid high voltage cable, with significant implications for the construction program (up to three years).

## Key assessment issues

### Traffic and transport

The construction of the overpass would introduce traffic disruptions along City West Link / The Crescent, however these are consistent with the disruptions that would have been experienced during the construction of the approved land bridge. The traffic impacts will be managed through standard traffic management measures aimed at safely directing and guiding traffic through the work zone.

A key concern of the community and the City of Sydney and Inner West Council is induced traffic from the vehicle overpass. Induced demand on the road network from the M4-M5 Link was addressed in the EIS for that project, with additional potential induced traffic volumes associated with the proposed modification not considered to be significant. The proposed overpass and changes to the layout of approach roads to Anzac Bridge are necessary to improve traffic merging arrangements and safety and will ensure that the Rozelle Interchange produces the best operational traffic outcomes once the M4-M5 Link is operational.

### Noise and vibration

Noise management levels would be exceeded during the day, evening and night time periods at nearby residences and commercial premises during construction, due to their proximity of the works. These noise impacts are unavoidable and are typical of major construction works in an urban environment. The Department is satisfied that these impacts can be managed through the extension of the out-of-hours construction noise insulation program and existing conditions in the Infrastructure Approval, which include requirements for periods of respite, hours of work, coordination of utility works, appointment of an Acoustics Advisor and noise monitoring.

Operational traffic noise impacts would be managed through the existing Infrastructure Approval which requires the Proponent to undertake an Operational Noise and Vibration Review to ensure that operational noise mitigation measures are provided where the noise is above the road noise criteria.

### Design and public space

The proposed modification received over 750 submissions objecting to or raising serious concerns regarding the removal of the approved land bridge and stating that the modified design would provide

a low-quality active transport experience. Concerns were also raised regarding changes to the existing at-grade crossing at The Crescent / Johnston Street / Chapman Road which require pedestrians and cyclists to make multiple crossings to reach the foreshore.

Following the feedback received during exhibition, the Proponent amended the design of the proposed modification to remove the initially proposed horseshoe-shaped shared user path bridge, provide a shared user ramp from the light rail stop leading to the at-grade path on the western side of The Crescent, and reinstatement and enhancement of the pedestrian crossing at the intersection of The Crescent/ Johnstone Street/ Chapman Road.

The amended design is an improvement from the initial modified design in terms of time travelled and distance for most pedestrian trips. It also provides an active transport link between the proposed open space at the Rozelle Rail Yards through to the Light Rail stop and Rozelle Bay foreshore.

The overpass and green link will have an impact on the visual amenity of residents, particularly those at 300 Johnston Street and Bayview Crescent, Annandale as they will directly overlook the overpass and/or green link. To reduce the impact on views from these residences, the Proponent has lowered the height of the overpass at its apex by two metres in the revised design.

The Proponent has committed to incorporating quality finishes and landscaping throughout the proposed green link and improving the interface between the green link and Rozelle Bay light rail stop to enhance the visual experience of pedestrians and cyclists. These enhancements will be developed as part of the urban design and landscaping process for the project, which is subject to an independent urban design review panel.

## **Conclusion**

The M4-M5 Link is a critical component of WestConnex, which in turn is key to achieving the Government's transport policy and objectives. The proposed modification would accommodate traffic from Annandale to travel north east towards the CBD using an elevated vehicle overpass, provide a shared user path connection from the future Rozelle Rail Yards open space to the Rozelle Bay light rail stop via a green link bridge, and from there onto the Rozelle Bay foreshore via a shared user path ramp which leads down to an upgraded pedestrian crossing over The Crescent.

The Department accepts that the proposed modified design is required to improve traffic flows and intersection performance at The Crescent / City West Link and across the surrounding road network and future proof the intersection to accommodate traffic flows associated with future projects including the proposed Western Harbour Tunnel (if approved).

A shared cycle and pedestrian pathway is an important connection for travelling between the future open space at the Rozelle Rail Yards, the Rozelle Bay light rail stop and Rozelle Bay foreshore. The modified proposal provides this link. Although it introduces an at-grade crossing when compared to the approved EIS land bridge design, it is the most feasible design based on engineering constraints. It is therefore recommended that the modification be approved subject to the recommended conditions.



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# 1. Introduction

This report provides an assessment of a request to modify the State significant infrastructure (SSI) approval for the WestConnex M4-M5 Link (SSI 7485). The M4-M5 Link (the project) is the third stage of the 33 kilometre-long WestConnex motorway program (**Figure 1**) that, together with the proposed Sydney Gateway, would facilitate improved connections between western Sydney, Sydney Airport and Port Botany, and south and south-west Sydney, as well as better connectivity between the important economic centres along Sydney's Global Economic Corridor.



**Figure 1 |** WestConnex overview (Source: M4-M5 Link EIS)

The M4-M5 Link will connect the M4 East project at Haberfield with the M8 at St Peters and comprises:

- new twin multi-lane tunnels between Wattle Street, Haberfield and the St Peters Interchange;
- a new interchange at Rozelle which includes tunnels, ramps and related infrastructure for a potential future Western Harbour Tunnel;
- a new tunnel connection from the Rozelle Interchange to the Iron Cove Bridge (Iron Cove Link);
- upgrades to the surrounding road network;
- new active transport facilities and up to 10 hectares of open space at Rozelle; and

- ancillary facilities including five motorway operation complexes and three tunnel ventilation facilities.

The approved project is being constructed in two stages and works have commenced on both:

- Stage 1 – construction of the mainline tunnels between the M4 East Motorway at Haberfield and the New M5 Motorway at St Peters. It is anticipated that the mainline tunnel will be open to traffic in early 2023.
- Stage 2 – construction of the Rozelle Interchange and Iron Cove Link, which is anticipated to be open in late 2023.

Figure 2 shows the main project components and location.

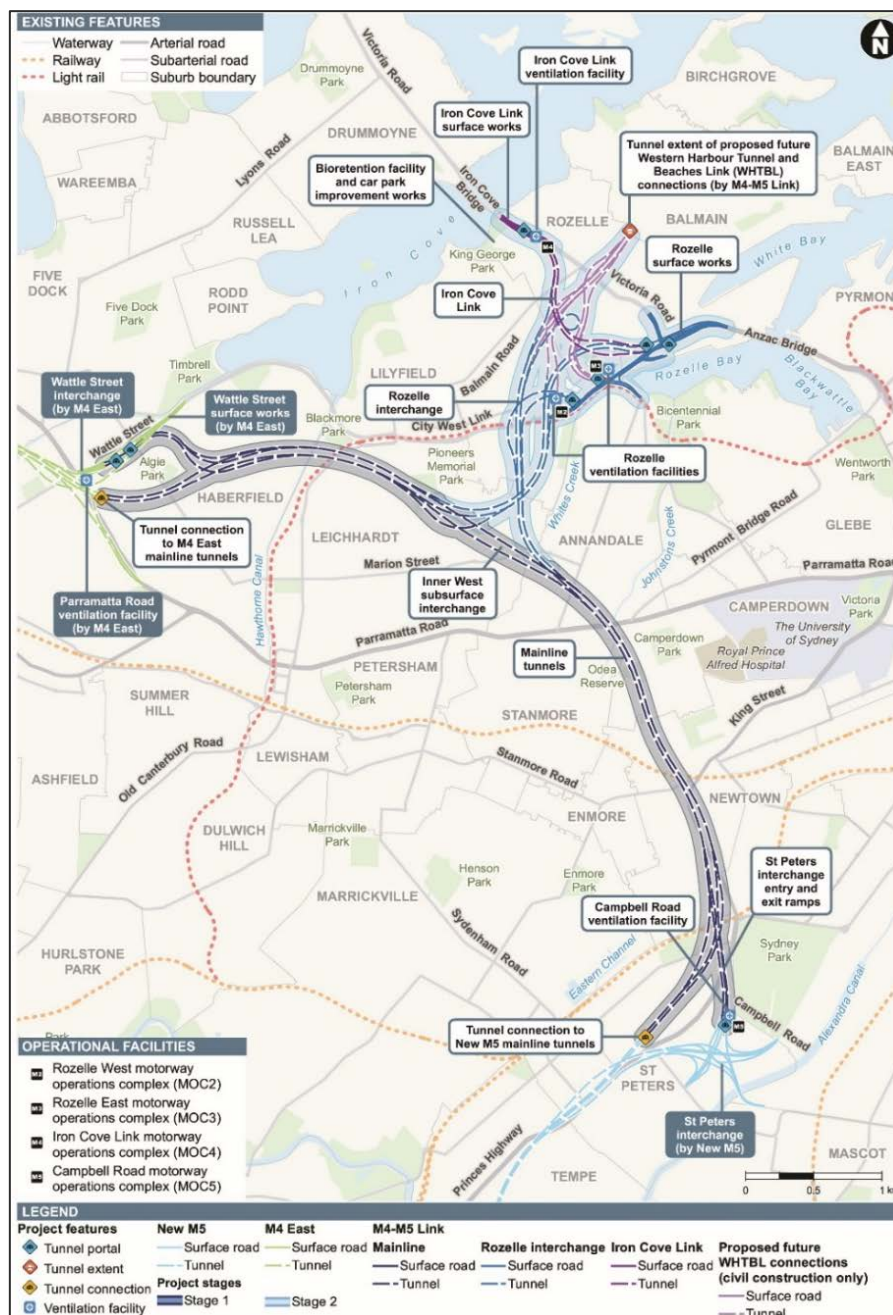


Figure 2 | Project location and design elements (Source: M4-M5 Link Modification Report)

The proposed modification relates to Stage 2 of the approved project.

The modification request seeks to construct a new elevated vehicular overpass (The Crescent overpass) that would allow traffic heading north on The Crescent from Annandale to bypass the signalised intersection at The Crescent / City West Link junction and continue east on The Crescent towards Victoria Road and the Anzac Bridge. The introduction of the overpass conflicts with the approved land bridge which would connect the open space at the Rozelle Rail Yards with the Rozelle Bay light rail stop and Rozelle Bay foreshore. Consequently, a new shared user path bridge (green link) spanning from the Rozelle Rail Yards to the Rozelle Bay light rail stop is proposed to the west of The Crescent / City West Link intersection. This green link would connect to the street level via a shared user ramp. In addition, the intersection at The Crescent / Johnston Street / Chapman Road is proposed to be upgraded. A construction ancillary facility is also proposed at the location of an existing minor construction ancillary facility along the foreshore at Rozelle Bay.

## 1.1 Background

The approved M4-M5 Link project is within three local government areas (LGAs) – Inner West, City of Canada Bay and City of Sydney – with the two tunnels, interchanges and major operational facilities traversing the suburbs of Ashfield, Haberfield, Leichhardt, Rozelle, Annandale, Stanmore, Camperdown, Newtown and St Peters.

Stage 2 of the approved project involves the construction of the Rozelle Interchange and the Iron Cove Link including connection to the stub tunnels at the Inner West subsurface interchange, connection to the surface road network at Lilyfield and Rozelle, and stub tunnels to provide connections to the proposed Western Harbour Tunnel. It also involves the provision of up to 10 hectares of open space at the former Rozelle Rail Yards. Operational infrastructure to be built as part of Stage 2 includes the Rozelle West motorway operations complex (MOC2), Rozelle East motorway operations complex (MOC3) and Iron Cove Link motorway operations complex (MOC4). In addition, ventilation outlets would be built within the former Rozelle Rail Yards and at Iron Cove.

An overview of the approved design and location of the approved project is provided in **Figure 3**.

Works associated with the modified proposal would be in the vicinity of the City West Link, The Crescent and Johnstone Street at Annandale. This area is an urbanised environment surrounded by diverse land uses including low to medium density residential communities, commercial and light-industrial developments, recreational areas and transport activities. The area subject to the modification is predominantly within the Inner West local government area, with upgrades to Chapman Road and The Crescent where they intersect with Johnston Street in the City of Sydney local government area.



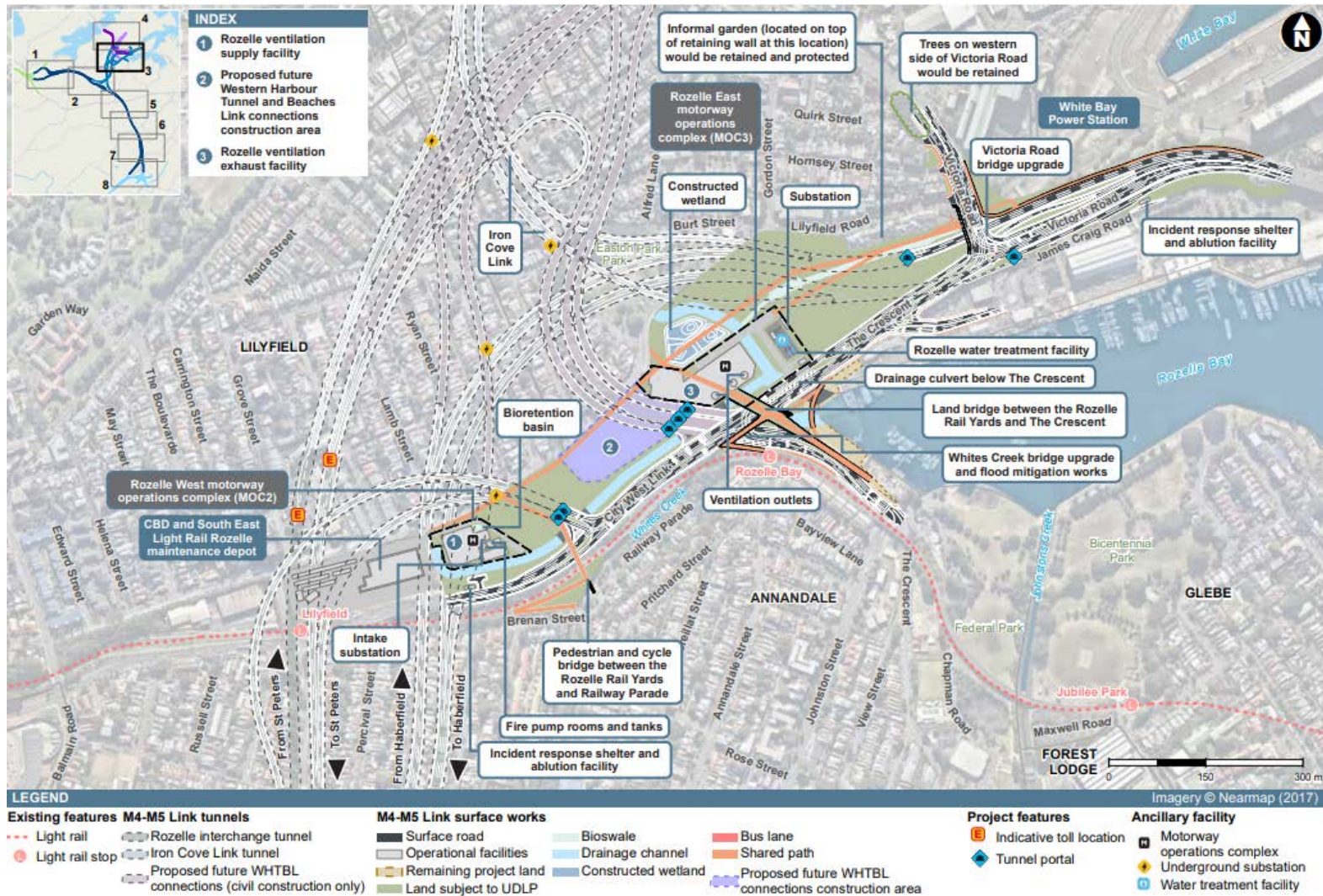


Figure 3 | Rozelle Interchange as approved (Source: The Crescent Overpass Modification Report)



## 1.2 Approval History

The M4-M5 Link project (SSI 7485) was approved on 17 April 2018 by the then NSW Minister for Planning. A modification relating to Stage 1 was approved by the then NSW Minister for Planning on 25 February 2019. The modification involved the inclusion of civil sites at Parramatta Road West and Parramatta Road East (C1b and C3b), a civil and tunnel site at Northcote Street (C3a), removal of the Darley Road civil and tunnel site, and relocation of the operational water treatment plant from Darley Road site to the Campbell Road motorway operations complex at the St Peters interchange.

A modification application (SSI 7485 Mod 3) was approved on 28 July 2020 for the relocation of the Iron Cove motorway operations complex (MOC4) underground (including the proposed electrical substation and ventilation facilities). The modification involves the construction of a ventilation tunnel and two underground caverns for housing ventilation equipment and use of the Iron Cove construction ancillary facility (C8) as a tunnelling and support site.

A modification application (SSI 7485 Mod 4) was approved on 30 July 2020 for the establishment and use of a construction ancillary facility on Glebe Island. The facility would be used to receive and assemble construction materials (in particular steel bridge girders) for the Rozelle Interchange.

## 1.3 Relevant Conditions

The following is a list of the conditions of approval relevant to this modification request.

**Condition A1** – *The CSSI must be carried out in accordance with the terms of this approval and generally in accordance with the description of the CSSI in the WestConnex M4-M5 Link Environmental Impact Statement – Volumes 1A-C and 2A-J (dated August 2017) (the EIS) as amended by:*

- (a) *the WestConnex M4-M5 Link Submissions and Preferred Infrastructure Report (dated January 2018) (the SPIR);*
- (b) *the WestConnex M4-M5 Link Mainline Tunnel Modification Report (dated September 2018) (Modification 1 Report) as amended by the WestConnex M4-M5 Link Mainline Tunnel Modification Response to Submissions (dated November 2018) (Modification 1 RtS); and*
- (c) *the WestConnex M4-M5 Link Rozelle Interchange Iron Cove Ventilation Underground Modification Report (dated November 2019) as amended by the WestConnex M4-M5 Link Rozelle Interchange Iron Cove Ventilation Underground Modification Response to Submissions Report (dated March 2020) and*
- (d) *the WestConnex M4-M5 Link Rozelle Interchange Glebe Island Construction Ancillary Facility Modification Report (dated June 2020).*

**Condition E55** - *The CSSI (including new or modified local roads, parking, pedestrian and cycle infrastructure) must be designed to meet relevant design, engineering and safety guidelines, including the Austroads Guide to Traffic Management.*

**Condition E60** - *A detailed Pedestrian and Cycle Implementation Strategy must be included as a component of the Urban Design and Landscape Plan required by Condition E133 and reviewed by the Design Review Panel. The Strategy must be prepared in consultation with relevant council(s) and Bicycle NSW. The Strategy must be consistent with the Active Transport Strategy in Volume 2F, Appendix N of the EIS and must incorporate the requirements of Conditions E58 and E59 and include:*

- (a) *pedestrian and cycle engineering and safety standards;*
- (b) *a safety audit of existing and proposed pedestrian and cycle facilities to address the above standards;*
- (c) *details of selected routes and connections to existing local and regional routes;*
- (d) *timing and staging of all works;*
- (e) *infrastructure details, including lighting, safety, security, and standards compliance;*
- (f) *signage and wayfinding measures; and*
- (g) *details of associated landscaping works.*

*All identified works arising from this condition are to be implemented prior to the commencement of project operations, except as permitted by this approval.*

**Condition E120** - A pedestrian and cycling green link, as described in the EIS, to be provided from the Rozelle Rail Yards and spanning City West Link to the park adjacent Chapman Road, must have adequate soil depth to facilitate planting across the bridge of a diverse range of vegetation consistent with the cross section provided at Figure 5.8 of Appendix L, Volume 2F of the EIS. The bridge must be a minimum width of 15 metres, where the pedestrian and cycling green link spans from Rozelle Rail Yards across the City West Link including the slip lane onto The Crescent, unless otherwise agreed by the Secretary.

**Condition E121** - The connection between the pedestrian and cycling green link and the park adjacent to Chapman Road must be designed to integrate with the open space and active transport infrastructure within the park in a manner that maximise the safe movement of pedestrians and cyclists and provide a contiguous path between the Rozelle Rail Yards open space and the park adjoining Chapman Road.

**Condition E127** - The Design Review Panel must refine the design objectives for place making, public realm and urban and heritage interpretation applicable to the length of the project and provide advice on the application of the objectives to key design elements in relation to place making, architecture, heritage, urban and landscape design and public art and aesthetic aspects of the CSSI. The Panel must also review all Urban Design and Landscape Plan(s) prior to these being submitted to the Secretary. Evidence of this review and the Proponent's consideration of the review is to be provided to the Secretary.

**Conditions E131** - Once the Design Review Panel is composed, and prior to the detailed design of the CSSI, a Design Review Panel Terms of Reference is to be developed and endorsed by all panel members. The Terms of Reference must be submitted to the Secretary for information and:

- (a) establish best practice governance and protocols for the operation of the Design Review Panel;
- (b) include a Code of Conduct;
- (c) outline the agreed frequency of Design Review Panel meetings, coordinated with Proponent program requirements, to ensure timely advice and design adjustment; and
- (d) outline secretariat functions and administration including the recording and storing of meeting agendas, minutes and actions.

**Condition E134** - The Urban Design and Landscape Plan(s) must be prepared by a suitably qualified and experienced person(s) in consultation with the relevant council(s), UrbanGrowth NSW, the community and affected landowners and businesses. The UDLP(s) must include, but not necessarily be limited to:

Objectives, Principles and Standards

- (a) demonstrated consideration of design objectives, principles and standards including:
  - (i) local environmental and heritage values,
  - (ii) urban design context,
  - (iii) sustainable design and maintenance,
  - (iv) community safety, amenity and privacy including 'safer by design' principles where relevant,
  - (v) relevant design standards and guidelines,
  - (vi) prioritising the visual amenity and values of adjoining receivers over the road user experience,
  - (vii) minimising the footprint of the project (including operational facilities), and
  - (viii) the urban design principles outlined in the document referred to in Condition A1, and
  - (ix) the urban design principles outlined in Better Placed and Greener Places by the NSW Government Architect; and
  - (x) DRP review.

Consultation

- (b) details of where and how recommendations from the Design Review Panel have been incorporated into the plan;
- (c) evidence of consultation with the relevant council(s), UrbanGrowth NSW and the community on the proposed urban design and landscape measures, prior to finalisation of the UDLP, and details of how the outcomes of this consultation have informed the development of the UDLP;

Context and Form

- (d) an analysis of the built, natural and community context and the urban design objectives, principles and standards for the CSSI;
- (e) detailed consideration of integration and continuity with urban design and landscape outcomes for the M4 East and New M5 projects taking into account the respective UDLP(s) for each project;
- (f) landscaping and building design opportunities to mitigate the visual impacts of road infrastructure and operational fixed facilities (including ventilation outlets, tunnel portals, Motorway Operations Complexes, noise walls etc.), including

- (i) building placement, designs and landscaping that are reflective of the local built form,
- (ii) a living vertical garden(s) or alternative treatment for ventilation outlets consistent with the requirements of Condition E118,

#### Access

- (g) the Pedestrian and Cycle Implementation Strategy identified in Condition E60;
- (h) the following interim park infrastructure must be provided at Rozelle Rail Yards to support passive recreational uses of the land: toilet facilities, seating, bins and bicycle parking;
- (i) details of staging to maximise progressive public access and use of the Rozelle Rail Yards site;

#### Design

- (j) the design of the project landform and earthworks;
- (k) the design of the CSSI elements including their form, materials and detail (including the City West Link pedestrian and cycling green link identified in Condition E120);
- (l) a description of the CSSI design features, including graphics such as sections, perspective views and sketches of key elements of the CSSI;
- (m) visual screening requirements;
- (n) development and delivery of public art opportunities throughout the Rozelle Rail Yards using local artists;
- (o) demonstrated integration of Crime Prevention Through Environmental Design principles into the detailed design process;

#### Lighting

- (p) an assessment of the location, design and impacts of operational lighting associated with the CSSI and measures proposed to minimise lighting impacts in accordance with Conditions E122, E123 and E124;
- (q) development of a Rozelle Rail Yards Lighting and Wayfinding Strategy that provides for effective, safe and innovative lighting and wayfinding throughout the Rozelle Rail Yards land and that also explores lighting as a public art opportunity whilst ensuring adherence to Conditions E122, E123 and E124;

#### Heritage

- (r) the location of existing heritage items;
- (s) information on the reuse of heritage items and items of significance to the urban form and landscape character including identification of opportunities for interpretative and innovative reuse of salvaged items from the Rozelle Rail Yards to ensure the character of the land remains connected to previous and surrounding industrial, transport and maritime land uses;

#### Landscaping

- (t) a description of disturbed areas (including construction ancillary facilities) and details of the strategies to progressively rehabilitate, regenerate and/or revegetate these areas;
- (u) details on the location of existing vegetation and proposed landscaping (including use of endemic and advanced tree stock where appropriate). Details of species to be replanted/revegetated must be provided, including their appropriateness to the areas and habitat for threatened species;
- (v) demonstrated integration of water-sensitive urban design principles into the detailed design process and maximisation of integration of existing and enhanced water features into the open space features of the site including enhancements to Whites Creek and other waterways as well as the constructed wetland;

#### Implementation and monitoring

- (w) the timing for implementation of access, landscape and open space initiatives; and
- (x) monitoring and maintenance procedures for the built elements, rehabilitated vegetation and landscaping (including weed control) including performance indicators, responsibilities, timing and duration and contingencies where rehabilitation of vegetation and landscaping measures fail.

**Condition E164** - Archival recording as required by Condition E163 must also be undertaken for the Cadden Le Messurier, former Hotel and the former Bank of NSW building, should these structures be demolished.

### **Appendix D – Out-of-Hours Mitigation**

Proposed changes to conditions E127 and E131 relating to the workings of the Design Review Panel and updating of agency names do not affect the design outcomes or impacts of the proposed modification.



## 2. Proposed Modification

The original modification application was for the construction of a new elevated vehicular overpass, a new green link shared user path linking the future open space at the Rozelle Rail Yards to the Rozelle Bay light rail stop (green link), and a new horseshoe-shaped bridge linking the future open space to the Rozelle Bay foreshore. The construction of these would require the removal of the approved land bridge which would have connected the future open space to both the light rail stop and foreshore.

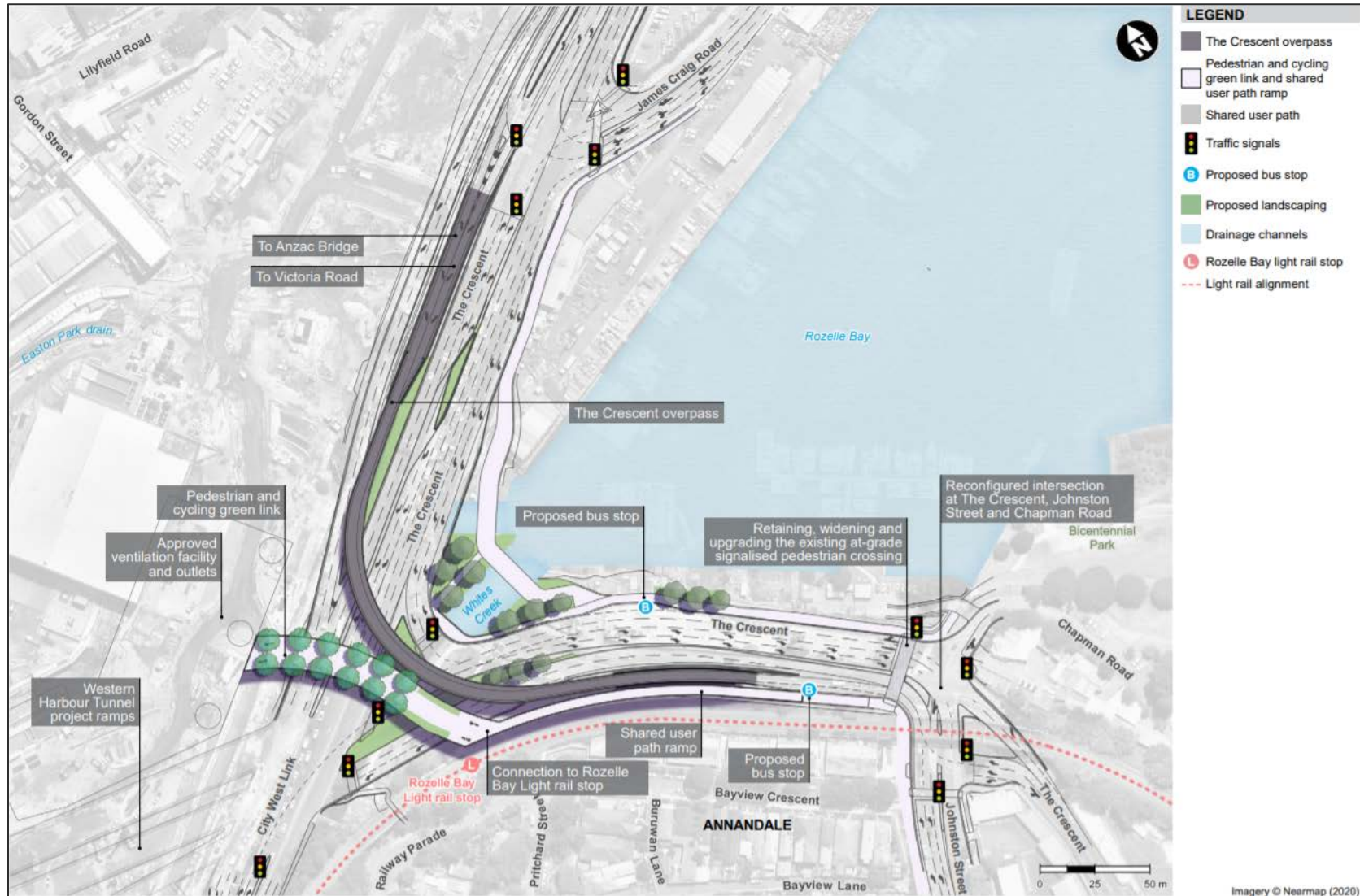
Based on issues raised in submissions regarding visual amenity and connectivity, the proposal went through a design change following exhibition (**Section 5.7**) and the Proponent now seeks approval for:

- a new elevated vehicular overpass over The Crescent to allow eastbound traffic heading north on The Crescent from Annandale to bypass the signalised intersection at The Crescent / City West Link junction and continue east on The Crescent towards Victoria Road and the Anzac Bridge (**Figure 4**);
- modifications to the eastbound lanes of the City West Link and The Crescent on either side of the intersection and northbound lanes on The Crescent at Annandale to provide space for the tie-in of the overpass;
- upgrades to the intersection of The Crescent / Johnston Street / Chapman Road;
- deletion of the approved pedestrian and cycling land bridge and construction of a new pedestrian and cycling green link further west, providing a connection between the future open space at the Rozelle Rail Yards and the Rozelle Bay light rail stop;
- a new shared user path ramp from the Rozelle Bay light rail stop along the western side of The Crescent;
- minor changes to the layout of the approach roads leading to the Anzac Bridge from Victoria Road, The Crescent and the Rozelle Interchange to improve traffic merging arrangements; and
- establishment of a construction ancillary facility (C6a) south of the intersection of James Craig Road and The Crescent, adjacent to Rozelle Bay.

### 2.1 The Crescent Overpass

The overpass would remove the existing at-grade right turn movement onto City West Link from The Crescent and would accommodate vehicles to travel east toward either the City or northern Sydney via the Anzac Bridge or connect to Victoria Road. The overpass would be approximately 240 metres in length with a road surface approximately nine metres above the ground. The overpass would have one traffic lane with a shoulder area provided on the inside curve. At its exit near James Craig Road, the overpass would diverge to two traffic lanes, one lane to access Anzac Bridge and one lane to access Victoria Road (northbound). Tie-in works associated with the new overpass would include lane reconfigurations and construction of retaining walls where the overpass starts and ends.

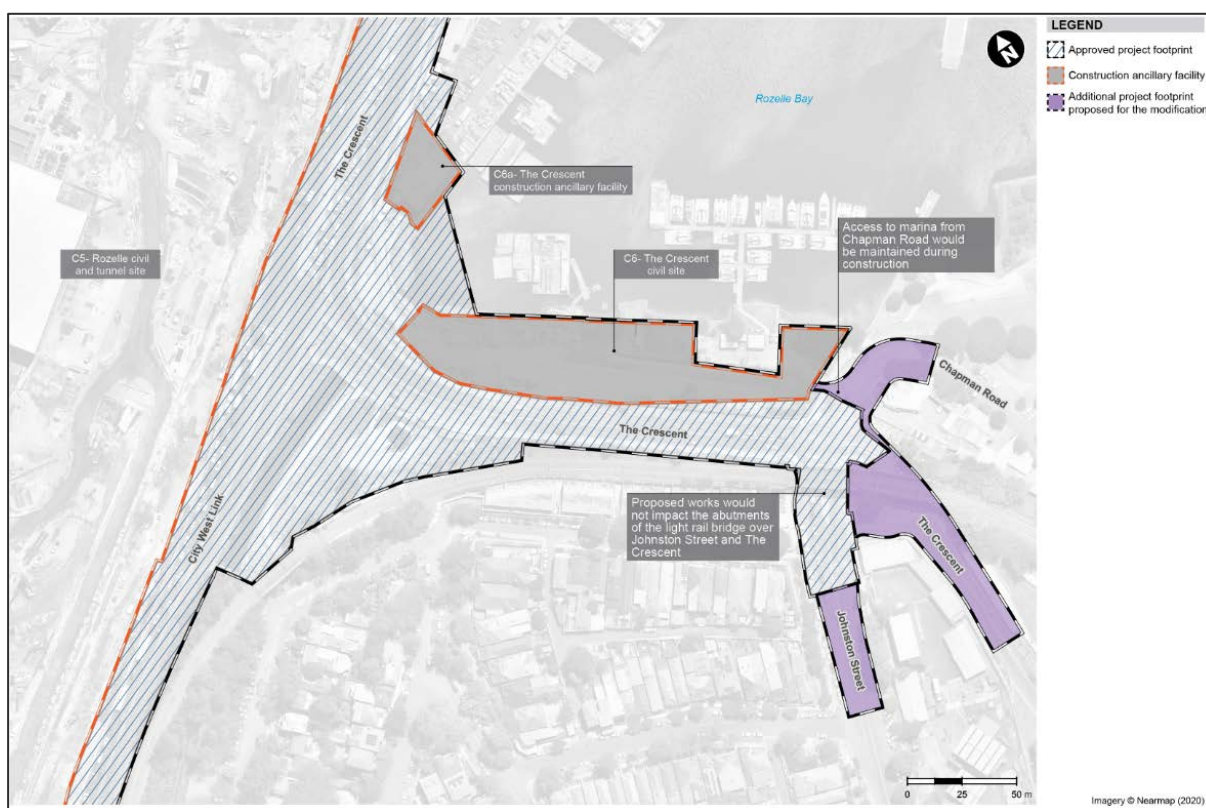




**Figure 4 | Proposed modification** (Source: Design Amendment Report)

## 2.2 The Crescent/Johnston Street/Chapman Road intersection

The introduction of the overpass would require upgrades and amendments to The Crescent, Johnston Street and Chapman Road, effectively extending the project footprint as shown in **Figure 5**. **Table 1** outlines the key proposed lane configurations.



**Figure 5 |** Additional construction footprint required (Source: Design Amendment Report)

**Table 1 |** New configurations at The Crescent / Johnston Street / Chapman Road

<p><b>For traffic travelling northbound along Johnston Street</b></p> <ul style="list-style-type: none"> <li>Two dedicated left turning traffic lanes into the northbound carriageways of The Crescent</li> <li>One dedicated through traffic lane into Chapman Road</li> </ul>
<p><b>For traffic travelling southbound along The Crescent (from the City)</b></p> <ul style="list-style-type: none"> <li>Two dedicated right turning traffic lanes into Johnston Street</li> <li>One dedicated through traffic lane continuing along The Crescent (southbound)</li> <li>One shared through/left turn traffic lane, allowing for through movements along The Crescent, and left turn movements into Chapman Road</li> </ul>
<p><b>For traffic travelling northbound along The Crescent (from Glebe)</b></p> <ul style="list-style-type: none"> <li>One dedicated left turning traffic lane into the southbound carriageways of Johnston Street</li> <li>Two dedicated through traffic lanes continuing along The Crescent via an S-shaped movement</li> <li>No direct right turn movements into Chapman Road (as per current arrangement)</li> </ul>
<p><b>For traffic travelling westbound along Chapman Road</b></p> <ul style="list-style-type: none"> <li>One shared through/left/right turn traffic lane allowing for through movements onto the southbound carriageway of Johnston Street or left turn and right turn movements onto the southbound and northbound carriageways of The Crescent</li> </ul>

The proposed upgrade works would include changes to the pedestrian crossing at The Crescent / Johnston Street / Chapman Road intersection as shown in **Figure 4**. The existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street would be widened to approximately six metres and have a paved surface to differentiate from the road surface, as well as construction of a central pedestrian refuge and installation of bicycle lanterns. A new signalised crossing is also proposed across Johnston Street (near Bayview Crescent).

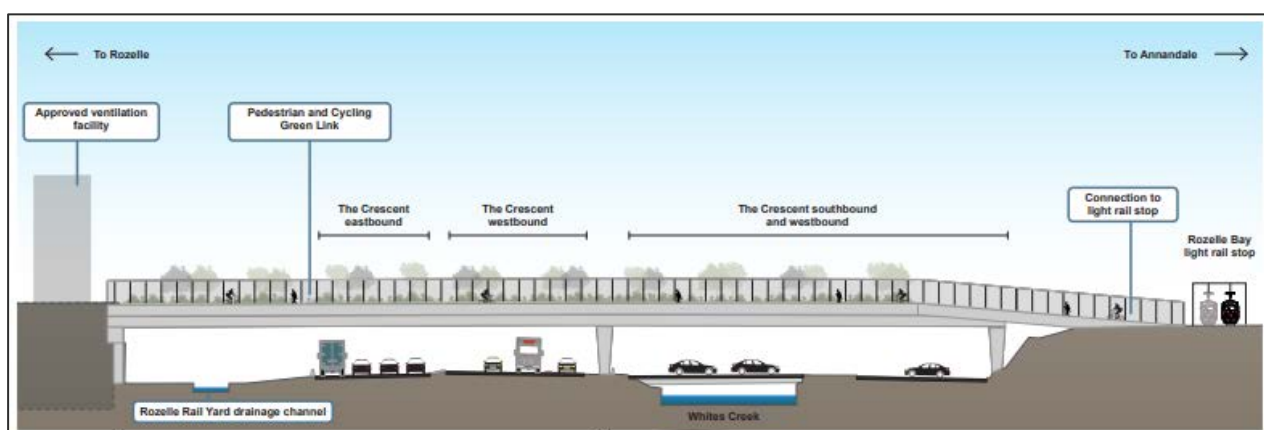
The proposed upgrade works at The Crescent / Johnston Street / Chapman Road intersection would result in temporary loss (during construction) of four parking spaces on the northern side of Chapman Road. These parking spaces would be reinstated in the vicinity of the existing location once construction is complete. The works would also result in the loss of two permanent on-street parking spaces at the very northern end of the northbound carriageway of Johnston Street.

### 2.3 Shared User Path – Eastern Side of The Crescent

A four-metre wide shared user path would be provided along the eastern side of The Crescent, parallel to the foreshore. The shared user path would connect directly to the bus stop on the eastern side of The Crescent and continue northwards crossing over the proposed utilities bridge that will span Whites Creek, eventually linking with the existing shared user path along James Craig Road which connects to the Anzac Bridge.

### 2.4 Pedestrian and Cycling Green Link

The approved pedestrian and cycling land bridge connecting the future open space area at the Rozelle Rail Yards with the Rozelle Bay foreshore and Rozelle Bay light rail stop would not be constructed as it would conflict with the proposed vehicular overpass. Instead, a pedestrian and cycling green link would be provided to the west of the intersection of The Crescent / City West Link, linking the future open space area with the Rozelle Bay light rail stop (see **Figure 4** and **Figure 6**).



**Figure 6 |** Indicative view of Rozelle Rail Yards pedestrian and cycling green link  
(Source: The Crescent Overpass Modification Report)

The proposed new pedestrian and cycling green link would be approximately 115 metres long, 15 metres wide and include a central shared user path. The bridge would include a diverse range of vegetation planting zones on either side such as shrubs and large established plantings. Vegetation

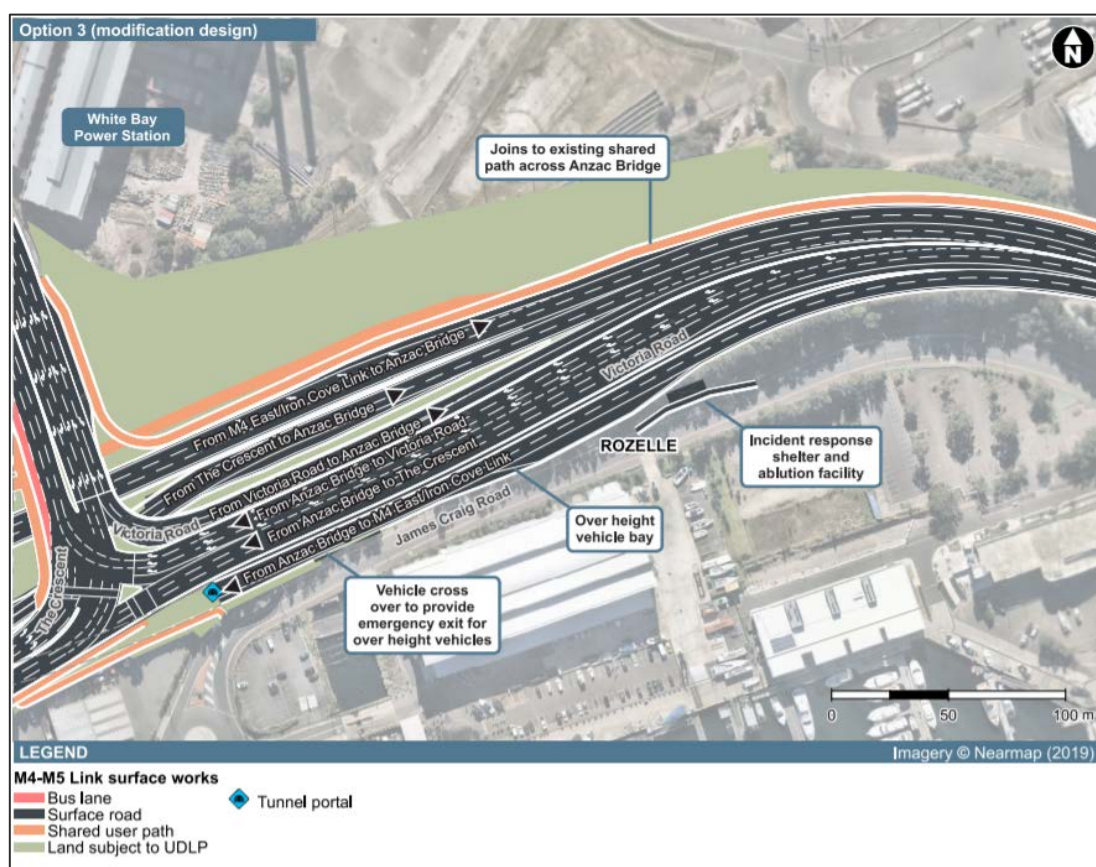


would not be included on approximately the southern 30 metres of the bridge as the structure needs to provide a ramp down to the Rozelle Bay light rail stop platform and the ramped structure is not able to provide the necessary soil depth required to support the continuation of tree planting.

A new 4.5 metre-wide shared user path ramp would descend from the pedestrian and cycling green link (at the Rozelle Bay light rail stop) to the at-grade footpath along the western side of The Crescent.

## 2.5 Anzac Bridge Approach Roads

The approach to Anzac Bridge from the west would be reconfigured. Three lanes from M4 East / Iron Cove Link would merge to two lanes, while two lanes from Victoria Road would merge to one lane and then would merge with two lanes from The Crescent (**Figure 7**). These lanes then would continue as four lanes on Anzac Bridge. This differs from the EIS, which had three lanes from M4 East / Iron Cove Link / M4, one lane from The Crescent and one lane from Victoria Road merging into four lanes on Anzac Bridge. The modified layout eliminates the zipper merge proposed in the EIS design.



**Figure 7 |** Road approaches to Anzac Bridge (Source: The Crescent Overpass Modification Report)

## 2.6 The Crescent Construction Ancillary Facility (C6a)

A construction ancillary facility would be established on the south side of The Crescent to the west of James Craig Road and adjacent to Rozelle Bay. This site is currently used as a minor construction ancillary facility. The site would be used for light vehicle parking for workers (around nine spaces) and as a materials laydown area.



## 2.7 Construction Activities

### Construction hours

Work would be undertaken in accordance with the construction hours set out in the Infrastructure Approval (7:00 am to 6:00 pm, Monday to Friday and 8:00 am to 6:00 pm on Saturday). Although most works would be undertaken during standard construction hours, a number of works would be required to be undertaken outside of these hours as they require traffic lane closures.

### Construction program

Construction on the modified design is proposed to commence in 2021 and be completed by Q2 2023. The indicative construction program for the proposed modification is outlined in **Table 2**.

**Table 2 |** Indicative construction program for the proposed modification

Construction Activity	2020				2021				2022				2023			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Site establishment and enabling works																
The Crescent Overpass construction																
Pedestrian and Cycling Green link																
The Crescent/Johnston Street/Chapman Road intersection upgrade																
Finishing works																
Anzac Bridge approach roads																



## 3. Strategic Context

### 3.1 The Project

WestConnex is identified in *Future Transport Strategy 2056* and the supporting plan *Greater Sydney Services and Infrastructure Plan*. The motorway program is expected to deliver broad economic benefits to NSW in the order of \$24.3 billion over its lifespan through improved access to and reliability of the motorway network.

The *State Infrastructure Strategy 2018-2038* identifies the importance of WestConnex in improving intercity and intracity general and freight transport connections and providing improved travel time and increased network capacity.

The WestConnex program of works is covered by the *Central City District Plan* and *Eastern City District Plan* (Greater Sydney Commission, 2018) and is consistent with the district priorities for a productive city by improving access to employment and increasing efficiency of freight movements.

### 3.2 The Modification – Alternatives and Option Selection

In order to improve intersection performance on the congested section of the road network at the City West Link / The Crescent and at The Crescent / Johnston Street / Chapman Road intersections, and improve capacity to maintain performance with traffic generation from future development (including the proposed Western Harbour Tunnel project), options relating to the following design elements were explored:

- The Crescent / City West Link intersection;
- the alignment of pedestrian and cycling infrastructure; and
- The Crescent / Johnston Street / Chapman Road intersection.

Construction of an underpass was explored for The Crescent / City West Link intersection. This option was not progressed based on geotechnical and engineering constraints. An underpass tunnel would need to dive below existing drainage infrastructure at Whites Creek as well as the drainage channel from the Rozelle Rail Yards and be near Rozelle Bay. This, combined with high groundwater levels, would result in potential groundwater inflow into the underpass. The surrounding fill material would also pose a risk to the structural integrity of an underpass. Tunnelling in this vicinity would also require the relocation of utility infrastructure, in particular it would require an existing Ausgrid high voltage cable to be relocated with significant implications for the construction program (up to three years).

An at-grade intersection was also assessed but discounted on the basis that it would not provide adequate intersection performance or capacity to handle traffic from future development. Also, this option would result in widening of the road carriageway into adjacent open space areas to the north within the Rozelle Rail Yards and to the east along the foreshore of Rozelle Bay.

The provision of an overpass means that the approved land bridge cannot be built as it would conflict with the overpass. Options for providing connectivity between the future open space at the Rozelle Rail Yards with the Rozelle Bay foreshore and Rozelle Bay light rail stop were investigated as part of the modification application, and a preferred option comprising a shared pedestrian and cycling green link to the west of the overpass and an eastern horseshoe-shaped shared user path was proposed. This was then amended to remove the horseshoe-shaped shared user path based on community feedback during the exhibition of the modification application.

The proposed amended design (assessed in this report) is consistent with the intent of the approved project which was to provide an active transport link between the future open space at the Rozelle Rail Yards, the Rozelle Bay foreshore and Rozelle Bay light rail stop.

The proposed modification is consistent with the NSW strategic planning policy framework, and the policies and plans which apply to the overall project (**Section 3.1**) also apply to the proposed modified works. The Department is satisfied that the Proponent has demonstrated that the modified proposal is justified and provides an acceptable balance between traffic imperatives and connections between the Rozelle Rail Yards open space and Rozelle Bay.



## 4. *Statutory Context*

### 4.1 Scope of Modifications

In accordance with section 5.25 of the EP&A Act, a proponent may request the Minister to modify an approval for State significant infrastructure. The Minister's approval for a modification is not required if the infrastructure as modified will be consistent with the existing approval. The proposed changes to the M4-M5 Link project are not consistent with the existing approval. Consequently, modification of the Minister's approval under section 5.25 of the EP&A Act is required.

### 4.2 Minister's Approval and Delegations

Under the Instrument of Delegation dated 11 October 2017, the functions and powers of the Minister for Planning under section 5.25 of the EP&A Act to determine a modification of the Minister's approval have been delegated where:

- the relevant local council has not made an objection;
- a political disclosure statement has not been made; and
- there are less than 25 public submissions in the nature of objections.

Nine hundred and four submissions in the nature of objections were received from the public on the original modification application and a further 215 objected to the amended design. In addition, Inner West Council and City of Sydney objected to the modified proposal. As such, the Minister's delegation cannot be used, and the Minister is the approval authority.





## 5. Engagement

### 5.1 Department's Engagement

Under section 5.28(1)(g) of the EP&A Act, the Planning Secretary is required to make requests for modifications of approvals determined by the Minister publicly available. The Department considered that the modification application has the potential to impact additional residents in Rozelle as well as introduce new impacts (construction and operational noise and vibration), and consequently determined to publicly exhibit the modification request. The modification application was publicly exhibited for 35 days from 21 August 2019 to 25 September 2019.

The Modification Report was made publicly available on the Department's website and electronically available at NSW Service Centres. The Modification Report was also publicly available at the following locations:

- Transport for NSW (Roads and Maritime Services) - 20-44 Ennis Road, Milsons Point;
- City of Sydney Council - Town Hall House, Level 2, 456 Kent Street, Sydney;
- Inner West Council Leichhardt Customer Service Centre - 7-15 Wetherill Street, Leichhardt;
- Glebe Library - 186 Glebe Point Road (corner Wigram Road), Glebe;
- Balmain Library - 370 Darling Street, Balmain; and
- Leichhardt Library - Piazza Level, Italian Forum, 23 Norton Street, Leichhardt.

The Department advertised the exhibition in the Sydney Morning Herald, Daily Telegraph and Inner West Courier.

The modification request was referred to the following government agencies for comment:

- Inner West Council;
- City of Sydney;
- Environment Protection Authority (EPA);
- Office of Environment and Heritage (OEH);
- NSW Department of Primary Industries (DPI);
- Port Authority of NSW;
- Department of Planning, Industry and Environment – Water (DPIE Water);
- Department of Planning, Industry and Environment – Crown Lands (Crown Lands);
- NSW Health; and
- Sydney Water.

The Department undertook a site inspection to better understand the characteristics of the local environment and understand the issues raised in submissions by the community, Councils and government agencies.

The Department met with community representatives from Annandale in September 2019 and March 2020 to discuss the proposed modification. The main issues raised were loss of connectivity, place making and impacts of the proposed modification on visual amenity.

## 5.2 Summary of Submissions

During the exhibition period, a total of 1,278 submissions were received, including nine from public authorities, 24 from organisations and 1,245 from the public. City of Sydney and Inner West Council both objected to the proposed modification. A total of 904 community members and organisations objected to the proposal.

## 5.3 Key Issues – Government Agencies

**Port Authority of NSW** requested that it be consulted on measures to mitigate construction impacts to port-related traffic. It objected to the proposed removal of the right turn movement from The Crescent to James Craig Road (eastbound) for vehicles coming from Annandale and along the east-west arm of The Crescent, as this removes existing access to the port and adjacent Transport for NSW owned land along the north side of Rozelle Bay from this direction. Additional information was requested on the existing and predicted number and types of vehicles using the current access route via The Crescent from the south to access James Craig Road.

**Environment Protection Authority (EPA)** noted the proposed construction works will be most noticeable from the residents to the west in Annandale and have advised that community engagement and the provision of respite from occasional night works would be an important mitigation measure. EPA reiterated that mitigation of noise at the source and from pathways is preferred over at-property treatments.

**NSW Health** requested for the Building Better Health guidelines be referenced and that all reasonable and feasible action should be taken to minimise noise exceedances. NSW Health requested that more stringent mitigation measures be included for construction fatigue and any worsened air pollution as a result of the proposed modification.

OEHL, Department of Planning Industry and Environment – Natural Resources Access Regulator (including DPIE Water and Crown Lands) and the former DPI advised that they had no comments.

## 5.4 Key Issues – Local Councils

**Inner West Council** stated there was insufficient justification for the proposed modification and that it is inconsistent with the Proponent's commitment to locate the entire Rozelle/Lilyfield interchange underground. Council stated that resolving traffic issues at the intersection of The Crescent and City West Link would cause congestion problems at other points in the road network, including on the Western Distributor and Victoria Road, and recommended that the Proponent assess the impact of the additional vehicles diverting to other roads such as Johnston Street.

Council expressed concern that the proposed modification would result in worsened and less safe conditions for pedestrians and cyclists due to the longer distances that would need to be traversed, steep climbs along shared user paths, and the location of the shared paths adjacent to widened roads with high traffic volumes. Concerns regarding the inefficient and unsafe proposed multiple crossings at The Crescent / Johnston Street / Chapman Road were also raised. Council expressed dissatisfaction with the proposed design stating that not only did it reduce connectivity but that the elevated structures are not sensitive to the local context and result in adverse visual impacts. Council recommended a peer review process of the design be undertaken.

Council recommended the Proponent should offer voluntary property acquisition to residents experiencing noise disturbance as a result of the additional construction noise and vibration impacts of the expanded project footprint.

**City of Sydney** raised concern that the proposal would induce traffic and give priority to vehicle movements resulting in reduced pedestrian and cyclist accessibility and impacts to residential amenity. It also expressed concerns over the cumulative visual impact of the modified design as well as operational and construction noise impacts on local residents.

Further concerns regarding the impact of the reconfiguration of the intersection of The Crescent and Johnston Street on the quality of pedestrian connectivity between Bicentennial Park and the surrounding area were raised. City of Sydney indicated that the proposed changes to the intersection at The Crescent/ Johnstone Street/ Chapman Road disadvantages pedestrians from Annandale and requested the Proponent provide updated journey times and delays for pedestrians accessing the intersection.

City of Sydney recommended changes to the design of the proposed pedestrian and cycling green link to make it safer for pedestrians and cyclists. It criticised the design of the horseshoe-shaped shared user bridge, particularly its length, width, and long inclines and declines and raised potential security concerns due to lack of passive surveillance.

## 5.5 Key Issues – Community

Key issues raised by the community and special interest groups are listed below. Further details of the issues raised in submissions are provided for each of the key assessment issues in **Section 6**.

### Strategic context and justification

- Lack of justification for the proposed modification.
- The modification would result in limited traffic improvements and induce traffic.
- The proposed modification provides only traffic improvements without improvements to other environmental and social aspects.
- The proposed modification is not consistent with NSW Government strategic plans and policy, in that it prioritises motor vehicles over public transport, reduces connectivity to public transport, community facilities and public open spaces.

- The elevated overpass is not consistent with the government's commitment of minimising visual impacts associated with the M4-M5 Link through placing roads underground.

#### Urban design and visual amenity

- Lack of consideration of the urban fabric with the proposed overpass and horseshoe-shaped shared user bridge being inconsistent with the existing character of the neighbourhood.
- Lack of consideration of amenity and pedestrian and cycling connectivity in the design.
- The overpass should be replaced with an underpass to reduce visual impacts.
- The height of the proposed overpass disregards local development standards.
- The proposed overpass and the shared user path bridge are visually intrusive and obstruct views towards Rozelle Bay, Anzac Bridge and the city skyline.
- The proposed urban design for the southern portion of the pedestrian and cycling green link adjacent to the Rozelle Bay light rail stop was not satisfactory.
- The proposed overpass and pedestrian ramp between Rozelle Bay light rail stop and The Crescent obstructed views of The Crescent mural which has heritage value.

#### Connectivity and active transport

- Increased travel times for pedestrians and cyclists, increased path distances and additional number of crossings.
- The proposed pedestrian and cycle paths are too narrow and likely to result in collisions. There is a need for separate pedestrian and cyclist paths both on the green link and the at-grade footpaths along The Crescent.
- The removal of the existing at grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street would significantly impact on pedestrian/cycling connectivity between Annandale and the foreshore and pedestrian/cycling safety.

#### Traffic, access and parking

- Inadequate assessment of traffic impacts.
- The removal of the right turn movement from Johnston Street to The Crescent (southbound) would detrimentally impact local connectivity.
- Inability for motorists using the overpass to turn right from The Crescent (eastbound) into James Craig Road.
- Worsened operational intersection traffic performance and travel times for motorists.
- Loss of parking along Johnston Street and Chapman Road.

#### Noise and Vibration

- Construction noise and vibration.
- General increase in noise from additional traffic once the overpass is operational.

Other issues included potential construction and operational air quality impacts, impacts to potential heritage items in the vicinity, inadequate consultation on the proposed modified design and inadequate consideration of issues raised by the community.

## 5.6 Response to Submissions

Following completion of the public exhibition period, the Department directed the Proponent to prepare a response to the submissions received. The Proponent's Response to Submissions Report (RtS) was made publicly available on the Department's website on 29 April 2020.

## 5.7 Amendment Report

Based on concerns raised in submissions from the community, local government and the Department on the design of the overpass, proposed pedestrian and cycling green link and horseshoe-shaped shared user bridge, including the impact on connectivity, visual amenity and the safety of pedestrians and cyclists, the Proponent revisited the design.

The design review process involved meetings with the Department, an independent design review process through the Government Architect's Office, and consultation with community groups and key stakeholders (e.g. Bicycle NSW). The amended design was documented in an Amendment Report and included:

- removal of the proposed horseshoe-shaped shared user bridge between the future open space at the Rozelle Rail Yards and the eastern side of The Crescent;
- enhancing the design of the southern section of the pedestrian and cycling green link to improve its amenity and interface with the Rozelle Bay light rail stop;
- increasing the width of the ramp from the Rozelle Bay light rail stop to the at-grade footpath along the western side of The Crescent to 4.5 metres to allow for shared use by pedestrians and cyclists;
- retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street and Chapman Road, including the introduction of paving treatments and bicycle lanterns;
- lowering the height of the proposed overpass by around two metres at its apex to a similar height to the pedestrian and cycling green link; and
- retaining the right-hand turn movement from Johnston Street to The Crescent (southbound).

### 5.7.1 Exhibition of Amendment Report

The Amendment Report was placed on exhibition from 29 April to 13 May 2020 on the Department's website to enable the community to review and provide comment on the amended design.

The Department advertised the exhibition in the Sydney Morning Herald and Daily Telegraph.

A total of 251 submissions were received, including 242 from members of the community, four from interest groups, one from the Member for Balmain and four submissions from public authorities. Of the community submissions received, eight submissions were in support, 215 objected and 28 provided general comments that were supportive of some or all of the changes in the revised design but had suggestions about further design changes.



## 5.7.2 Key Issues Raised in Submissions on the Amendment Report

### Government Agencies

**NSW Health** indicated support for the proposed amendment, including the proposal to extend the noise treatment zone to include additional residences affected by out-of-hours construction works.

**EPA** indicated that it did not have any further comment to make in addition to the advice previously provided in its submission on the original modification application.

### Local Councils

**Inner West Council** stated that it was pleased to see the changes to the proposal but confirmed its position that it opposes motorways and the proposed modification to increase road capacity in Annandale. It stated that the modification does not adhere to strategic plans and policy that focus on active transport connections and reduced car dependency. Inner West Council expressed concerns over the proposed crossing at The Crescent / Johnston Street / Chapman Road potentially resulting in large groups of people including school groups, families, scooters and bicycles waiting at this corner. Council requested the opportunity to be involved in the urban design and landscape planning process prior to TfNSW publicly exhibiting the urban design and landscape plan for the M4-M5 Link.

**City of Sydney** restated its opposition to WestConnex and expressed concerns over induced traffic, and that the proposal would impact on the sense of 'place' of the surrounding streets and result in increased construction noise and vibration due to the enlarged project footprint. It also expressed concern that the proposal does not provide adequate active transport links to open space areas and the proposed at grade and grade separated solution poses a significant safety issue for pedestrians and cyclists.

### Community

Key issues raised by the community and special interest groups on the amended design included:

- reinstatement of the horseshoe-shaped shared user path;
- need for the shared user path ramp and green link to be widened to allow for pedestrians and cyclists to be separated;
- need for provision of adequate waiting space and regular light sequencing for pedestrians and cyclists waiting to use the at-grade signalised crossing of The Crescent at the corner of Johnston Street to avoid delays, queuing and bottlenecks;
- paths widths to be increased to allow separation of pedestrians and cyclists and promote social distancing;
- inadequate community involvement in the revised design process;
- insufficient information to enable appropriate review and comment on the design;
- revised design lacks creativity with respect to visual treatments, urban design and sustainability considerations;
- need for improved landscaping treatments and the inclusion of public art, especially along the green link;
- potential noise and visual impacts at residents due to the proximity to the overpass

- the elevated view for pedestrians and cyclists from the green link toward the city and Rozelle Bay would be compromised by the overpass; and
- changes to active transport links will discourage businesses from relocating to this area.

### 5.7.3 Response to Submissions on Amendment Report

Following completion of the public exhibition period, the Department directed the Proponent to respond to the submissions received. The Proponent's response was made publicly available on the Department's website on 4 June 2020.



## 6. Assessment

The Department in its assessment of the project considered submissions received on the Modification Report and Design Amendment Report and identified the key issues as traffic and transport, noise and vibration, and design and public space (active transport, urban design and visual amenity) (**Sections 6.1 to 6.3**). Other issues are discussed in **Section 6.4**.

### 6.1 Traffic, Transport and Access

#### 6.1.1 Construction

##### Issues

##### Traffic volumes and flows

Construction works associated with the proposed modification will not result in any discernible increase in construction traffic volumes above those stated in the EIS as the original proposal had a substantial land bridge at this location. The proposed construction ancillary facility (C6a) on the southern side of The Crescent, adjacent to Rozelle Bay and to the east of City West Link and The Crescent intersections, would have minimal impact on traffic flows with traffic being managed in accordance with construction traffic management plans.

##### Parking

Construction of the proposed overpass would require four parking spaces at the western end of Chapman Road to be temporarily removed in order to facilitate the use of the C6 civil site. Following the completion of construction, these spaces would be reinstated at a location close to their current position. The upgrade of the intersection of The Crescent / Johnston Street / Chapman Road would result in the loss of two permanent on-street parking spaces at the very northern end of the northbound carriageway of Johnston Street.

##### Access

Local access to 300 Johnston Street would be within the construction zone for the proposed The Crescent / Johnston Street / Chapman Road intersection upgrade. Consequently, there is potential for access to be impacted.

##### Submissions

##### Community and interest groups

Key issues raised in community and public interest group submissions regarding construction traffic and transport include:

- disruptions and safety concerns for residents, pedestrians and cyclists;
- increased construction traffic including heavy vehicles; and

- changed traffic arrangements affecting visitors to local businesses.

#### Government agency and council submissions

**Port Authority of NSW** raised concern regarding the potential traffic impacts on James Craig Road and The Crescent intersection, in particular additional impacts from the proposed works and other larger civil works required in the vicinity and the proposed construction ancillary facility (C6a). Consequently, it requested that measures to mitigate construction impacts to port-related traffic be developed in consultation with Port Authority.

#### **Consideration**

Construction traffic impacts will be unavoidable along City West Link / The Crescent and Johnston Street as the proposed modification will require changes (e.g. lane closures and lane swaps) to the surface road network. In addition, lane closures will be required at times that facilitate road and utility works and the construction of the overpass and green link. However, the majority of works would be undertaken within the existing approved project footprint and are of a scale which will not result in any significant increase in construction traffic impacts over those detailed in the EIS. The impacts will be managed through standard traffic management measures aimed at safely directing and guiding traffic through the work zone as committed to by the Proponent, and in the conditions of the Infrastructure Approval including the preparation and implementation of a Construction Traffic, Transport and Access Management Plan.

The proposed construction ancillary facility (C6a – refer **Figure 5**) would be accessed from The Crescent and accommodate nine worker parking spaces as well as small delivery vans and rigid truck movements throughout the working day (average 2 trucks per day). Due to the low number of vehicles accessing the site, traffic from this facility would have a negligible impact on the surrounding road network including The Crescent and City West Link.

Regarding community concerns about safe access, the Infrastructure Approval included a number of requirements aimed at safeguarding the community including maintenance of safe pedestrian and cycling access around work sites during construction, and the development and implementation of a Construction Traffic, Transport and Access Management Plan.

The Proponent has committed to maintaining access to 300 Johnston Street and should temporary changes to driveway access be required, this would be done in consultation with the land owners/occupiers. The Department is satisfied with this approach, noting that should access be physically impacted the Infrastructure Approval requires impacted driveways to be reinstated to at least an equivalent standard.

The Department is satisfied with the Proponent's proposal to continue to engage with the Port Authority of NSW to address potential construction impacts (both works and construction traffic) on port-related traffic through the Traffic Coordination Group established for the Rozelle Interchange as part of the Construction Traffic, Transport and Access Management Plan.



## 6.1.2 Operational Traffic

### Issue

Operation of the proposed overpass will require changes to the lanes on The Crescent, upgrades to the intersection of The Crescent / Johnston Street / Chapman Road and slight changes to the approach roads leading to the Anzac Bridge from The Crescent and Victoria Road (as compared to the EIS design).

#### Traffic volumes

The proposed overpass would allow eastbound traffic heading north on The Crescent from Annandale to bypass the signalised intersection at The Crescent / City West Link junction and continue east on The Crescent towards Victoria Road and the Anzac Bridge. The modelling predicted around 17,500 vehicles per day would use the proposed overpass in 2023 and 19,000 would use it in 2033. In addition, an extra 2,500 vehicles per day on Johnston Street is forecast (northbound) for both 2023 and 2033. The increases on Johnston Street would mainly occur in off peak periods with approximately 70-90 additional vehicles northbound vehicles during each of the AM and PM peak periods.

#### Network performance

The modelling results indicate an improvement in the network performance during the AM peak period in 2023 when compared to the EIS model, while the 2033 cumulative scenario shows that network performance metrics (travel times, intersection performance and queue lengths) are comparable to the EIS. The overall network performance metrics for the cumulative 2023 and 2033 PM peak periods are comparable to the EIS models.

#### Intersection performance

In the AM peak for 2023 and 2033, the performance of each of the relevant intersections (Level of Service (LoS) rating with A representing the best operating conditions and F the poorest) is forecast to be comparable or better when compared with the EIS. The most noticeable improvement is at the Victoria Road / Robert Street intersection in the 2033 AM peak hour, which is forecast to improve from LoS F to LoS C. In the 2023 PM peak hour, most intersections are forecast to perform the same or better when compared with the EIS. The only intersection predicted to operate at a lower LoS when compared to the EIS modelling results is the Victoria Road / Darling Street intersection (PM peak, 2033) which is forecast to perform at a LoS E (compared to the EIS forecast LoS D) due to a higher total intersection demand.

The existing crossing at The Crescent / Johnston Street / Chapman Road Intersection will be retained and upgraded. In addition, the right turn movement from Johnston Street to The Crescent (south) will be retained. The retention of the crossing and right-hand turn movement will result in an intersection LoS similar to that predicted for the approved modified design in the EIS (see **Table 3**). However, the LoS is poorer when compared to the original design which removed the crossing and right turn movement. Reinstatement of this turn was a priority for both the Department and the community.

**Table 3** | The Crescent / Johnston Street / Chapman Road intersection performance (Source: Design Amendment Report)

Year	Peak Hours	EIS LoS	Modification LoS	Revised Design LoS
2023	AM Peak	C	B	C
	PM Peak	F	C	E
2033	AM Peak	C	C	C
	PM Peak	F	E	F

Queue lengths along The Crescent, Johnston Street and Chapman Road would significantly reduce in the AM peak period in 2023 and 2033 (**Table 4**). There is also a marked improvement in the AM and PM peak periods for 2023 and 2033 along The Crescent (south) and Johnston Street.

**Table 4** | Comparison of queue lengths from EIS, modification and amended design (Source: Design Amendment Report)

Year	Peak Hours	EIS Average queue (m)	Modification Average queue (m)	Revised Design Average queue (m)
2023 AM Peak	The Crescent (S)	329	55	50
	Chapman Road	17	3	2
	The Crescent (N)	191	30	45
	Johnston Street	128	17	25
2033 AM Peak	The Crescent (S)	330	116	154
	Chapman Road	18	3	2
	The Crescent (N)	187	37	55
	Johnston Street	154	22	32

#### Movements to / from James Craig Road

Vehicles using the overpass will not be able to access the at-grade right turn movement onto James Craig Road due to the proposed lane configurations, which direct traffic from the overpass to Anzac Bridge or Victoria Road.

#### Parking

The modified design will result in the permanent loss of two parking spaces at the northern end of Johnston Street.

#### **Submissions**

##### Community and interest groups

Key issues raised in community and interest group submissions regarding operational traffic and transport include:

- no access to right hand turn into James Craig Drive for vehicles using the overpass;
- the modification would induce traffic demand, increasing congestion and attracting more traffic into the immediate and surrounding suburbs;
- no road safety audit conducted; and

- worsened operational intersection traffic performance and travel times for motorists.

#### Government agency and council submissions

**City of Sydney** raised concerns that the modification is likely to induce traffic and was of the opinion that the traffic modelling outputs for the WestConnex project are invalid and traffic induction on local streets such as Johnston Street could be significantly higher. Council questioned if bus shelters would be provided on The Crescent.

**Inner West Council** expressed concern that the proposed modification would cause an increase in traffic and congestion on the Western Distributor, Victoria Road, Johnston Street and the Annandale neighbourhood centre. Council requested for bus shelters to be provided along The Crescent.

**Port Authority of NSW** expressed concern regarding the methodology used to indicate the number of and types of vehicles using the current access road via The Crescent (northbound) and the inability for traffic to make a right-hand turn into James Craig Road from the overpass.

#### **Consideration**

##### Network performance

There is a need to improve capacity at the City West Link / The Crescent and The Crescent / Johnston Street / Chapman Road intersections so that performance of the local road network can be maintained once the M4-M5 Link is complete, and to accommodate traffic generation from future development proposed in the vicinity of the project, including the Western Harbour Tunnel, if approved. The Department considers that the modifications to the intersections, and provision of the overpass, will facilitate improved operational traffic outcomes at the Rozelle Interchange.

Proposed changes to the layout of approach roads to Anzac Bridge are necessary to improve traffic merging arrangements and safety. The changes recognise altered volumes and priority of traffic as a result of the introduction of traffic from the M4-M5 Link tunnels, including the Iron Cove Link, as well as predicted traffic flows from other upstream sections of the road network. The configuration of approach lanes also takes into consideration the operation of the buses on Victoria Road/Anzac Bridge.

Inner West and City of Sydney Council both expressed concern that the modified design will induce traffic and worsen network performance. The modelling results indicate that this is not the case and that overall network performance would be improved by comparison to the design presented in the EIS. Increases in vehicle numbers on Johnston Street are estimated to be less than 10 per cent with less than four and one per cent increases predicted on The Crescent (south) and the Anzac Bridge. These increases are not considered significant and would have minimal impact on traffic performance and safety on these roads given the existing traffic volumes.

The Proponent will continue to minimise potential traffic impacts on the surrounding road network through the preparation of a road network performance review prior to operation, as required by the Infrastructure Approval. The Infrastructure Approval also requires the Proponent to undertake an operational road network performance review within 12 months of, and five years after, the commencement of operation.

### Intersection performance

As noted above, the LoS at the majority of intersections is predicted to be comparable or better when compared with the design presented in the EIS. The Department acknowledges that the amended design would result in a reduced level of performance at The Crescent / Johnstone Street / Chapman Road intersection when compared to the modified design presented in the Modification Report. However, this decrease in performance is outweighed by the benefits that would be achieved by retaining both the pedestrian crossing at the intersection of The Crescent / Johnston Street and right-hand turn onto The Crescent from Johnston Street. Further, the amended design would result in significant reductions in queue length along The Crescent and Johnston Street.

### Movements to / from James Craig Road

The proposed modification would remove the ability for motorists using the overpass to turn right from The Crescent (eastbound) into James Craig Road. It is not possible to allow traffic from the overpass to make the right turn movement as it would require motorists to cut across multiple lanes of traffic within a short distance on exiting the overpass. This would pose a high risk of collisions and block free flowing traffic movements from the overpass along The Crescent onto Victoria Road. The Department notes alternate routes are available, including:

- accessing City West Link further to the west and then turning right into James Craig Drive, or
- accessing Anzac Bridge further to the east and then turning left into James Craig Road.

The Department also notes that a metro stop is proposed near the former White Bay Power Station at Rozelle as part of Sydney Metro West, which would also provide access to Glebe Island.

Motorists originating from the west using City West Link can still turn right into James Craig Drive from The Crescent (eastbound). Motorists originating from the east or north using Anzac Bridge or Victoria Road can turn left into James Craig Road.

### Public transport

The existing northbound bus stop will be relocated along The Crescent between Johnston Street and City West Link around 80 metres south of its existing location consequent to the overpass. The stop will be an indented bus bay to avoid impeding traffic movements. The risk of a crash from vehicles turning left at Johnston Street onto The Crescent when buses pull in and out of the bus bay is considered low as vehicles making this left turn are likely to be travelling at a slow speed which reduces stopping distance requirements.

The Proponent has indicated that there is limited space within the footpath reserve along The Crescent to provide bus shelters. However, it would investigate the feasibility of providing shelters.

### Parking

The Department accepts that the loss of the two parking spaces at the northern end of Johnston Street is unavoidable consequent to the intersection upgrade in this location and that no other sites are available within the immediate vicinity to offset this impact.



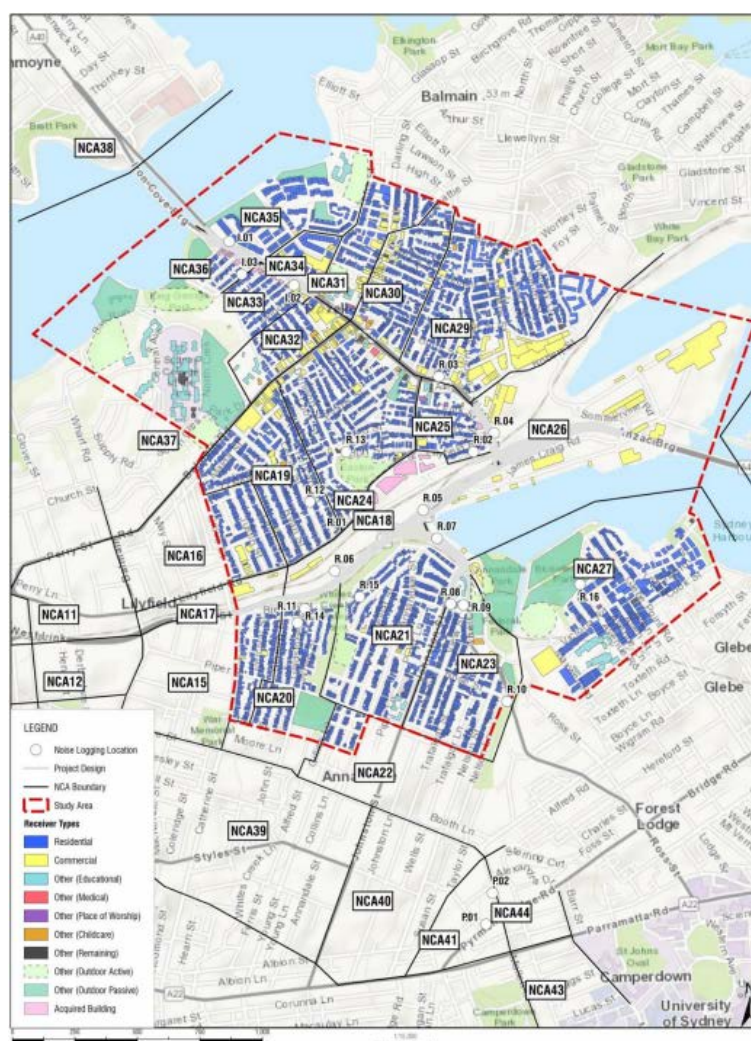
## 6.2 Noise and Vibration

### Issue

#### Construction noise

Although the majority of construction activities are proposed to be undertaken during standard construction hours (7:00 am to 6:00 pm, Monday to Friday and 8:00 am to 6:00 pm on Saturday), out-of-hours works will be required for the delivery of oversized material, plant and equipment and bridgeworks, including craneage and erection of bridge beams and precast deck units.

The modelling results indicate that noise management levels (NMLs) would be exceeded during the day (7:00 am – 6:00 pm), evening (6:00 pm -10:00 pm) and night-time (10:00 pm – 7:00 am) periods primarily at residences and commercial premises adjacent to the construction of the overpass and green link and upgrade of The Crescent / Johnston Street / Chapman Road intersection. The most affected residents are located in Noise Catchment Area NCA21 (**Figure 8**) where residents are as close as 30 metres from works associated with the construction of the overpass and green link. They are also near The Crescent / Johnston Street / Chapman Road intersection upgrade works. **Table 6** sets out the predicted noise exceedances (worst-case noise levels) in NCA 21.



**Figure 8 | Noise catchment areas**  
(Source: The Crescent Overpass Modification Report)

**Table 5 | Predicted worst-case construction noise exceedances**  
(Source: The Crescent Overpass Modification Report)

Source: The Crescent Overpass Modification Report

NCA	NML dB(A)	Overpass / Green Link					The Crescent / Johnston Street / Chapman Road intersection upgrade	
		Piling Work dB(A)	General earthworks dB(A)	Bridge works dB(A)	Concrete works dB(A)	Roadworks dB(A)	General earthworks dB(A)	Roadworks d(BA)
Residential – Standard Daytime								
NCA21	58	75	78	73	68	72	80	77
Residential - Evening								
NCA21	53			73				77
NCA23	50							57
Residential – Night time								
NCA21	47			73				77
NCA23	41			44				57

Bridge works associated with the construction of the overpass and green link and roadworks associated with upgrade to The Crescent / Johnston Street / Chapman Road intersection would result in noise levels above the sleep disturbance criteria at over 200 residents.

#### Construction vibration

Proposed construction works have the potential to create vibration impacts at adjoining residences, due to the use of jackhammers, vibratory rollers and rockbreakers and piling activities. Construction of the overpass and green link would potentially impact adjoining residents when compared to the approved land bridge as these structures would be located closer to residences.

A number of buildings have been identified as being within the minimum working distance for vibration generating activities as follows:

- up to 22 buildings for The Crescent overpass, green link and shared path user bridge works;
- one building for The Crescent civil site (C6) works; and
- up to 15 buildings for The Crescent, Johnston Street and Chapman Road intersection works.

In addition, there are a number of buildings within the nominated minimum working distance for human comfort vibration:

- 53 buildings for The Crescent overpass, green link and shared path user bridge works;
- two buildings for The Crescent Civil site (C6) works; and
- 43 buildings for The Crescent, Chapman Road and Johnston Street intersection works.

#### Operational noise

The elevated overpass is predicted to increase traffic noise levels by up to 1.5 dB(A) at adjacent properties along Bayview Crescent when compared to the EIS traffic scenario, as traffic will be closer to the residences which sit above The Crescent in this location. The proposed modification results in

altered traffic volumes on Johnston Street and traffic noise is predicted to increase by up to 1.0 dB(A) under modelled scenarios when compared to the EIS traffic scenario.

## Submissions

### Community and interest groups

Key issues raised in community and interest group submissions regarding noise and vibration include:

- concerns regarding the adequacy of the noise and vibration assessment;
- impacts from construction noise, particularly out-of-hours works; and
- increased operational traffic noise.

### Government agency and council submissions

**City of Sydney** raised concerns regarding additional noise and vibration impacts to surrounding residences and facilities (including TAFE NSW) during construction due to the expanded project footprint.

**Inner West Council** raised concerns regarding additional construction noise and vibration impacts and potential additional sleep disturbance due to the expanded project footprint. Council expressed concern that cumulative operational noise impacts have not been adequately addressed.

**EPA** recommended the Proponent undertake extensive community engagement and provide respite from occasional night work due to the construction noise impacts. EPA expressed its preference for mitigation of noise at the source and pathway over receiver-based treatments where reasonable and feasible.

**NSW Health** stated it is critical to address construction fatigue and recommended all reasonable and feasible actions be undertaken to minimise construction and operational noise exceedances at residences.

## Consideration

### Construction noise and vibration

The Department recognises the need for some works to be completed outside of standard construction hours for road safety reasons and to minimise disruptions to traffic. Key construction noise impacts on residences are associated with works undertaken of an evening and night time at The Crescent / Johnston Street / Chapman Road intersection and bridgeworks for the overpass and green link. While construction impacts are unavoidable in urbanised areas, the Department considers that the impacts can be managed through the Proponent's mitigation measures and the existing conditions of approval which include:

- comprehensive forewarning of works and potential disruptions;
- periods of respite;
- appointment of an Acoustics Advisor to oversee construction noise and vibration planning, management, monitoring and mitigation;





consultation and the requirement in the Infrastructure Approval that noise generating works in the vicinity of educational institutions must not be scheduled during sensitive periods, would facilitate the management of noise impacts.

The Infrastructure Approval includes several requirements for managing construction vibration including monitoring vibration, preparation of Construction Noise and Vibration Impact Statements, vibration criteria and vibration testing to identify minimum working distances from buildings and heritage items. The Department is satisfied that vibration impacts can be adequately managed through these existing condition requirements.

#### Operational noise

The EIS for the M4-M5 Link identified operational traffic noise is predicted to increase along Johnston Street, The Crescent and City West Link once the M4-M5 Link is operational and a number of properties adjacent to these roads were identified as eligible for at-property treatment. Under the modified design, operational traffic noise will increase incrementally by up to 1.5 dB along Johnston Street and The Crescent when compared to the operational noise levels predicted in the EIS for the approved design, triggering eligibility for noise treatment at additional properties.

The Infrastructure Approval requires the Proponent to undertake an operational noise and vibration review to confirm operational noise (and vibration) impacts based on the final design and identify any additional noise mitigation (including at-property noise treatments) that may be required. The review will confirm those residences eligible for noise mitigation treatment consequent to the modified design.

The Infrastructure Approval also requires the Proponent to undertake noise monitoring within 12 months of operation to compare the actual noise performance against noise predictions, and if there is a discrepancy to reassess the implemented noise mitigation measures and identify and implement any additional measures that are required. This will provide a check to ensure that residences impacted by operational traffic noise and are eligible for at-property noise treatment consequent to the modified design receive appropriate mitigation.

The Department considers that the existing conditions relating to operational noise would effectively ensure that appropriate and effective noise mitigation would be provided and as such no additional conditions are recommended.

## **6.3 Design and Public Space**

### **Issue**

#### Active transport concepts

Over 750 community submissions and Inner West and City of Sydney Council either objected or raised concerns over the deletion of the approved land bridge, stating that it results in worsened conditions for pedestrians and cyclists. They also raised concern that the modified design would provide a comparatively poor and low amenity active transport experience.

As noted in **Section 2.4**, to compensate for the removal of the land bridge the Proponent initially proposed two active transport links:

- a horseshoe-shaped shared user path spanning from the Rozelle Rail Yards to the Rozelle Bay foreshore and Bicentennial Park east of the intersection of The Crescent and City West Link; and
- a new green link (shared pedestrian and cyclist user bridge) to the west of The Crescent overpass to provide a direct connection between the future open space at the Rozelle Rail Yards and Rozelle Bay light rail stop, with a shared user ramp from the light rail stop leading to the at-grade path on the western side of The Crescent.

Following community feedback during the exhibition of the modification application and advice from an independent design review process led by the Government Architect's Office, the Proponent removed the horseshoe-shaped bridge from the proposed design. However, community submissions (20 per cent) on the exhibited amended design have called for the path to be reinstated as it would provide a connection which does not require cyclists and pedestrians to cross intersections.

#### Pedestrian and cycling green link

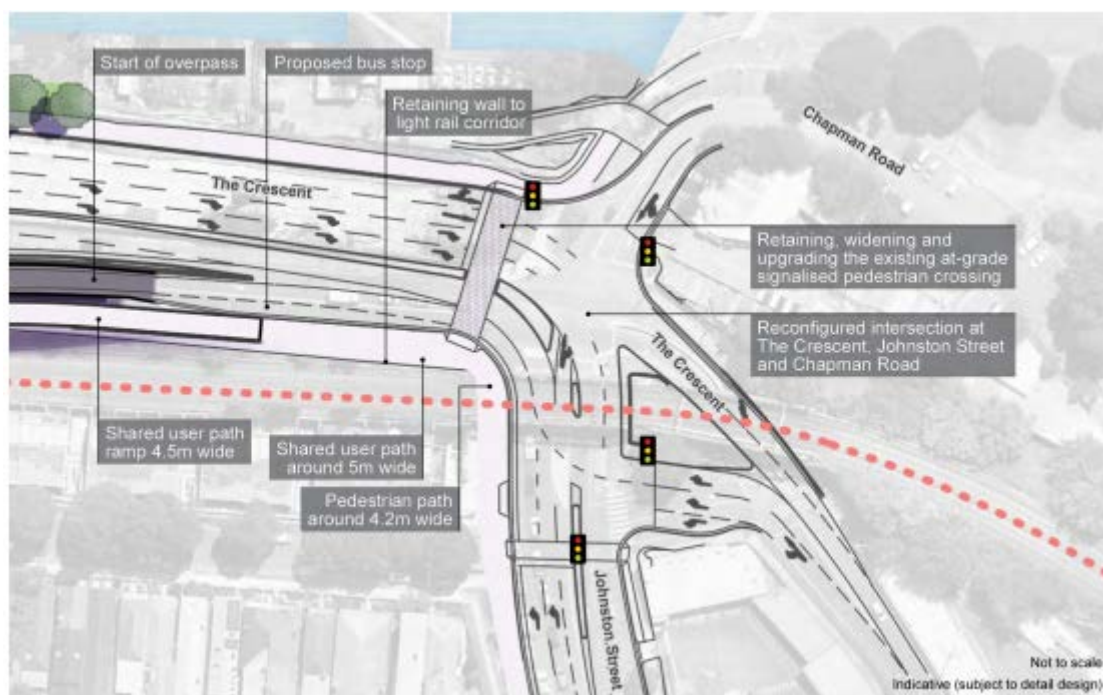
The green link will connect from the light rail stop to the at-grade path on the western side of The Crescent via a ramp. Under the amended design, the ramp will be widened from three to 4.5 metres to accommodate shared use by pedestrians and cyclists. However, the community and councils remain concerned that the ramp width is inadequate to accommodate the expected patronage.

A key concern raised in submissions was the integration of the ramp linking to the Rozelle Bay light rail platform with the green link. The existing level of the Rozelle Bay light rail stop is lower by comparison to the northern (central) section of the green link, which results in the green link ramping down at its southern end to meet the light rail platform. As such, this southern end is not able to provide the necessary soil depth required to support the continuation of tree planting across the full length of the bridge.

#### The Crescent / Johnston Street / Chapman Road crossing

The existing at-grade signalised crossing at The Crescent and Johnston Street intersection would be widened to approximately six metres and upgraded as part of the proposed modification (**Figure 10**). Upgrades to the crossing include paved surfaces to differentiate the crossing from the road surface and construction of a central pedestrian refuge.

The signalised pedestrian crossing will accommodate pedestrians and cyclists travelling from the light rail stop (southbound) using the proposed pedestrian and cyclist ramp, down to the west side of The Crescent. This will provide direct connection with Chapman Road and the foreshore area. The community and councils are concerned that the corner of The Crescent and Johnston Street will become crowded as people gather waiting to cross the intersection. There is also dissatisfaction that the wait time will add to the overall journey time when compared to the approved land bridge and that they will be forced to cross an intersection when the approved design provided for a crossing-free connection from "park to park".



**Figure 10 |** Indicative pedestrian and cyclists crossing over The Crescent and Johnston Street  
(Source: Response to submissions on Design Amendment Report)

### Visual impacts

The existing landscape character and setting surrounding the Rozelle Interchange consists of one to two storey residential dwellings, low rise commercial factories and warehouses, Rozelle Bay and associated wharves, open space areas and transport infrastructure. From a visual perspective the modification would have a high to moderate impact to residences in northern Annandale (Bayview Crescent) due to their proximity to the elevated overpass and green link structures.

However, the removal of the initially proposed horseshoe-shaped shared user path would reduce the number of elevated structures, providing a significant and positive change with regards to visual impacts.

### **Submissions**

#### Community and interest groups

Key issues raised in community and interest group submissions regarding active transport are:

- calls for the reinstatement of the approved land bridge;
- the modification is inconsistent with the urban design principles for the project;
- lack of integration of the green link with the light rail stop;
- increased travel times and distances compared to travelling on the approved land bridge;
- pedestrian and cyclist exposure to vehicle traffic, noise, wind, heat and crime;
- inadequate pedestrian and cyclist access to wider open space, facilities, and public transport;
- severe visual impacts from overpass, green link and user path bridge;

- view loss from surrounding properties and for cyclists and pedestrians crossing from the Rozelle Rail Yards to the foreshore; and
- impacts from proposed shared user path (horseshoe) bridge.

#### Government Agency and Council Submissions

**Inner West Council** indicated that the proposed design does not provide the same standard of walking and cycling access as would be provided by the approved land bridge. In its initial submission, it raised concerns that the proposed design would be difficult to navigate and would cause longer travel distances, steep climbs and long delays for pedestrians and cyclists. Although Council welcomed some of the changes in the amended design, it restated its position that a seamless walking and cycling connection between the Rozelle Rail Yards and foreshore needs to be provided, consistent with the approved design. Council also raised concern over the potential for the intersection at The Crescent / Johnston Street corner to safely accommodate the large groups of people that are likely to wait to cross to the foreshore.

In relation to visual impacts, Council supported the removal of the horseshoe-shaped shared user path noting that the amended design reduced visual impacts. However, it was concerned that the proposed structures would be difficult to navigate and would diminish the general sense of safety and security for pedestrians and cyclists.

**City of Sydney** expressed concern that the proposal gives priority to motorists over pedestrians and cyclists and recommended that the overpass be removed and for the approved land bridge to be constructed. It raised concern over the configuration of The Crescent and Johnston Street, including accessibility issues and impacts to public transport and residential amenity. The City also recommended enhancements to the design of the proposed green link.

Council also expressed concerns regarding the cumulative visual impact on the surrounding area. Council noted that the amended design resulted in better urban design and visual outcomes but questioned the validity of the overall design as it prioritises vehicle movements over people and places.

#### **Consideration**

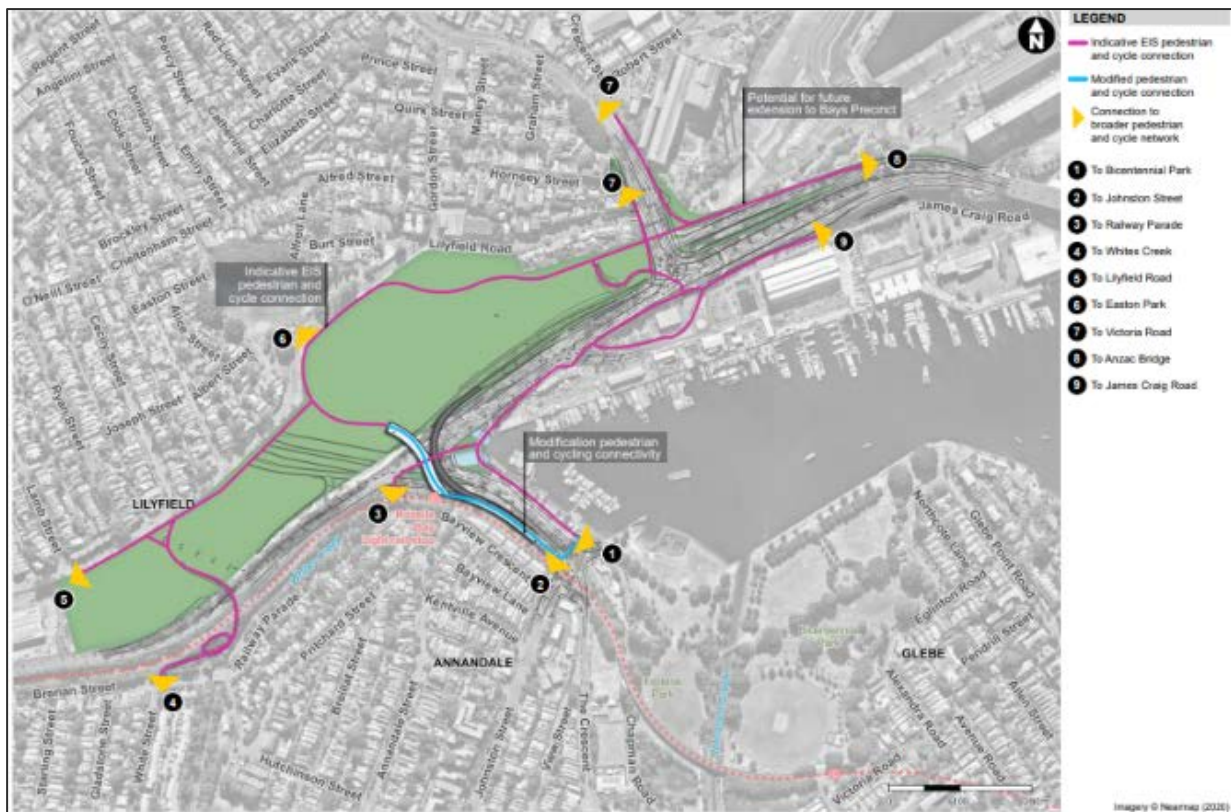
##### Active transport concepts

Whilst the Department supports the construction of the green link as a means of providing connectivity from the Rozelle Rail Yards to the Rozelle Bay light rail stop and Rozelle Bay foreshore, it recognises the proposed design provides a less direct active transport solution compared to the approved land bridge. As noted in **Section 3.2**, this compromise is driven by engineering constraints that do not allow for the undergrounding of the proposed overpass.

The horseshoe-shaped shared user path would have provided a grade separated connection between the Rozelle Rail Yards and parkland along the Rozelle Bay foreshore. However, it would have been a significant structure in the landscape and the Department accepts its removal. The Department considers that the proposed green link, shared user path ramp and upgraded intersection at The Crescent / Johnston Street / Chapman Road enable good connectivity between the Rozelle Rail Yards

and foreshore, while acknowledging it is not a seamless connection as pedestrians and cyclists will need to navigate a road crossing.

The approved project includes a shared pedestrian and cycle connection along the north-western area of the future open space at the Rozelle Rail Yards (**Figure 11**), but there is relatively poor and circular connectivity between the light rail stop and Rozelle, in the proximity of Gordon Street. The Department considers that the proposed active transport network should be enhanced to facilitate north-south connectivity through the future open space generally between Gordon Street, Rozelle and The Crescent and has recommended a condition to this effect. The exact location of the shared path would be directed through the Urban Design Landscape Plan (UDLP) process and considered against other objectives for this area including locations and areas for active recreation.



**Figure 11 | Broader pedestrian and cycling connectivity** (Source: Design Amendment Report)

### Pedestrian and cycling green link

Based on concerns raised in submissions, the Proponent revised the design of the southern portion of the green link bridge to provide better integration and connectivity with both the light rail stop and pedestrian ramp which leads from the light rail stop down to the west side of The Crescent. The design of the ramp has also been widened from three metres to 4.5 metres to allow for shared use by pedestrians and cyclists. The Department supports these design changes as they will provide improved connectivity outcomes.



Further widening the ramp which leads from the light rail stop down to the footpath on the western side of The Crescent would enhance pedestrian and cyclist movements. The Proponent advised that the ramp cannot be widened further due to the fixed position of the existing light rail retaining wall along the west side of The Crescent, the location of utilities (Sydney Trains high voltage transmission line, Ausgrid high voltage transmission line and Jemena medium pressure gas main) and the alignment of the City West Link / The Crescent intersection with the proposed future Western Harbour Tunnel portals (if approved). The Department accepts these factors as limiting constraints and notes the proposed shared user path width (4.5 metres) is in accordance with the *Guide to Road Design Part 6A: Paths for Walking and Cycling* (Austroads, 2017).

The Department notes that it is not possible to provide the necessary soil depth required to support tree planting across the southern portion of the green link and alternate landscaping will be provided. The Proponent's Design Amendment Report does not provide a landscaping solution for this section of the bridge, noting that the final design would be the subject of a UDLP overseen by a specialist Design Review Panel. To ensure that the final landscaping of the green link bridge provides a sense of place, and the interfaces with the light rail stop and ramp are appropriately designed and landscaped, the Department has recommended the Proponent provide detail in the UDLP of landscaping on the interface between the green link bridge and light rail stop.

#### The Crescent / Johnston Street / Chapman Road crossing

The Department supports retaining the pedestrian/cyclist crossing that links the northern and southern sides of The Crescent near the intersection with Johnston Street. Retaining the crossing is an improvement over the original modified design which would have required pedestrians to make four road crossings at the intersection of The Crescent / Johnston Street / Chapman Road to reach the foreshore. The reinstated crossing will provide an important connection for Annandale residents and users of the green link with the foreshore.

In response to requests from the community and Inner West Council, the Proponent committed to widening the crossing to around six metres, installing paving treatments to differentiate the crossing from the road surface, constructing of a central pedestrian refuge and installing bicycle lanterns. The Department commends these initiatives to enhance pedestrian and cyclist safety.

The amended design will not impact upon the at-grade shared user path on the northern side of The Crescent along the Rozelle Bay foreshore. This active transport route will continue to be available to pedestrians and cyclists consistent with the arrangements proposed in the EIS.

#### Travel times

The proposed active transport link will result in longer travel distances and times for pedestrians and cyclists as shown in **Table 8** which compares travel distances and times for pedestrians for the approved project, initial modification design and amended design.

**Table 6 |** Pedestrian travel distance and times (Source: Design Amendment Report)

Pedestrian Trip	Distance (metres)			Pedestrian Travel Time (minutes)		
	EIS	Modification	Revised Design	EIS	Modification	Revised Design
Rozelle Rail Yards open space to Chapman Road	330	515	365	04:14	06:36	05:56
Rozelle Rail Yards open space to Rozelle Bay light rail stop	265	155	150	03:24	01:59	01:55
The Crescent (west) to Chapman Road	30	155	35	01:23	03:14	01:42
Rozelle Bay light rail stop to Chapman Road	205	335	210	03:38	05:33	03:57
Railway Parade to The Crescent (east)	120	120	120	02:47	02:47	02:47

Whilst distance and time travelled by pedestrians from the Rozelle Rail Yards to Chapman Road would increase under the proposed design when compared to the approved project, the 30 metre increase is not considered significant. However, although the increase in distance may be minor there is a noticeable increase in the time taken, as pedestrians will have to wait to cross The Crescent. The Proponent has committed to increasing the minimum green time for crossing to 20 seconds, to provide a safe timeframe for crossing the intersection and the call to cross will be set at every traffic signal cycle at the intersection to minimise travel times to the greatest extent possible.

The amended design provides benefit over the initial modified design in terms of both time and distance travelled for the majority of pedestrian trips. The Department acknowledges that the amended design will provide a quicker and shorter trip between the Rozelle Rail Yards and light rail stop when compared to the EIS design, benefiting pedestrians making this trip.

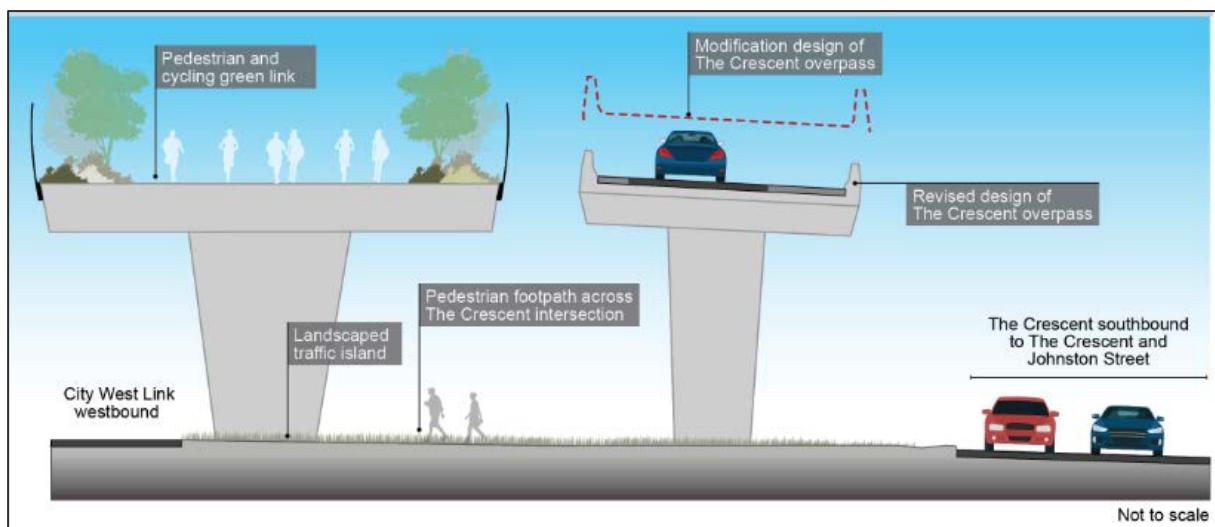
### Visual impacts

The Department recognises the proposed overpass will impact on the landscape and visual amenity impacts that would be experienced by adjacent residents, pedestrians and motorists. However, the amended design incorporates a design solution that seeks to better balance traffic and active transport connectivity, and safety and amenity when compared to the original modified design. Further, the visual impact should be considered in the context of the original land bridge design approved in the EIS. The approved land bridge would have been an expansive structure and visible from the surface road, the Rozelle Rail Yards open space, the Rozelle Bay foreshore and from the residences located along Bayview Crescent and Johnston Street.

The visual amenity of residents at 300 Johnston Street and Bayview Crescent will be impacted by the green link and overpass as they will have direct views of the structures. In addition, the overpass and green link will partially obstruct residents' views to Rozelle Bay, Anzac Bridge and city skyline.

However, the light rail corridor provides separation from the proposed structures, lessening their obtrusiveness, and the visual impact would be softened to some extent by existing trees within view of these residences.

As noted in **Section 5.7**, the Proponent engaged in a design review process through the Government Architect's Office to improve the original proposed design. An outcome of this process was a recommendation to reduce the height of the overpass to reduce its visual impact at adjacent residences. The Proponent reduced the height of the overpass by two metres at its apex as part of the amended design so that at its maximum height it is the same height as the proposed green link (**Figure 12**). The height cannot be reduced any further as it would impinge on the minimum vehicle clearance heights where it spans The Crescent / City West Link.



**Figure 12** | Cross section showing the reduction in height of the Crescent Overpass  
(Source: Design Amendment Report)

The Infrastructure Approval requires the Proponent to prepare and implement a UDLP to be reviewed by a Design Review Panel. To improve the aesthetics of the modified design, the Department recommends the UDLP incorporate the following design requirements:

- landscaping (soft and/or hard) to mitigate the visual impacts of The Crescent overpass and related pedestrian and cycling green link, traffic islands and medians; and
- development and delivery of public art opportunities within the construction footprint surrounding the intersection of The Crescent / and City West Link using local artists.

These design requirements will soften views of the infrastructure and improve the pedestrian and motorists experience at ground level. As noted, the Department has also recommended the Proponent provide landscaping of the interface between the green link bridge and light rail stop.

The Department has also recommended the UDLP include visualisations of The Crescent overpass, green link, shared user path ramp and the at-grade pedestrian and cyclist crossing of The Crescent to

facilitate consultation with the community and councils and the review and assessment of the proposed design and landscape treatments by the Design Review Panel.

A shared pedestrian path would be provided over the mouth of Whites Creek where it enters Rozelle Bay (**Figure 13**), constructed on top of a utilities bridge. To enhance user experience, and consistent with advice from the Government Architect, the Department has recommended that the mouth of Whites Creek north east of The Crescent and to the west of the proposed utilities bridge, not be fully enclosed.



**Figure 13 |** Indicative aerial view of the City West Link intersection and Whites Creek open space  
(Source: Design Amendment Report)

Concern was raised in submissions around road lighting. The area surrounding the future Rozelle Interchange is currently well lit. The green link, overpass and shared user path ramp would also be lit, adding to night light levels. The Infrastructure Approval requires the Proponent to construct and operate the project with the objective of minimising light spillage to residential properties. In addition, it requires the Proponent to provide mitigation measures to manage residual night lighting impacts to protect properties adjoining or adjacent to the project in consultation with affected landowners. The Department considers these requirements would ensure that night lighting is appropriately managed.

## 6.4 Other Issues

### Heritage

There are three listed heritage items relevant to the proposed modification:

- Annandale (Johnston Street) underbridge – Section 170 *Heritage Act 1977* and *Sydney Regional Environmental Plan – City West*;
- Glebe Railway Viaduct and sandstone retaining wall – Section 170 *Heritage Act 1977*; and
- Whites Creek Stormwater Channel No. 95 – Section 170 *Heritage Act 1977*.

Changes to the intersection of The Crescent / Johnston Street / Chapman Road would result in works occurring adjacent to the Annandale (Johnston Street) underbridge and Glebe Railway Viaduct and sandstone retaining wall. However, none of these structures will be directly impacted by the works.

The Crescent Mural at Annandale (**Figure 14**) has been identified as a potential heritage item for addition to Inner West Council's local environmental plan heritage register. The Mural was commissioned by the former Leichhardt Council in 1980 and created by artist Rodney Monk.



**Figure 14** | The Crescent Mural (Source: Google Images)

Community submissions, Inner West Council and the Member for Balmain expressed concern regarding the proposed overpass and shared user path ramp partially obstructing views of the mural and called for the mural to be protected. Although the ramp will partially obscure views of the mural, the level of visual impact would be similar to the approved project which included a pedestrian ramp from the Rozelle Bay light rail stop to The Crescent, which would have partially blocked views to a section of the mural.

The revised design includes a one metre separation distance between the mural and the shared user path ramp to ensure the mural structure (light rail retaining wall) is not directly affected by the ramp. This also provides sufficient room for on-going inspection and maintenance of the existing retaining wall and the mural.

The Department has recommended the Proponent undertake archival recording of the mural to capture its uniqueness in the local environment and create a permanent record to inform ongoing understanding of the political and social movements that inspired the artwork.

#### **Soils, hydrology, air quality and socio-economic impacts**

The Proponent assessed the potential impacts of the proposed modification in relation to air quality, surface water, flooding and drainage, contamination, and social and economic impacts.

The Department considers the Proponent has undertaken an adequate assessment of these issues and that the proposed modification will not result in new or additional impacts in respect of these issues when compared to the approved design. Further, these impacts can generally be managed through the Proponent's management commitments and the conditions in the Infrastructure Approval.





## 7. Evaluation

The Department has reviewed the Modification Report, Design Amendment Report, community, interest group and Government agency submissions, and Responses to Submissions reports on the modified and amended designs. Based on its review, the Department considers the key issues associated with the proposed modification are traffic and transport, noise (construction and operational noise) and vibration and design and public space (active transport and visual amenity). The proposed modification incorporates a design solution that seeks to better balance traffic and active transport connectivity, safety and amenity when compared to the original modified design. Based on its assessment, the Department considers the modification is justified and recommends that it be approved, subject to conditions.

The proposed overpass would provide for additional forecast traffic, including from future proposed road projects such as the Western Harbour Tunnel (if approved) and result in improved traffic flows from the City West Link and Johnston Street / The Crescent for traffic travelling towards Victoria Road and the Anzac Bridge. A key benefit of the overpass would be the reduction in queue length for traffic travelling north on Johnston Street towards the City West Link / The Crescent.

The construction of the overpass means that the approved land bridge linking the future open space at the Rozelle Rail Yards to the Rozelle bay foreshore cannot be constructed as the two structures would conflict. . Although an underpass would allow for the land bridge to be built, the Department accepts that its constructability is not feasible due to engineering constraints, including the need to dive under the Whites Creek and Rozelle Rail Yards drainage channels, presence of fill material, high groundwater levels, and presence of major utility infrastructure including an underground Ausgrid high voltage cable. The Department considers that the proposed green link, shared user ramp linking the Rozelle Bay light rail stop to The Crescent and upgraded pedestrian crossing at The Crescent / Johnston Street / Chapman Road provide a feasible alternative solution to facilitate safe pedestrian and cyclist access. However, the alternative design introduces a less direct solution when compared to the approved land bridge.

The Proponent has committed to undertake plantings along the green link and landscaping works along The Crescent and in the vicinity of the works to improve the visual amenity and enhance connectivity for the Rozelle and Annandale communities. This is supported by the Department and is reinforced through the recommended conditions of approval.

Although construction and operation of the overpass will increase noise levels at adjacent residents, the implementation of at-property treatments as part of the approved construction noise insulation program and operational noise mitigation (at-property treatments) would reduce noise impacts at impacted residences.



## 8. Recommendation

It is recommended that the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report; and
- **determines** that the application WestConnex M4-M5 Link Modification 2 – The Crescent overpass and active transport links (SSI 7485 MOD 2) falls within the scope of section 5.25 *Environmental Planning and Assessment Act 1979*;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to approve the modification;
- **agrees** with the key reasons for approval listed in the draft notice of decision;
- **modify** the approval of SSI 7485; and
- **signs** the attached Notice of Modification (**Appendix J**).

Recommended by:

**Fadi Shakir**  
Planning Officer  
Transport Assessments

Recommended by:

**Glenn Snow**  
Director  
Transport Assessments



## 9. Determination

The recommendation is: Adopted / ~~Not adopted~~ by:

**The Hon. Rob Stokes MP**

Minister for Planning and Public Spaces

30th September, 2020.



# Appendices

## Appendix A – List of Documents

Austroroads, 2017. *Guide to Road Design Part 6A: Paths for Walking and Cycling*.

Greater Sydney Commission, 2018. *Central City District Plan*.

Greater Sydney Commission, 2018. *Eastern City District Plan*.

NSW Government, 2018. *The State Infrastructure Strategy 2018-2038*.

NSW Government, 2018. *Greater Sydney Services and Infrastructure Plan*.

NSW Government, 2018. *Future Transport Strategy 2056*.

Roads and Maritime Services, 2017. *M4-M5 Link Environmental Impact Statement*.

Roads and Maritime Services, 2018. *M4-M5 Link Submissions and Preferred Infrastructure Report*.

Transport for NSW, 2020. *WestConnex M4-M5 Link Rozelle Interchange – Modification: The Crescent Overpass and active transport links, Modification Report*

Transport for NSW, 2020. *WestConnex M4-M5 Link Rozelle Interchange – Modification: The Crescent overpass and active transport links, Response to Submissions Report*

Transport for NSW, 2020. *WestConnex M4-M5 Link Rozelle Interchange – Modification: The Crescent overpass and active transport links, Design Amendment Report*

Transport for NSW, 2020. *WestConnex M4-M5 Link Rozelle Interchange – Modification: The Crescent overpass and active transport links, Response to Submissions on the Design Amendment Report*

## Appendix B – Modification Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>



## Appendix C – Submissions on Modification Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>

## Appendix D – Response to Submissions on Modification Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>

## Appendix E – Design Amendment Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>

## Appendix F – Submissions on Design Amendment Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>

## Appendix G – Response to Submissions on Amendment Report

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>



## Appendix H – Community Views

Issue	Consideration
<p><i>Traffic and transport impacts</i></p> <ul style="list-style-type: none"> <li>• Traffic impacts (congestion and increased journey times) during construction due to increased project footprint.</li> <li>• Induced traffic demand and increased congestion due to the overpass.</li> <li>• Worsened operational traffic performance.</li> <li>• No access to James Craig Road.</li> </ul>	<p><i>Assessment</i></p> <ul style="list-style-type: none"> <li>• The proposed civil works for the overpass and green link will be constructed within the project footprint and would not generate a noticeable increase in construction traffic volumes.</li> <li>• The level of service at the majority of intersections is predicted to be comparable or better when compared with the approved project.</li> <li>• The proposed network changes will accommodate traffic generation from future development proposed in the vicinity of the project including the Western Harbour Tunnel (if approved).</li> <li>• Vehicles using the overpass will not be able to access the at-grade right turn movement onto James Craig Road as it would require motorists to cut across multiple lanes of traffic within a short distance on the exiting overpass, posing a high risk of collisions. Alternate routes are available, and James Craig Road will still be accessible by motorists originating from the west using the City West Link.</li> <li>• A metro stop is proposed near the former White Bay Power Station at Rozelle as part of Sydney Metro West, which would also provide access to Glebe Island.</li> </ul> <p><i>Conditions</i></p> <p>The existing Infrastructure Approval includes conditions for managing construction traffic and requires the Proponent to prepare a road network performance review prior to operation and operational road network performance reviews. As such, no further conditions are proposed.</p>
<p><i>Noise and vibration</i></p> <ul style="list-style-type: none"> <li>• Impacts from construction noise, particularly out-of-hours works along The Crescent and Johnstone Street.</li> <li>• Increased operational traffic noise at residents adjacent to the overpass.</li> </ul>	<p><i>Assessment</i></p> <ul style="list-style-type: none"> <li>• Construction will cause noise and vibration impacts at adjacent residences. A comprehensive suite of construction noise mitigation measures are required to be implemented under the existing Infrastructure Approval.</li> <li>• The overpass will increase traffic noise to residents living along Bayview Crescent at Annandale. The approved project requires the Proponent to undertake an operational noise and vibration review to confirm operational noise and vibration impacts and identify any new residences that may be eligible for at-property noise mitigation.</li> </ul> <p><i>Conditions</i></p> <ul style="list-style-type: none"> <li>• The existing Infrastructure Approval requires the implementation of a construction Noise Insulation Program for properties identified as highly noise affected by out-of-hours works. The Department has recommended a condition requiring the extension of out-of-hours construction noise mitigation to an additional 19 residences located along Kentville Avenue and the northern end of Johnston Street to mitigate against construction noise generated by out-of-hours works.</li> </ul>

<i>Design and public spaces</i>	<i>Assessment</i>
<ul style="list-style-type: none"> <li>• Removal of the approved land bridge.</li> <li>• Proposed active transport connection provides a compromised outcome compared to the approved land bridge.</li> <li>• Proposal prioritises motorists over pedestrians.</li> <li>• Inadequate pedestrian and cyclist access to wider open space, facilities, existing and future public transport.</li> <li>• Visual impact of overpass on existing character of the area.</li> <li>• View loss from surrounding properties.</li> <li>• Poor visual amenity at the interface of the green link and light rail stop.</li> <li>• Inadequate visual representation of proposed design.</li> </ul>	<ul style="list-style-type: none"> <li>• The removal of the approved land bridge is driven by engineering constraints that do not allow for the undergrounding of the proposed overpass.</li> <li>• The loss of the land bridge connection will be offset with an alternate path, including a green link, shared user path ramp and upgraded pedestrian crossing at the intersection of The Crescent / Johnston Street / Chapman Road. The Department is satisfied that the Proponent has provided adequate access to pedestrians and cyclists to wider open space and facilities.</li> <li>• To reduce the visual impact of the overpass, the Proponent has reduced the height at its apex by two metres and provided a wider separation between the green link and overpass.</li> <li>• Although the overpass will be visible by residents along Bayview Crescent at Annandale, the visual impact would be softened by existing trees, and the light rail corridor will provide separation from the overpass. Views to Rozelle Bay, Anzac Bridge and the City skyline will be maintained.</li> <li>• Under the Infrastructure Approval, the final form and design of the overpass and active transport infrastructure would be subject to the Urban Design and Landscape Plan (UDLP) process under the guidance of a Design Review Panel. However, to improve the pedestrian and cyclists experience at ground level and along the green link, it is considered that additional design objectives are required.</li> </ul>
	<p><i>Conditions</i></p> <ul style="list-style-type: none"> <li>• The Department has recommended minimum design requirements for the green link and requirements in the UDLP regarding landscaping of the green link, traffic islands and medians and inclusion of public art opportunities.</li> <li>• The Department has also recommended a condition to ensure visualisations of the proposed modification including of the at-grade pedestrian and cyclist crossing of The Crescent are included in the UDLP.</li> <li>• A condition requiring the active transport network be enhanced to facilitate north-south connectivity through the future open space at the Rozelle Rail Yards has also been recommended to address community concerns regarding poor connectivity between the light rail stop and Rozelle.</li> </ul>

## Appendix I – Consolidated Approval

<https://www.planningportal.nsw.gov.au/major-projects/project/16516>

## Appendix J – Notice of Modification