

# WestConnex M4-M5 Link

## **Rozelle Interchange – Modification:** The Crescent overpass and active transport links

Response to submissions report

April 2020

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# Transport for NSW

WestConnex M4-M5 Link

Rozelle Interchange

Modification: The Crescent overpass and active transport links

Response to submissions report

April 2020

#### Prepared for

Transport for NSW

Prepared by AECOM Australia

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## Contents

Glo	ossary and terms of abbreviations	i
Α.	Part A - Introduction and overview of consultation and submissions received	A-1
	A.1 Introduction	A-1
	A.2 Community and stakeholder involvement	A-5
	A.3 Submissions received	A-21
	A.4 The revised design	A-23
	A.5 Modification report clarifications	A-25
В.	Part B – Response to stakeholder submissions	B-1
	B.1 City of Sydney Council	B-2
	B.2 Inner West Council	B-20
	B.3 Port Authority of NSW	B-41
	B.4 NSW Environment Protection Authority	B-48
	B.5 NSW Health: Sydney Local Health District	B-50
	B.6 NSW Roads and Maritime Services – Maritime	B-53
C.	Part C – Response to community and organisation submissions	C-1
	C.1 General	
	C.2 Strategic context and justification	C-3
	C.3 Assessment process	C-12
	C.4 Modification design	C-17
	C.5 Community and stakeholder engagement	C-31
	C.6 Traffic and transport	C-34
	C.7 Urban design and visual impact	C-49
	C.8 Noise and vibration	C-60
	C.9 Air quality	C-68
	C.10 Non-Aboriginal heritage	
	C.11 Cumulative impacts	C-76
	C.12 Other environmental issues	C-78
	C.13 Suggested changes to environmental management measures and Conditions of Appr	ovalC-81
	C.14 Other issues	C-84
D	Part D – Environmental Management Measures, Conditions of Approval and Conclusion	onD-1
	D.1 Proposed changes to Environmental Management Measures	D-1
	D.2 Proposed changes to Conditions of Approval	D-3
	D.3 Conclusion and next steps	D-8
	D.4 References	D-11

### Tables

Table A-1: Details of consultation undertaken during the exhibition of the Modification report	A-7
Table A-2: Consultation following the public exhibition of the modification	A-11
Table A-3: Summary of submissions	A-21
Table A-4: Additional consultation undertaken during the preparation of the Modification report	A-25
Table B-1: Rozelle Interchange: key intersection performance (LoS) – Peak hour	B-4
Table B-2: Options assessment for The Crescent/City West Link intersection	B-23
Table B-3: NSW government committed transport infrastructure projects	B-26
Table B-4: Consistency with the Roads and Maritime Services Corporate Plan 2018-2021	B-28
Table C-1: NSW government committed transport infrastructure projects	C-7
Table C-2: Detailed information of assessment	C-13
Table C-3: Options assessment for The Crescent/City West Link intersection	C-20
Table C-4: Rozelle Interchange: key intersection performance (LoS) – Peak hour	C-41
Table C-5: Non-Aboriginal heritage items near the proposed modification	C-72
Table D-1: EMM to be amended as part of the modification	D-1
Table D-2: CoA to be amended as part of the modification	D-4

## Figures

24
) 25
-5
-6
10
11
13
13
14
14
ct 15
16
17
22
14
19
23
$)2^{-1}11111111111111111111111111111111111$

Figure C-3: Additional footprint required for the proposed modification	26
Figure C.4: Alternative routes to access James Craig RoadC-4	45
Figure C-6: Indicative view looking east from City West Link (10 years following project opening)C-4	56
Figure C-7: Indicative view looking west from The Crescent (east) (10 years following project opening).C-	56
Figure C-8: Indicative view from the green link towards the Rozelle Bay light rail stop (10 years following project opening)C-4	57
Figure C-9: Indicative view from the Rozelle Bay light rail stop along the green link (10 years following project opening)C-4	57
Figure C-10: Indicative view from the Rozelle Bay light rail stop looking south east (10 years following	
project opening)C-4	58
Figure C-11: Noise catchment areasC-	65
Figure C-12: Additional at-property noise treatment zone (compared to the EIS)C-	66
Figure C-13: Non-Aboriginal heritage itemsC-	73

#### Appendices

Appendix A Submitter identification number reference table

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# Glossary and terms of abbreviations

Term	Meaning	
Α		
AECOM	AECOM Australia Pty Ltd	
AM peak hour	Unless otherwise stated, this refers to vehicle trips arriving at their destination during the average one hour peak in the AM peak period between 7.00 am and 9.00 am on a normal working weekday	
At-grade	At ground level, not on an embankment or in a cutting	
В		
Bicentennial Park	Park adjacent to Chapman Road and Rozelle Bay as outlined in the Conditions of Approval	
С		
C6	The Crescent civil site located on the east side of The Crescent adjacent to Rozelle Bay	
CC6a	Construction ancillary facility proposed on the southern side of The Crescent adjacent to Rozelle Bay and to the east of the City West Link / The Crescent intersection	
CBD	Central Business District	
CEMP	Construction Environmental Management Plan required by Condition C1	
CPTED	Crime Prevention Through Environmental Design	
CNVG	Construction Noise and Vibration Guideline (Roads and Maritime, 2016)	
CNVMP	Construction Noise and Vibration Management Sub-Plan required by Condition C4.	
Construction	Includes all physical work required to construct the project	
CoRTN	Calculation of Road Traffic Noise algorithms (UK Department of Transport 1988)	
СоА	Conditions of Approval	
CSSI	Critical State Significant Infrastructure	
D		
dB	Decibel - sound level measurement	
dBA A-weighted decibels A-weighting is applied to instrument-measured sound levels in effort to account for loudness perceived by the human ear, as the ear is less sensitive to low audio free		
DD Act (DDA)	Disability Discrimination Act 1992 (Commonwealth)	
DECC	Former NSW Department of Environment and Climate Change, now OEH	
DPE	Former NSW Department of Planning and Environment, now DPIE	
DPIE	NSW Department of Planning, Industry and Environment, formerly DPE	
E		
EIS	Environmental Impact Statement	
EPA	NSW Environment Protection Authority	

Term Meaning			
EP&A Act	Environmental Planning & Assessment Act 1979 (NSW)		
EPI	Environmental planning instruments		
EPL	Environment Protection Licence under the <i>Protection of the Environment Operations Act 19</i> (NSW)		
F			
G			
н			
hr	Hour		
I			
ICNG	Interim Construction Noise Guideline (NSW DECC 2009)		
Impact	Influence or effect exerted by a project or other activity on the natural, built and community environment		
Interchange	A grade separation of two or more roads with one or more interconnecting carriageways		
Iron Cove Link         Tunnel connection providing an underground bypass of Victoria Road between An and Iron Cove Bridge			
J			
к			
km/h	Kilometres per hour		
L			
L <sub>Aeq</sub>	The 'energy average noise level'		
L <sub>A90</sub> The "background noise level" in the absence of construction activities. This parar represents the average minimum noise level during the daytime, evening and nig periods respectively. The LAeq(15minute) construction Noise Management Leve based on the LA90 background noise levels			
Landscape The aggregate of built, natural and cultural aspects that make up an area and provid character of place. Includes all aspects of a tract of land – built, planted and natural topograph ecological features			
LCZ	Landscape character zone		
LEP	Local environmental plan		
LGA	Local Government Area		
LoS	Level of Service. A qualitative measure describing operational conditions within a traffic stream or intersection and the perception by motorists and/or passengers		
Μ			
m	Metres		
m <sup>2</sup>	Square metres		
m <sup>3</sup>	Cubic metres		

Term	Meaning		
M4-M5 Link mainline tunnels	M4-M5 Link Stage 1 (the mainline tunnels) is also commonly referred to as Stage 3A of the WestConnex program of works including tunnels connecting with the M4 East Motorway at Haberfield and the New M5 Motorway at St Peters		
MP	Member of Parliament		
N			
NCAs	Noise Catchment Areas		
NCG	Noise Criteria Guideline (Roads and Maritime, 2015)		
NEPC	National Environment Protection Council		
NEPM	National Environment Protection Measure		
NMLs	Noise Management Levels		
NOx	Nitrogen oxides		
NSW	New South Wales		
0			
OEH	NSW Office of Environment and Heritage, formerly DECCW and now part of DPIE		
ONVR	Operational Noise and Vibration Review required by Condition E92		
Р			
Pedestrian and cycling green link (green link) The active transport link bridging over City West Link and connecting the Roz			
РМ	(Airborne) particulate matter		
PM <sub>10</sub>	Airborne particulate matter with an aerodynamic diameter of less than 10 micrometres (µm)		
PM <sub>2.5</sub>	Airborne particulate matter with an aerodynamic diameter of less than 2.5 micrometres (µm)		
PM peak hour	Unless otherwise stated, this refers to trips travelling on the network during the average one hour peak period between 3pm to 6pm on a weekday		
Project (M4-M5 Link project)The approved project that is subject to this proposed modification. A component WestConnex program of works. Includes a new multi-lane road link between the Motorway at Haberfield and the New M5 Motorway at St Peters. The project wou include an interchange at Lilyfield and Rozelle (the Rozelle Interchange) and a tu connection between Anzac Bridge and Victoria Road, east of Iron Cove Bridge (I Link). In addition, construction of tunnels, ramps and associated infrastructure to connections to the proposed future Western Harbour Tunnel and Beaches Link p be carried out at the Rozelle Interchange			
Proponent	The person or organisation that proposes to carry out the project or activity. For the purpose of the project, the proponent is Transport for NSW		
Q			
R			
RBL	Rating Background Level		
RLMP	Residual Land Management Plan required by Condition E112		

Term	Meaning		
RNP	NSW Road Noise Policy (NSW EPA, 2011)		
Roads and Maritime	Former NSW Roads and Maritime Services, now Transport for NSW		
RozelleM4-M5 Link Stage 2 (the Rozelle interchange and Iron Cove Link) is also comm to as Stage 3B of the WestConnex program of works. It will comprise a new un motorway interchange connecting from the M4-M5 Link mainline tunnels to City the Anzac Bridge with links to the future Western Harbour Tunnel project. It als 			
Rozelle Rail Yards	Former rail yards now proposed to be developed as open space as part of the M4-M5 Link project. The site is generally bounded by City West Link and The Crescent (east) to the south, Victoria Road to the east, Lilyfield Road to the north and the light rail stabling and maintenance facility to the west.		
S			
s	Second		
S170       State Agency Section 170 Heritage and Conservation Register. Section 170 of the Act 1977 (NSW) requires NSW Government agencies to keep a register of heritage items/assets owned, occupied or managed by that government agency			
SEARs	Secretary's Environmental Assessment Requirements Requirements and specifications for an environmental assessment prepared by the Secretary of the NSW Department of the Planning and Environment under section 115Y of the <i>Environmental Planning and Assessment Act 1979</i> (NSW)		
SEPP State Environmental Planning Policy			
SHR State heritage register			
SPIR	Submissions and Preferred Infrastructure Report		
SREP Sydney Regional Environmental Plan			
SSD State Significant Development			
SSI	State Significant Infrastructure		
Shared user path bridge	A proposed horseshoe shaped shared user path bridge located to the east of the City West Link/The Crescent intersection and connecting between the proposed Rozelle Rail Yards open space area to the north and the east side of The Crescent adjacent to Rozelle Bay to the south		
Shared user path ramp	A shared use path ramp connecting the Rozelle Bay light rail stop with the west side of The Crescent to the north of The Crescent/Johnston Street/Chapman Road intersection		
Т			
TAFE Technical and Further Education			
The contractor	John Holland CPB Contractors		
The Crescent overpass	A proposed elevated vehicular overpass at The Crescent that would allow eastbound traffic from Annandale to bypass the signalised intersection at The Crescent/City West Link and continue east on The Crescent toward Victoria Road and Anzac Bridge		
TTAMP	Traffic Transport and Access Management Sub-Plan required by Condition C4		

Term	Meaning
U	
UDLP	Urban Design and Landscape Plan required by Conditions E133 and E134
v	
Visual amenity	Pleasantness or attractiveness of a place or area
VISSIM	A multi-modal traffic flow simulation software package
VHT	Vehicle hours travelled
VKT	Vehicle kilometres travelled
w	
Western Harbour Tunnel and Beaches Link	<ul> <li>The Western Harbour Tunnel and Beaches Link program of works consists of:</li> <li>Western Harbour Tunnel which stretches from the Warringah Freeway at Cammeray, across Sydney Harbour, to the WestConnex Rozelle Interchange</li> <li>Beaches Link, which provides an alternative to the Spit Bridge for the Northern Beaches, connecting from Seaforth and Balgowlah under Middle Harbour and through to the Warringah Freeway and Gore Hill Freeway</li> </ul>
Western Harbour Tunnel project	Western Harbour Tunnel and Warringah Freeway Upgrade project which stretches from the Warringah Freeway at Cammeray, across Sydney Harbour, to the WestConnex Rozelle Interchange
WestConnex program of works	A program of works that includes the M4 Widening, King Georges Road Interchange Upgrade, M4 East, New M5 and M4-M5 Link projects
x	
Y	
z	
Others	
µg/m³	Micrograms per cubic metre

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# Part A

Introduction and overview of consultation and submissions received

# A. Part A - Introduction and overview of consultation and submissions received

## A.1 Introduction

### A.1.1 Background

The M4-M5 Link project (the project) is part of the WestConnex program of works 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. In addition, it would allow for better connectivity through local communities and between the important economic centres along Sydney's Global Economic Corridor.

The project includes the construction and operation of a new multi-lane road link between the M4 East Motorway at Haberfield and the New M5 Motorway at St Peters, an interchange at Lilyfield and Rozelle (the Rozelle Interchange) and a tunnel connection between Anzac Bridge and Victoria Road, east of Iron Cove Bridge (Iron Cove Link).

Approval for the construction and operation of the project was granted on 17 April 2018 by the NSW Minister for Planning and Public Spaces (application number SSI 7485).

The approval provides for the construction and operation of the project in two stages:

- Stage 1<sup>1</sup> construction of the Mainline Tunnels between the M4 East Motorway at Haberfield and the New M5 Motorway at St Peters. These works commenced in 2018 with the Mainline Tunnels scheduled to open to traffic in 2022
- Stage 2<sup>2</sup> construction of the Rozelle Interchange and Iron Cove Link. Stage 2 commenced in 2019 and is scheduled to open to traffic in 2023.

The Environmental Impact Statement (EIS) and the Submissions and Preferred Infrastructure Report (SPIR) described and assessed important road network and active transport links at Lilyfield and Rozelle. The works specific to the proposed modification involved:

- The realignment and widening of key roads and intersections at and around the junction of The Crescent and City West Link;
- New and upgraded pedestrian and cyclist infrastructure including new north south connections between the new open space at the Rozelle Rail Yards, Rozelle Bay light rail stop and Bicentennial Park.

<sup>&</sup>lt;sup>1</sup> M4-M5 Link Stage 1 (the Mainline Tunnels)

<sup>&</sup>lt;sup>2</sup> M4-M5 Link Stage 2 (the Rozelle Interchange and Iron Cove Link)

#### A.1.2 Proposed modification

The proposed modification relates to Stage 2 of the project and would occur within the Inner West and City of Sydney Local Government Areas. The proposed modification includes the following key components:

- A new elevated vehicular overpass at The Crescent (the overpass) that 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
- 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 (including lane reconfiguration and marking, signal phasing, adjusting positions of traffic signals kerb works etc.)
- Realignment of the pedestrian and cycling green link (green link) to the west of The Crescent, providing
  a connection between the Rozelle Rail Yards and the Rozelle Bay light rail stop
- A new horseshoe shaped shared user path bridge (shared user path bridge) spanning The Crescent to the east of The Crescent/City West Link intersection. The shared user path bridge provides a connection between the Rozelle Rail Yards and the at grade surface connection (the 'shared user path') to Bicentennial Park along the east side of The Crescent and adjacent to Rozelle Bay. The shared user path bridge would provide the pedestrian and cyclist connectivity required by Conditions E120 and E121 for the project albeit in a different arrangement to that shown in the EIS
- 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
- Use of a minor construction ancillary facility, established in accordance with Condition C24, as a
  construction ancillary facility. The proposed C6a construction ancillary facility site is located on the
  south side of The Crescent to the west of James Craig Road and adjacent to Rozelle Bay. The
  proposed modification would allow use of the site for a limited number of additional purposes which are
  not permitted by Condition C24 including:
  - Light vehicle parking for workers (around 9 spaces) and
  - Material laydown areas and a limited number of associated vehicle movements (small delivery vans and rigid trucks).

These additional purposes would support the various construction activities at the C6 civil site.

#### A.1.3 The proponent

On 1 December 2019, Roads and Maritime Services and Transport for NSW joined together to create one integrated Transport for NSW in order to deliver better outcomes for customers and communities across NSW. All functions and responsibilities will now be performed by Transport for NSW and any references to Roads and Maritime Services will be legally taken to mean Transport for NSW automatically. As such, the proponent for the proposed modification is now Transport for NSW.

### A.1.4 Need for the proposed modification

Since planning approval was granted, John Holland CPB Contractors (the contractor) was appointed to construct Stage 2 of the approved project on behalf of Transport for NSW. The contractor reviewed the concept design for the approved project and together in discussions with Transport for NSW identified a number of potential design and constructability improvements.

The proposed modification aims to improve intersection performance and optimise active transport connections. The proposed modification would:

- Improve intersection performance on this congested section of the road network including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections by introducing a new overpass to accommodate eastbound traffic travelling toward Anzac Bridge and Victoria Road
- Adjust the alignment of active transport links to avoid conflict with the overpass while maintaining the
  overall connectivity proposed within the EIS and Conditions of Approval (CoA) for the project by
  providing a direct connection between the suburbs of Rozelle and Annandale and improved access to
  public transport infrastructure including the Rozelle Bay light rail stop
- Improve the efficiency of construction and minimise the duration of construction impacts on nearby
  residents by reducing the need for further construction activities to accommodate the proposed Western
  Harbour Tunnel and Warringah Freeway Upgrade project (Western Harbour Tunnel project) at City
  West Link and The Crescent, should that project proceed in the future (the EIS was placed on public
  exhibition in January 2020)
- Improve capacity at the intersections so that they can maintain performance with traffic generation from future development proposed in the vicinity of the project including the proposed Western Harbour Tunnel project if that development proceeds (the EIS was placed on public display in January 2020).

Not all of the changes proposed can be accommodated within the existing project approval. As such it is necessary to seek a modification to the project approval in accordance with Section 5.25 of the *Environmental Planning and Assessment Act* 1979 (NSW) (EP&A Act).

#### A.1.5 Statutory context

The project was declared as State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI) and was therefore assessed and approved under Part 5 of the EP&A Act.

Transport for NSW as the proponent for the project, is proposing to modify project approval SSI 7485 under Section 5.25 of the EP&A Act.

The Modification report (dated August 2019) was prepared in accordance with the Secretary's Environmental Assessment Requirements (SEARs) developed for the modification which are detailed in Appendix A (Environmental Assessment Requirements) of the Modification report. The SEARs were developed in consultation with the Department of Planning, Industry and Environment (DPIE). The Modification report details the proposed changes to the approved project and includes an environmental assessment of those changes.

#### A.1.6 Purpose of this document

During the public exhibition of the Modification report, a total of 1,278 submissions were received by the DPIE. The Secretary of the DPIE provided copies of the submissions to Transport for NSW. This Response to submissions report and the Design amendment report, has been prepared to respond to these submissions.

The Response to submissions report, together with the Design amendment report, has been provided to DPIE for review and assessment. As part of its assessment, DPIE will prepare an Environmental Assessment Report and recommendations that will be provided to the NSW Minister for Planning and Public Spaces for determination of the modification.

A copy of this Response to submissions report has been published by DPIE at the following website:

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

The NSW Minister for Planning and Public Spaces determination, including any additional CoA (if relevant) and the Secretary's Environmental Assessment Report, will be published on DPIE's website following determination.

This Response to submissions report has the following structure:

- Part A Introduction and overview of consultation and submissions received
- Part B Response to stakeholder submissions
- Part C Response to community submissions
- Part D Revised environmental management measures, conditions of approval and conclusion
- Appendix A Submitter identification number reference table.

#### A.1.7 Proposed modification and the Urban Design and Landscape Plan

The proposed modification provides a concept level of detail regarding the proposed overpass and active transport links, in comparison to the M4-M5 Link EIS. The concept level of detail the indicative alignment, height, width and form of structures and key features of the active transport links which are proposed. The modification application process also includes an assessment of the environmental impacts associated with this modification.

The Urban Design and Landscape Plan (UDLP) is being prepared as required by Condition E133 and Condition E134. The UDLP will be prepared for the entirety of the Rozelle Interchange project and would include the proposed future Rozelle Rail Yard open space and the infrastructure proposed as part of this modification.

The UDLP will be consistent with the concept designs proposed in this modification (if the modification is approved). However, the UDLP will provide further detail in relation to the design of proposed structures and active transport links including issues such as building materials, paving treatments, landscaping, lighting, wayfinding signage, seating, bins, public art opportunities and heritage interpretation opportunities.

The UDLP is to be prepared in consultation with the relevant local council, Infrastructure NSW (former UrbanGrowth NSW) and the local community, which includes landowners and businesses under Condition E134. The UDLP must be reviewed by the Design Review Panel and must respond to the outcomes of this review process.

## A.2 Community and stakeholder involvement

Consultation with the community and stakeholders has occurred during the preparation of the Modification report and during public exhibition of the modification as described in the sections below.

#### A.2.1 Consultation during the preparation of the Modification report

As detailed in Section 5.4.1 and Section 5.4.2 of the Modification report, Transport for NSW engaged and consulted with the community and stakeholders using various methods and tools during preparation of the Modification report. This was described in the consultation activities and consultation tools used included:

- Media releases to Sydney metropolitan news organisations
- M4-M5 Link Rozelle Interchange Community Update Brochure
- M4-M5 Link Rozelle Interchange Community Update Email
- Meetings with WestConnex Community Reference Groups Rozelle Interchange
- Meetings with:
  - Glebe Island/White Bay Community Liaison Group
  - Transport for NSW Sydney Light Rail
  - NSW Environment Protection Authority (EPA)
  - Sydney Water
  - Port Authority of NSW
  - Sydney Metro West
  - State Transit Authority
  - Infrastructure NSW (former UrbanGrowth NSW)
- Briefings/discussions with:
  - Inner West Councillors
  - Anthony Albanese Member of Parliament (MP)
  - Inner West Councillors and Inner West and City of Sydney Council Officers.

The Modification report did not include consultation activities that were undertaken with TAFE NSW Annandale and Annandale North Public School P & C immediately prior to public exhibition. Details of that consultation have been provided in **Section A.5.1** 

#### A.2.2 Consultation during public exhibition of the modification

The Modification report was placed on public exhibition for 35 calendar days from 21 August 2019 to 25 September 2019. During this period, consultation activities were carried out to provide community and stakeholders with an opportunity to find out detailed information about the proposed modification. The consultation activities included:

 Provision of a 'Community Guide to the M4-M5 Link modification' factsheet to residents, businesses and other stakeholders that could be potentially impacted by the proposed modification. This factsheet was distributed at the commencement of the public exhibition of the modification. It outlined how to make a submission and focused on the potential impacts related to the modification. It was issued to residents, businesses and other stakeholders located close to the modification in Rozelle and Annandale including Johnston Street and Bayview Crescent (<u>https://www.westconnex.com.au/sites/default/files/RI\_The%20Crescent\_Overpass\_Modification\_</u> <u>FINAL%20web.pdf</u>)

- Doorknocking potentially impacted residents, businesses and other stakeholders to explain the proposed modification and gather any feedback
- Sending emails directly to registered stakeholders, including residents, landowners, stakeholders, businesses and community groups
- Two information sessions delivered to the Annandale community
- One briefing session for Rozelle residents
- Briefing sessions for the Inner West Bike Users Group, Bicycle NSW and the Annandale Foreshore Community Group
- Providing webpage updates about the modification, which were published on www.westconnex.com.au and included information on how to make a submission.

In addition to the above, further consultation activities were undertaken with City of Sydney Council, community representative groups and other stakeholders. Details of those consultation activities are provided below in **Table A-1**.

All feedback was collated and has been presented in this Response to submissions report.

Table A-1: Details of consultation undertaken during the exhibition of the Modification report

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)
Annandale Residents Community Information Sessions (x2)	28 August 2019	······································	Concerns raised about the pedestrian connectivity in the area with the proposed changes including the inability to cross directly from the light rail stop side to the foreshore.	Any improvements to the proposed pedestrian connectivity will be explored as part of the submissions process.
modification by Transport for NSW.	Traffic surveys and modelling undertaken by Transport for NSW indicated that the right turn movement from Johnston Street to The Crescent (south) is not currently a heavily used movement and is not forecast to be a heavily used movement in the future.			
			Asked why the cyclist and pedestrian paths aren't separated on the shared user path bridge. Suggested it was dangerous for pedestrians.	The shared user path width does not allow for separated pedestrian and cyclist lanes.
		More details on the overpass design were requested, including on the barriers, street lighting and sign posting on the overpass.	Further details of the overpass design are subject to the detailed design being undertaken by the contractor.	

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)
Annandale Foreshore Community group	4 September 2019	Members of the Annandale Foreshore discussed details of the modification following the community information sessions.	What are the key criteria for requiring the overpass?	The modification is being proposed to improve the traffic performance of the intersection and ensure that the design is able to accommodate the proposed Western Harbour Tunnel project at City West Link and The Crescent, should that project proceed in the future (the EIS was placed on public display in January 2020).
			Is it possible to have the proposed overpass as an underpass?	The underpass option was considered but deemed not viable due to engineering challenges and constraints.
			The proposed change now means it is harder to get from the Annandale side across to the foreshore and Bicentennial Park. In addition, concerns about the extra set of traffic lights needed to cross from The Crescent to the foreshore were also raised.	As a result of the community feedback, Transport for NSW will be undertaking further traffic modelling to explore options to improve the pedestrian connectivity.
Inner West Bike User Groups and Bicycle NSW	11 September 2019	Members of the Inner West Bike User Group and Bicycle NSW were briefed on the modification.	Concerns about the pedestrian and cyclist connectivity with the proposed modification. The proposed change now means it is harder to get from the Annandale side across to the foreshore and Bicentennial Park.	As a result of the community feedback, Transport for NSW will be undertaking further traffic modelling to explore options to improve the pedestrian connectivity.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)
Rozelle residents briefing	16 September 2019Residents of the Rozelle community were briefed on the 	community were briefed on the	Concerns about the pedestrian and cyclist connectivity with the proposed modification.	As a result of the community feedback, Transport for NSW will be undertaking further traffic modelling to explore options to improve the pedestrian and cycling connectivity.
			Concerns about the lack of community consultation regarding the proposed modification.	The consultation was focused on highly impacted residents based on visual amenity, construction and operational noise impacts and active transport connectivity.
			Concerns about the visual amenity impacts of the proposed overpass.	Transport for NSW will be exploring options to amend the design as part of the submissions process.
City of Sydney	September	City of Sydney Chief Operating Officer and two officers were given an update on the Rozelle Interchange along with a briefing on the proposed modification.	Concerns the proposed overpass induces more traffic and motorists in the local area and doesn't factor in active transport. The proposed change now means it is harder to get from the Annandale side across to the foreshore and Bicentennial Park.	As a result of the community feedback, Transport for NSW will be undertaking further traffic modelling to explore options to improve the pedestrian and cycling connectivity.

#### A.2.3 Consultation following the public exhibition of the modification

After public exhibition of the Modification report and during the preparation of this Response to submissions report, Transport for NSW undertook further consultation. The details of the issues raised, and the responses provided during this consultation are provided in **Table A-2**.

#### Table A-2: Consultation following the public exhibition of the modification

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
Bicycle stakeholder groups workshop	21 November 2019	Workshop with the Bicycle User Group, Bikes NSW and Inner West Council	Will the overpass still be constructed if the Western Harbour Tunnel project is not approved?	The overpass will need to be built regardless of the Western Harbour Tunnel project. The overpass business case needs to be able to stand on its own merits, namely the benefits of improving the intersection performance and broader network.
			Will there be a separated cyclist and pedestrian lane on the shared user path bridge?	Due to the width constraints of the shared user path bridge, that will not be possible.
			Is it possible to put markings on the shared user path to make it clearer or encourage where cyclists and pedestrians should go?	The layout and design of the wayfinding signage will be established as part of the Urban Design Landscape Plan (UDLP) process in accordance with Condition 133 and Condition 134.
			Concerns about the noise impacts of the overpass on the pedestrians using the green link. Suggested the cyclist lane is put closer to the overpass and the pedestrian lane further away from the overpass.	Due to the width constraints of the green link, that will not be possible.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
			Why is a pedestrian underpass crossing The Crescent at the intersection with Johnston Street, where the existing signalised crossing is, not possible?	The width of the road is too narrow to achieve the gradients needed to construct an underpass. Additionally, an underpass would not present an ideal arrangement from a pedestrian safety perspective. As a result of the community feedback, Transport for NSW will be undertaking further traffic modelling to explore options to improve the pedestrian connectivity.
			Indicated that reinstating the existing signalised pedestrian crossing of The Crescent is a priority. Asked if cyclists are also able to use it.	Transport for NSW is investigating the possibility of reinstating the crossing. If this is done, bike lanterns would be included at the signals to accommodate cyclists.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
			What are the gradients on the proposed widened shared user path ramp going up to the Rozelle Bay light rail stop?	The proposed path from the light rail stop to The Crescent would have a grade of approximately 1 in 20. The ramp would be compliant with relevant Australian Standards including <i>Disability</i> <i>Discrimination Act 1992</i> (Cth) (DDA) requirements. Transport for NSW is investigating the possibility of widening the ramp to 4.5 metres, so it operates as a shared user path.
			Suggest gathering information about Opal card usage in the local area to understand which bus stops residents are using.	Transport for NSW to investigate Opal data.
			Will the shoulder area going south on The Crescent near the Chapman Road intersection stay with the new design?	Transport for NSW will investigate opportunities to retain that narrow shoulder area on The Crescent southbound during development of the detailed design.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
Jamie Parker (MP for Balmain)	18 February 2020	Briefing of The Crescent overpass and active transport links modification design refinements	Design refinements were positively received. No key issues or concerns raised. Positive feedback on the design refinement and consultation process received.	Comments noted.
Glebe Island and White Bay Community Liaison Group Meeting	10 March 2020	Briefing of The Crescent overpass and active transport links modification design refinements	Community member raised a question to Port Authority of NSW members on whether the removal of the right-hand turn in to James Craig Road would adversely impact on port operations. Port Authority of NSW responded and advised this would be investigated. No comments or issues raised regarding design refinements	Comments noted
Annandale Foreshore Community Group	13 March 2020	Briefing of The Crescent overpass and active transport links Modification design refinements	Improvements to pedestrian and cyclist access noted. Improvements to visual impact outcomes noted. Improvements to pedestrian safety noted. Retention of the right-hand turn from Johnson Street on to The Crescent positively received. Design refinements and consultation process were positively received.	Comments noted

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
WestProtects	13 March 2020	Briefing of The Crescent overpass and active transport links modification design refinements	Improvements to pedestrian and cyclist access noted. Improvements to visual impact outcomes noted. Improvements to pedestrian safety noted. Retention of the right-hand turn from Johnson Street on to The Crescent positively received. Positive feedback on the design refinement and consultation process received. Recommendation to investigate the separation of cyclists and pedestrians along the shared user ramp, even if only by using line marking.	Transport for NSW to investigate opportunities for separation of pedestrians and cyclists using line marking. Other comments noted.
Anthony Albanese (MP for Grayndler)	23 March 2020	Briefing of The Crescent overpass and active transport links modification design refinements	Re-affirmed strong opposition to the broader Project, to the proposed modification and the revised design.	Comments noted

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
Inner West Council	02 April 2020	Briefing of The Crescent overpass and active transport links modification design refinements	The revised design was positively received. Improvements to pedestrian and cyclist access at The Crescent, Johnston Street, and Chapman Road intersection were noted. General comment that the revised design was positive and reflected community concerns. A request for the indented bus bay to have shelter provision received.	Transport for NSW to investigate provision of shelter at the indented bus bay, however noted the constraints of the locality. Other comments noted
Bicycles NSW, and Inner West Bicycle User Groups	02 and 03 April 2020	Briefing of The Crescent overpass and active transport links modification design refinements	The revised design was positively received. General comment that the revised design was positive and reflected community concerns. General commentary received on regional and local cycle connections. Request that the cycle lane on Johnson Street be retained, and that the narrow shoulder along The Crescent southbound be retained. Request for bicycle lanterns to be incorporated into the design for the signalised crossing of Johnson Street.	Transport for NSW to investigate incorporating bicycle lanterns into the signalised crossing of Johnson Street. Other comments noted.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
Annandale North Public- School P&C	03 April 2020	Briefing of The Crescent overpass and active transport links modification design refinements	The revised design was positively received. General comment that the revised design was positive and reflected community concerns. Restated concerns regarding safety risk to school students associated with increased traffic demand on Johnson Street as a result of the modification. Requested clarification of the level of visual obstruction of the mural along The Crescent as a result of the proposed shared user path ramp.	Transport for NSW advised that the concerns regarding increased traffic demands on Johnson Street would be addressed in the Response to submissions report. Transport for NSW advised that the visual impacts on the mural along The Crescent would be consistent with what was proposed in the modification and the approved EIS. Other comments noted.

Meeting/Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at the time of the meeting)
Rozelle Interchange – Special Community Reference Group Meeting	07 April 2020	Briefing of The Crescent overpass and active transport links modification design refinements	The revised design was positively received. Request for visualisations of the revised design to state what year post-opening they represent. Request for Transport NSW to investigate as far as possible separation of cyclists and pedestrians along the proposed shared user ramp. Single comment regarding the loss of connection between green space provided by the shared user path bridge in the Modification design.	Transport for NSW to investigate opportunities for separation of pedestrians and cyclists using line marking. Transport for NSW to investigate adding post- opening time dates on visual renders showing the revised design. Other comments noted.
Port Authority of NSW	09 April 2020	Briefing of The Crescent overpass and active transport links modification design refinements	The revised design was positively received. Comment and discussion regarding the origin of the traffic modelling and data used to assess the impact of the loss of the right-hand turn from The Crescent on to James Craig Road.	Transport for NSW advised the assessment for the right- hand turn traffic movement from The Crescent on to James Craig Road was based on traffic data from the M4-M5 Link EIS. A detailed response is provided in the Response to submissions report.

#### A.2.4 Publication of the Response to submissions report

This Response to submissions report will be made publicly available on the DPIE website from 29 April 2020 at the following location:

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

The Design amendment report will be placed on public exhibition between 29 April and 13 May 2020. Submissions may be made on this report at the following location: <u>https://www.planningportal.nsw.gov.au/major-projects/project/16516</u>.

#### A.2.5 Display of the Urban Design Landscape Plan

The UDLP for the Rozelle Interchange will be prepared in accordance with Condition E134. Transport for NSW will place the UDLP on exhibition for a period of 28 calendar days and the community will have the opportunity to review the plan and submit their comments to Transport for NSW. Transport for NSW and the Rozelle Interchange contractor will develop a communications strategy to outline the various consultation activities to be undertaken during this exhibition period.

#### A.2.6 Consultation during construction of the project

Consultation during construction of the project is being undertaken in accordance with the relevant CoA for the project. Communication and consultation with stakeholders and the community would focus on providing updates on construction activities and program, responding to enquiries and concerns in a timely manner and minimising potential impacts where possible. During construction, a dedicated community relations team will deliver:

- A detailed Communication Strategy (identifying relevant stakeholders, procedures for distributing information and receiving/responding to feedback, and procedures for resolving stakeholder and community complaints during construction and operation) as required by Condition B1
- Notification letters and phone calls to residents and businesses directly affected by construction works, changes to traffic arrangements and out-of-hours works
- Face-to-face meetings with landowners as needed
- Regular community updates on the progress of the construction program
- Regular updates to the WestConnex website (www.westconnex.com.au)
- Media releases and project advertising in local and metropolitan English language and non-English language newspapers to provide contact information for the project team
- Site signage around construction ancillary facilities
- 24-hour, toll-free project information and complaints line, a dedicated email address and postal address.

A Complaints Management System will be in place for the duration of construction as required by Condition B8. This system will include the recording of complaints and how the complaint was addressed (within a Complaints Register). The system will be maintained during construction by the relevant contractors and will be made available to the Secretary of DPIE.

A Community Complaints Mediator will oversee the Complaints Management System and will follow-up on any complaint where the public is not satisfied with the response as required by Condition B13.

A Public Liaison Officer for construction of ancillary facilities and for utility works will be appointed as required by Condition B6.

A website providing information in relation to the project has been established (<u>www.westconnex.com.au/projects/m4-m5-link-rozelle-interchange</u>) and will be maintained for the duration of works, and for a minimum of 24 months following the completion of construction of the project as required by Condition B17.

## A.3 Submissions received

#### A.3.1 Submitters

The modification public exhibition period of five weeks commenced on 21 August and ended on 25 September 2019. Submissions in response to the Modification report were received and accepted by DPIE during the public exhibition period via:

- Electronic submission (online) www.planningportal.nsw.gov.au/major-projects/
- Email plan\_comment@planning.nsw.gov.au
- Post Major Projects Assessment, NSW Department of Planning, Industry and Environment, GPO Box 39, Sydney, NSW, 2001.

A total of 1,278 submissions from 1,211 submitters were received in response to the Modification report. The types and numbers of submissions have been summarised in **Table A-3**.

Table A-3: Summary of submissions

Submitter type	Number of submissions
Community	1,245
Organisation	24
Public Authorities	9
Total	1,278

The following public authorities provided a submission in response to the Modification report:

- City of Sydney Council
- Inner West Council
- Port Authority of NSW
- NSW Environment Protection Authority (EPA)
- NSW Health: Sydney Local Health District
- NSW Roads and Maritime Services Maritime.

The following public authorities reviewed the Modification report and noted that they had no comment on the proposed modification:

- NSW Department of Primary Industries
- NSW DPIE (Environment, Energy and Science Group)
- NSW DPIE (Environment, Energy and Science Group) Office of Environment and Heritage.

#### A.3.2 Overview of issues raised in submissions

Submissions from key stakeholders and the community raised the following key concerns:

- The justification provided for the proposed overpass was not sufficient
- The impacts associated with the proposed overpass would outweigh any of the claimed benefits
- The quality of the options assessment undertaken for key elements of the modification such as the overpass and key active transport links was inadequate. An underpass or at grade intersection option was preferred rather than an overpass
- The changes proposed to the approved active transport links as a result of the proposed overpass would reduce pedestrian/cycling connectivity, increase travel distances and travel times, and reduce the amenity and safety of pedestrians and cyclists
- The proposed overpass and the shared user path bridge were visually intrusive and obstructed views towards Rozelle Bay, Anzac Bridge and the city skyline
- The proposed overpass and the shared user path bridge were not consistent with the character of the surrounding area
- The proposed urban design and landscaping treatment for the southern portion of the 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
- 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
- The removal of the right turn movement from Johnston Street to The Crescent (southbound) would detrimentally impact on local connectivity and result in redirected traffic using alternative routes that are less convenient, and in some cases, not safe
- The removal of the right turn movement from The Crescent (eastbound) to James Craig Road would detrimentally impact on connectivity to port related businesses in the Rozelle Bay, Glebe Island and White Bay areas and the proposed station precinct for the Sydney Metro West project. This would result in redirected traffic using alternative routes that are less convenient
- The elevated overpass is not consistent with the WestConnex commitment to minimising visual impacts through placing roads underground.

A response to all of the issues raised by stakeholders and the community is detailed in **Part B** (Response to public authority submissions) and **Part C** (Response to community and organisation submissions).

# A.4 The revised design

In response to some of the issues raised in submissions, Transport for NSW is proposing a number of design changes (the revised design) to achieve improved connectivity, visual amenity and urban design outcomes. These design changes include:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the Pedestrian and cycling green link (green link). This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline
- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Increasing the width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed
- Retaining the right-hand turn movement from Johnston Street to The Crescent (southbound)
- Removing the proposed shared user path bridge (shared user path bridge) between the proposed Rozelle Rail Yards open space and the eastern side of The Crescent.

A full description of the revised design and associated environmental assessment is provided in the *WestConnex M4-M5 Link, Rozelle Interchange – Modification: The Crescent overpass and active transport links, Design amendment report* (Transport for NSW, April 2020) (Design amendment report).



Figure A-1 The revised design

Imagery © Nearmap (2020)



Figure A-2: Indicative aerial view of the City West Link intersection (10 years following the project opening)

## A.5 Modification report clarifications

This section describes clarifications to the Modification report to address, errors and discrepancies. Where relevant, the text provided can be considered to replace the text from the Modification report.

None of the minor errors and discrepancies would result in any significant change to the outcomes of the environmental assessment described in the Modification report.

### A.5.1 Consultation during the preparation of the Modification report

Section 5.4.1 and 5.4.2 of the Modification report (pages 5-5 to 5-9) did not include consultation activities that were undertaken with TAFE NSW Annandale and Annandale North Public School P & C due to the consultation being undertaken immediately prior to public exhibition. Details of consultation with those stakeholders is outlined in **Table A-4**.

Meeting/ Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)	
TAFE NSW, Annandale	13 August 2019	Staff from TAFE NSW, Annandale were provided with a project update, including a briefing of the	Asked if modification would impact street parking around the TAFE.	The modification will result in the permanent loss of two spaces on the north end of Johnston Street, Annandale.	

Table A-4: Additional consultation undertaken during the preparation of the Modification report

Meeting/ Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)	
		overpass and active transport links modification.	Asked if pedestrian and cyclist access routes are maintained during construction	All pedestrian and cyclist access routes must be maintained during construction in accordance with Condition E57.	
Annandale North Public School P&C	14 August 2019	The president and members of the Annandale North Public School P&C were provided with a project update, including a briefing of the overpass and active transport links modification.	Safety concerns raised about the four sets of traffic lights the school children would need to cross from Johnston Street to reach Bicentennial Park. They indicated that the school children use Bicentennial Park regularly as there are no sports fields at the school.	After consideration of the issues raised in the submissions, Transport for NSW is proposing a number of design changes including the retention of the existing at grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street. In addition to the retention of this crossing, Transport for NSW is also proposing to upgrade the usability of the crossing by making it wider, applying pavement treatments, installing a pedestrian refuge and introducing bicycle lanterns. As a result of this change, the multiple crossings of The Crescent and Chapman Road proposed in the initial Modification report are no longer being proposed	
			Raised safety concerns about the increased number of heavy vehicles outside the school on Johnston Street as a result of WestConnex.	The number of trucks on Johnston Street is likely to be a result of increased construction from a number of projects in the area.	

Meeting/ Briefing	Timing	Details	Feedback/Comments	Transport for NSW (response at time of meeting)
			Suggested safety improvements to the areas outside of the school	Explained that the school is outside of the project footprint and any safety improvements need to be investigated by Sydney Division within Transport for NSW. Explained we would put them in touch with Sydney Division.

### A.5.2 Air quality receptors

Section 6.5.1 of the Modification report (page 6-39) incorrectly identifies that predicted operational air quality impacts were assessed at 386 residential, workplace and recreational receptors surrounding the Rozelle Interchange.

The correct number of receptors is 400 as identified in sections 2.2.2 and 6 of Appendix D (Air quality assessment) of the Modification report.

### A.5.3 M4 exit ramp

In section 6.3.3 of the Modification report (page 6-10) there is reference to 'congestion on the Western Distributor and Anzac Bridge is forecast to cause queuing in the Iron Cove Link and on the M4 exit ramp.' The reference to the 'M4 exit ramp' should be to the 'M4-M5 Link exit ramp to Anzac Bridge'.

This clarification also applies to similar text on pages 25, 26 and 39 in Appendix B (Traffic and transport assessment) of the Modification report.

### A.5.4 Footpath ramp

Section 4.4.3 of the Modification report describes that a new shared user path ramp would connect between the green link and Rozelle Bay light rail stop and the at grade footpath on the western side of The Crescent. The correct arrangement is shown on Figures 4-1, 4-3 and 4-5 of the Modification report which includes a pedestrian ramp between the green link and Rozelle Bay light rail stop and the western side of The Crescent. This is the same arrangement as proposed for the approved project.

In response to some of the issues raised in submissions, Transport for NSW is now proposing to increase the width of this proposed ramp to around 4.5 metres to allow for shared use by pedestrian and cyclists. Details regarding this change are provided in Section 3 of the Design amendment report.

### A.5.5 Consultation with Jamie Parker

Table 5-4 of the Modification report states that a briefing for Jamie Parker (Member for Balmain) on the proposed modification was undertaken on July 15 2019 and that no concerns were raised in regard to the green link, the overpass or the shared user path bridge. While a briefing was undertaken by Roads and Maritime on 15 July 2019 and included some discussion of the modification, this briefing included a variety of issues including parking changes at Iron Cove and Lilyfield Road and did not include a detailed discussion of the proposed modification.

### A.5.6 Right-turn movement into James Craig Road

Sections 4.1.10, 4.2.10 and 6 of Appendix B (Traffic and transport assessment) of the Modification report stated the maximum forecast peak hour demand from Johnston Street and The Crescent (south) and turning right into James Craig Road in the 'with project' and 'cumulative' scenarios is about 40 vehicles in the 2033 AM peak hour. The correct number, under these scenarios, should be up to a maximum of 66 vehicles in the peak hours. The majority of traffic turning right into James Craig Road originates from City West Link.

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Response to stakeholder submissions

# B. Part B – Response to stakeholder submissions

The following stakeholders provided a submission in response to the Modification report and a response to each submission is provided in this chapter:

- City of Sydney Council (refer to **Section B.1**)
- Inner West Council (refer to Section B.2)
- Port Authority of NSW (refer to Section B.3)
- NSW Environment Protection Authority (EPA) (refer to Section B.4)
- NSW Health: Sydney Local Health District (refer to Section B.5)
- NSW Roads and Maritime Services Maritime (refer to Section B.6).

The following stakeholders reviewed the Modification report and provided a submission noting that they had no comment on the proposed modification:

- NSW Department of Primary Industries
- NSW Department of Planning, Industry and Environment (DPIE) Environment, Energy and Science Group
- NSW DPIE (Environment, Energy and Science Group) Office of Environment and Heritage.

# B.1 City of Sydney Council

### B.1.1 Traffic and transport

### Induced traffic

#### Issue description

The Crescent overpass will enable the removal of a signal phase at the intersection of City West Link and The Crescent. This will increase the traffic capacity between City West Link and The Crescent (North), and between The Crescent (East) and The Crescent (North). This will induce traffic onto the Anzac Bridge (and the City Centre) and along Johnston Street and to the areas beyond. The Council is of the view that the WestConnex traffic modelling inputs relied upon by the proponent, which are based on the 'predict and provide approach', are invalid and as a result it disputes the traffic impacts outlined in the Modification report. Council is of the view that, based on regional road capacity increases, the induced traffic on local streets such as Johnston Street could potentially be significantly higher.

### Response

In addition to other needs, the proposed modification is required in order to:

- Improve intersection performance on this congested section of the road network, including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections (refer to Table B-1)
- Improve capacity at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections so they can maintain performance with traffic generation from future development proposed in the vicinity of the project, including the proposed Western Harbour Tunnel and Warringah Freeway Upgrade project (Western Harbour Tunnel project), if that development proceeds.

The operational traffic assessment for the proposed modification, refer to Appendix B (Traffic and transport assessment) of the Modification report, indicated that during the AM and PM peak hours the overall modelled network performance metrics (such as travel times, intersection performance and queue lengths) are comparable to or slightly improved by comparison to the Environmental Impact Statement (EIS).

Some increases in traffic volumes are forecast on parts of the road network as a result of the proposed modification. These include 2,500 additional vehicles per day on Johnston Street (less than 10 per cent change), 1,500 additional vehicles per day on Anzac Bridge (less than one per cent change) and around 400 additional vehicles per day on The Crescent (south) (less than four per cent change). These increases are not considered significant and are expected to have minimal impact on traffic performance and safety on these roads given high existing traffic volumes (refer to **Figure B-1** and **Figure B-2**) and the intended function of these roads in the road network.

Increased traffic volumes able to enter the network as a result of the proposed modification are likely to impact on parts of the road network that are already congested such as:

- Victoria Road northbound in the AM peak, which is already affected by tidal flow arrangements in Drummoyne
- Anzac Bridge/Western Distributor in the AM peak, which is already affected by queuing back from Bathurst Street and the Sydney Harbour Bridge.

During the PM peak hour, the results for the proposed modification are similar to those in the EIS, with the difference considered to be minimal and non-significant.

Induced demand on the wider network is discussed in Section 4.2.1 in Appendix H of the EIS, along with Section B11.8.21 of the Submissions and Preferred Infrastructure Report (SPIR). Induced demand as a result of the project is predicted to equate to about 0.3 per cent additional daily trips in the Sydney metropolitan area in 2033. This percentage would vary by geographic location and assessment area and is not anticipated to be affected by the proposed modification. The forecast percentage changes indicate that the Sydney (Local Government Area) LGA would experience reductions in both daily vehicle kilometres and vehicle hours travelled of two per cent in 2033 as a result of the project. The modification has adopted a similar modelling approach, future year scenarios and assumptions to the EIS to enable a meaningful comparison of results.

For further information in response to concerns about the WestConnex and M4-M5 Link EIS traffic modelling approach, see Section C8.1.1 of the SPIR.

The traffic related impacts of the proposed modification would be mitigated through the environmental management measures (EMM) and Conditions of Approval (CoA) of the approved project. These include:

- EMM OpTT3: requires Transport for NSW to develop a strategy to ensure appropriate network integration in the areas surrounding the Rozelle Interchange
- Condition E63: requires preparation of a road network performance plan in consultation with the relevant councils
- Condition E64: requires preparation of an operational road network performance review which must confirm the adequacy of the mitigation measures identified in the road network performance plan within 12 months and five years after the commencement of operation of the full Critical State Significant Infrastructure (CSSI).

Table B-1: Rozelle Interchange: key intersection performance (LoS) – Peak hour

Key intersections		Year 2023			Year 2033				
	Base	Project EIS	Cumulative EIS	Project Modification	Cumulative Modification	Project EIS	Cumulative EIS	Project Modification	Cumulative Modification
AM peak hour				•			1		
City West Link/M4-M5 link ramps	_	В	В	А	В	В	В	В	В
City West Link/The Crescent	В	С	С	В	В	D	С	С	С
The Crescent/James Craig Road	А	В	A	А	А	В	В	В	В
Victoria Road/The Crescent	В	С	С	В	В	D	D	С	С
The Crescent/Johnston Street/Chapman Road*	С	С	С	С	С	С	F	С	С
PM peak hour									
City West Link/ M4-M5 link ramps	-	В	В	А	А	В	С	А	В
City West Link/The Crescent	D	В	С	В	В	С	С	В	В
The Crescent/James Craig Road	В	А	A	А	А	А	А	А	А
Victoria Road/The Crescent	F	С	С	С	С	С	С	С	С
The Crescent/Johnston Street/Chapman Road*	F	F	F	С	С	F	F	Е	D

\*As a result of the submissions following public exhibition of the Modification report, Transport for NSW has revised the design that would impact the intersection performance of The Crescent / Johnston Street / Chapman Road intersection compared to the approved project (EIS) and modification designs. This is discussed further in Section 3.1 of the Design amendment report



Figure B-1: Difference in Average Weekday Traffic between 2023 'with project' EIS and 'with project' modification scenarios



Figure B-2: Difference in Average Weekday Traffic between 2033 'with project' EIS and 'with project' modification scenarios

### Need for additional capacity between City West Link and The Crescent (North)

### Issue description

It is unclear why additional capacity between City West Link and The Crescent (North) is needed given that WestConnex will free up significant capacity along this link through the provision of the new WestConnex tunnels between Haberfield and St Peters Interchange.

### Response

In the EIS, the approved project is predicted to reduce traffic on City West Link east of the M4 East Wattle Street ramps by about 25 per cent in the 2023 and 2033 'with project' and 'cumulative' scenarios. This is a result of surface traffic transferring to the new motorway tunnels following opening of the M4-M5 Link project.

While the EIS traffic modelling identified that traffic volumes would be reduced in some areas, the Johnston Street/The Crescent intersection was predicted to operate at Level of Service (LoS) F in the AM and PM 2033 cumulative scenarios, with congestion leading back onto Johnston Street and further south on The Crescent. As a result, the road network including the City West Link, The Crescent and Johnston Street intersections require a solution to improve network performance and traffic capacity. The modification would serve to:

- Improve intersection performance on the congested section of the road network nearby the project footprint, including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections (refer to **Table B-1**)
- Improve capacity at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman intersections so they can maintain performance with traffic generation from future development proposed in the vicinity of the project, including the proposed Western Harbour Tunnel project, if that development proceeds.

Large infrastructure projects have long lead-times and can be disruptive to communities during construction. Once built these projects can also be difficult and costly to alter. The proposed modification has identified a series of improvements to ensure that the Rozelle Interchange project produces the best operational traffic outcomes and is constructed efficiently, and, in a manner, which avoids the need for subsequent alterations, thereby resulting in reduced amenity impacts for the local community.

### Accessibility for local residents because of increased traffic along The Crescent

#### Issue description

The reconfiguration of the intersection of The Crescent and Johnston Street would encourage greater throughput of traffic along The Crescent, resulting in accessibility issues and impacts to residential amenity.

#### Response

A relatively small increase in traffic volumes is forecasted along The Crescent in the area to the south of Johnston Street of about 400 vehicles per day (less than a four per cent change) or 10-20 vehicles in each of the 2033 AM and PM peak hours. Therefore, impacts on accessibility and residential amenity along this section of The Crescent are not anticipated. It is noted that both Johnston Street and The Crescent are State Roads with two and one lane in each direction respectively. A sensitivity test was undertaken which indicated that the predicted increase in traffic on Johnston Street and The Crescent had minimal impact on wider network performance.

Operational road traffic noise levels are expected to generally be comparable to the approved project, with noise levels for the proposed modification being within -0.5 dBA to +0.5 dBA of the EIS noise levels for the majority of receivers in the study area. This relatively small increase is however sufficient to result in additional exceedances of (NML) on Johnston Street in both the *Do Something* and *Do Something Plus* scenarios. No additional operational traffic noise exceedances were predicted for receivers along The Crescent (south). Noise mitigation will be investigated further during detailed design and, if confirmed as part of the Operational Noise and Vibration Review (ONVR) required by Condition E92, at property treatments would be considered as the preferred noise treatment.

### Chapman Road

### Issue description

As a result of removing the right turn from Johnston Street to The Crescent (southbound) there is likely to be increased use of Chapman Rd by drivers making U-turns and then turning left into The Crescent (southbound). This will lead to a decrease in parking, amenity and safety on Chapman Road for those accessing the park and encourage higher speeds in a low speed environment.

### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes retention of the existing right turn movement from Johnston Street to The Crescent southbound. This will remove the requirement for drivers to use alternate routes or perform a U-turn on Chapman Road. Assessment of the potential impacts associated with this design change is provided in Section 3.1 of the Design amendment report.

As outlined in Section 4.4.2 of the Modification report, no permanent changes are proposed to Chapman Road during operation beyond minor kerb and line marking adjustments to tie in with the upgraded intersection layout.

Four parking spaces at the western end of Chapman Road would be temporarily removed during construction to facilitate the use of the C6 civil site, however these spaces would be reinstated following completion of construction. As a result, there would be no permanent loss of parking on Chapman Road.

### B.1.2 Noise and vibration

### Issue description

As a result of an increase in the project footprint, construction works will now result in additional noise and vibration impacts to residences and facilities including TAFE NSW — Annandale.

### Response

The modification would result in an expansion of the project footprint along relatively small sections of Johnston Street, The Crescent and Chapman Road (refer to **Figure B-3**).

Works within the expanded footprint would occur within the existing road reservations and generally consist of pavement works including milling, re-sheeting, relocation of traffic signals, kerb adjustments and line marking. Some of those works are likely to be carried out as out-of-hours works, and therefore have the potential to result in construction noise impacts to a limited number of additional residential receivers. It is noted that affected receivers are generally adjacent to, or near, major roads and therefore are subject to relatively high existing noise levels.

The works around The Crescent, Chapman Road and Johnston Street may impact a relatively small number of additional receivers within Noise Catchment Area (NCA) 21 during day and night-time works given the need to complete construction work for the proposed modification further to the south and east than was assessed for the approved project. Overall the predicted impacts are comparable to existing operational traffic noise levels and consistent with the construction noise impacts presented in the EIS.

It is proposed to modify the figure in Appendix D of the CoA that relates to Condition E87 for out-of-hours works mitigation. The noise treatment zone would be extended on that figure to include the additional receivers impacted by proposed out-of-hours construction works in this area (refer to **Figure B-4**). Construction noise impacts would also be managed in accordance with the Construction Noise and Vibration Management Plan (CNVMP) required by Condition C4.

Appendix C (Noise and vibration assessment) of the Modification report outlines that construction noise impacts are predicted at the Petersham College, Annandale TAFE during the daytime period. Out-of-hours construction works are likely to occur outside of the normal operating hours of the TAFE.

Condition E80 requires that noise generating works in the vicinity of educational institutions must not be scheduled during sensitive periods unless other reasonable arrangements have been made with the affected institution.

Targeted consultation regarding potential impacts has been undertaken with TAFE NSW and surrounding residences during exhibition of the Modification report (refer to **Section A.2**). Consultation would continue throughout the construction period.



Imagery © Nearmap (2020)



Figure B-4: Additional at-property noise treatment zone (compared to the EIS)

### B.1.3 Urban design and visual impact

### Visual impacts on the surrounding area during operation

#### Issue description

The cumulative visual impact of the overpass, pedestrian and cycling green link and shared user path would significantly change the quality and visual amenity of the surrounding area.

### Response

In Section 6.7 of the Modification report the visual impacts of The Crescent overpass (the overpass), pedestrian and cycling green link (the green link) and shared user path bridge from a number of sensitive viewing locations have been assessed and photomontages were prepared to assist in demonstrating the visual impact.

The assessment considered the effects of the modification as a standalone project and then assessed the cumulative impacts of the modification in association with approved elements of the M4-M5 Link project such as the tunnel portals, ventilation building and outlets.

The existing visual character of the area is dominated by multi-lane arterial roads, several elevated bridge structures, port related maritime uses and an elevated light rail corridor. As part of the approved project there are also a number of prominent structures to be constructed in the Rozelle Rail Yards including a ventilation building, ventilation outlets, tunnel portal and the green link which crossed the City West Link and The Crescent. In the wider area there are a number of visually prominent structures such as the White Bay Power Station, the Glebe Island Grain Silos and the Anzac Bridge.

As detailed in the EIS, most of the mature tree plantings in the former Buruwan Park, within and adjacent to sections of the light rail corridor and along the east side of The Crescent have been removed as part of construction works associated with the approved project. As a result, the character along this section of The Crescent is now more open and exposed. Replacement tree planting will be proposed as part of the UDLP and in accordance with the requirements detailed in Condition E177.

The overpass and the green link introduce new structural elements into this existing local context but not elements which are totally foreign to the character of the area. These new elements are located within the existing road corridor and are physically separated from the closest residential areas by the elevated light rail corridor to the west and the proposed Rozelle Rail Yards open space area to the north.

The visual impacts from the proposed modification were assessed as being generally consistent with the approved project with exception of the residents located in the northern part of the apartments at 300 Johnston Street and Bayview Crescent. As a result of the additional elevated elements from the proposed modification, including the shared user path bridge and the overpass, the residents at this location would experience an increased visual impact by comparison to the infrastructure assessed in the EIS.

Transport for NSW has revised the design to address the feedback received from the submissions and stakeholder workshops. Changes most relevant to visual impacts include:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline
- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Removal of the proposed shared user path bridge (shared user path bridge) between the proposed Rozelle Rail Yards open space and the east side of The Crescent.

These changes will help to reduce the visual impacts associated with the proposed modification and will result in an improved outlook for nearby residents and for users of the green link looking east and north east towards Rozelle Bay, Anzac Bridge and the city skyline. See Section 3.3 of the Design amendment report for the landscape character and visual impact assessment of the revised design

Indicative visualisations of modification are presented in Figure B-5 to Figure B-9.



Figure B-5: Indicative view looking east from City West Link (10 years following project opening)



Figure B-6: Indicative view looking west from The Crescent (east) (10 years following project opening)



Figure B-7: Indicative view from the green link towards the Rozelle Bay light rail stop (10 years following project opening)



Figure B-8: Indicative view from the Rozelle Bay light rail stop along the green link (10 years following project opening)



Figure B-9: Indicative view from the Rozelle Bay light rail stop looking south east (10 years following project opening)

### Pedestrian and cycling green link configuration

### Issue description

To be consistent with current government policies and best practice the green link should be:

- Separated for users walking and riding
- Have at least three metres for the cycleway
- Have at least three metres for the footpath
- Have some separation between the cycleway and the footpath.

#### Response

The overall width of the green link would be approximately 15 metres, inclusive of two planting zones (one either side of the bridge) and a central shared user path. The width of the two planting zones on either side of the bridge would be approximately four metres each, leaving a seven-metre width for the shared user path. This width is considered to be sufficient to allow for the appropriate separation of pedestrians and cyclists. The shared user path would be line marked and signposted. In addition, the clear width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent would be increased to 4.5 metres to allow for the shared use by pedestrians and cyclists (refer to **Figure B-10** and **Figure B-11**).

Condition E134 requires the preparation of an Urban Design and Landscape Plan(s) in consultation with the relevant council, Infrastructure NSW (former UrbanGrowth NSW), the community and affected landholders and businesses. In preparing this Plan feedback from each of those parties will be considered in finalising the design for the active transport links.





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Figure B-10 The revised design - cross sections 1 & 2





Imagery © Nearmap (2020)



Figure B-11 The revised design - cross sections 3 & 4

### B.1.4 Active transport

### General pedestrian and cyclist impacts

### Issue description

The reconfiguration of the intersection of The Crescent and Johnston Street reduces the quality of pedestrian connectivity between Bicentennial Park and the surrounding area, including the Rozelle Bay light rail stop. The proposed arrangement will disadvantage people walking to and from Annandale and the park and encourage non-compliant behaviour.

Updated journey times and delays should be provided given that the proposal would require three signalised crossings between Bicentennial Park and Annandale. It is further recommended that bicycle lanterns be included on all pedestrian crossings.

### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes retaining, widening and upgrading the existing atgrade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed. In addition to the retention of this crossing, Transport for NSW is also proposing to upgrade the usability of the crossing by making it wider to approximately six metres. The revised design and the associated traffic and transport impacts are discussed further in Section 3.1 of the Design amendment report.

### Connectivity to public transport

#### Issue description

No direct bicycle route is proposed between the bus stop and green link (near the Rozelle Bay light rail stop). The proposed arrangement would require riders to dismount to make this movement.

#### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes increasing the clear width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for a fully compliant shared user path for both pedestrian and cyclists. Further, the existing shared user path from Railway Parade, under the light rail bridge that connects to the re-aligned City West Link/The Crescent intersection would be retained, together with a signalised at-grade crossing of The Crescent at this location. The revised design and the associated traffic and transport impacts are discussed further in Section 3.1 in the Design amendment report.

# Shared user path bridge compliance with Crime Prevention Through Environmental Design principles

#### Issue description

The proposed design of the shared user path bridge including long inclines and declines, and relative isolation will make it an unattractive route and result in risks to personal security due to a lack of passive surveillance. The bridge is not considered to be consistent with Crime Prevention Through Environmental Design (CPTED) principles and would reduce accessibility levels for active transport users of Bicentennial Park.

### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the removal of the proposed shared user path bridge between Rozelle Rail Yards and the east side of The Crescent.

Pedestrians and cyclists wishing to travel from Rozelle Rail Yards open space area to the foreshore adjacent to Rozelle Bay would travel south using the green link and shared user path ramp to the west side of The Crescent and then east across The Crescent using the upgraded at-grade signalised crossing. This is an improved route and would be quicker and safer in comparison to the shared user path bridge proposed in the Modification report. The revised design and the associated active transport impacts are discussed further in Section 3.1 of the Design amendment report. Passive surveillance of pedestrians and cyclists using this route would be available from the Rozelle Rail Yards open space area, Rozelle Bay light rail stop and passing traffic using surrounding roads, including the overpass.

### Shared user path bridge design

### Issue description

To provide a shorter route and improve safety for customers it is recommended that stairs and lifts be provided at either end or the width be increased to at least seven metres to allow for a three-metre cycleway divided from a three-metre pedestrian path.

### Response

As outlined in Section B.1.4 Transport for NSW is no longer proposing the shared user path bridge.

### **B.2 Inner West Council**

### **B.2.1 Strategic justification**

### Justification for the modification

### Issue description

The major justification for the modification is access to the proposed future Western Harbour Tunnel project which has not yet been approved. Further concerns relate to predicted network outcomes resulting from the modification, including Level of Service, which do not justify the modification.

### Response

The proposed modification is required in order to:

- Improve intersection performance on this congested section of the road network, including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections
- Improve capacity at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections so that they can maintain performance with traffic generation from future development proposed in the vicinity of the project, including the proposed Western Harbour Tunnel project, if that development proceeds.

As detailed in section 4.2.1 of Appendix B (Traffic and transport assessment) of the Modification report, the operational traffic assessment assumes there no surface connections between the proposed Western Harbour Tunnel project and City West Link. This is the same assumption as was adopted in the traffic assessment for the M4-M5 Link EIS. The operational traffic impacts associated with the surface connections to City West Link have been assessed as part of Western Harbour Tunnel and Warringah Freeway Upgrade EIS.

The Modification report predicted LoS for several key intersections in 2023 and 2033 comparing the EIS design to the proposed modification. This analysis shows that the proposed modification will result in comparable or improved intersection performance at The Crescent/Johnston Street, The Crescent/City West Link and The Crescent/Victoria Road in both future year scenarios. That analysis is reproduced in **Table B-1** focusing on the adjacent intersections in Rozelle and Annandale which are likely to be impacted by the operation the proposed overpass. Responses to issues such as potential increased traffic volumes resulting from the proposed modification and the potential impact on network performance and travel times are outlined in **Section B.1.1**.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes retaining, widening and upgrading the existing atgrade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed. The revised design and the associated active transport impacts are discussed further in Section 3.1 of the Design amendment report.

Transport for NSW undertook surveys of this intersection in September 2019 to review traffic and pedestrian and cyclist volumes. Transport for NSW reviewed the survey results and undertook additional modelling of the intersection with the existing at-grade signalised crossing of the intersection and the existing right turn movement from Johnston Street to The Crescent (south) retained. A summary of the pedestrian and cyclist numbers at this intersection as recorded in this survey is provided in Section 3.1 of the Design amendment report.

Compared to the EIS models, the intersection performance in the 2023 AM peak hour indicated a small improvement, although the LoS remained at LoS C, while there was a significant improvement in delay in the PM peak hour, with the LoS improving from LoS F to LoS E. In 2033, the performance in the AM and PM peak hours shows similar trends to the performance results in 2023.

A comparison of LoS for the EIS, modification and the revised design in 2023 and 2033 is presented in Section 3.1 of the Design amendment report.

### Alternatives considered including commitment to locate the Rozelle Interchange underground

### Issue description

Given commitments to locate the entire Rozelle/Lilyfield interchange underground, the addition of an overpass is not in accordance with this commitment.

### Response

Various options were considered (refer to **Figure B-12**) to meet the aims of the proposed modification. As outlined in Section 4.3.1 of the Modification report, three main options were considered to improve the performance of The Crescent and City West Link intersection during operation of the project. These options are shown in **Figure B-12** and included:

- EIS arrangement (option 1) an at-grade signalised intersection containing three right turn lanes from The Crescent (northbound) to The Crescent (eastbound).
- The underpass (option 2) a tunnel underpass connecting The Crescent (northbound) to The Crescent (eastbound)
- The overpass (option 3) an overpass consisting of two lanes connecting The Crescent (northbound) to The Crescent (eastbound).

The overpass option was considered the preferred option when considering a variety of engineering and environmental constraints including constructability and cost, intersection performance, active transport connectivity, visual impact and urban design considerations.

The at-grade option does not provide adequate intersection performance or capacity to handle traffic from future projects. Also, this option would result in widening of road carriageway into adjacent open space areas to the north within Rozelle Rail Yard and to the east along the foreshore of Rozelle Bay, which is not preferred.

The underpass option would need to navigate below existing drainage infrastructure as a result increasing the tunnel gradients. It would require an existing Ausgrid high voltage cable to be relocated with significant implications for the construction program and overall construction costs. It would also be more challenging from a constructability perspective requiring traffic lane closures and diversions over an extended period of time in a particularly busy section of the arterial road network. For these reasons this option was not preferred.

The options assessment undertaken for the Crescent/City West Link intersection in the Modification report has been updated to reflect some of issues raised in the submissions received during the public exhibition period and the results of option assessment work previously undertaken by Transport for NSW. The updated options assessment is provided in **Table B-2**.

The proposed overpass (option 3) forms an upgrade to the arterial road network within Annandale and Rozelle. It does not form part of the motorway interchange associated with the Rozelle Interchange, which remains mostly underground as previously stated and approved.



Figure B-12 Options considered for the intersection of The Crescent and City West Link

Table B-2: Options assessment for The Crescent/City West Link intersection

Option	Description	Discussion
At-grade	An at-grade signalised intersection	The arrangement proposed in the EIS would result in a number of benefits including:
intersection arrangement	containing three right turn lanes from The Crescent (northbound) to The Crescent	Minimal visual change by comparison to the existing arrangement
(EIS)	(eastbound).	• Improved active transport connectivity from the Rozelle Rail Yards to Chapman Road and Annandale using the green link alignment proposed in the EIS design.
		The EIS arrangement would be subject to several disadvantages:
		• The at-grade intersection arrangement would result in inferior intersection performance by comparison to the other options and as a result would negatively impact on the road network in this area of Rozelle and Annandale
		• The arrangement would not provide sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval
		Additional future works would likely be required at the intersection to provide additional capacity resulting in extension of the construction program
		• To further upgrade the at-grade intersection to achieve satisfactory capacity would require further widening of the road carriageways within the Rozelle Rail Yards and along the Rozelle Bay foreshore.
The	A tunnel underpass connecting The	The underpass option would result in a number of benefits including:
underpass	Crescent (northbound) to The Crescent (eastbound).	Improvement in intersection performance relative to the at-grade (EIS) arrangement and similar to overpass option
		• Sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval
		Similar visual impact to at-grade (EIS) option
		Similar active transport connectivity to at-grade (EIS) option
		The underpass option would be subject to several disadvantages:

Option	Description	Discussion
		<ul> <li>Underpass would need to navigate below existing drainage infrastructure (e.g. Whites Creek and the drainage channel from the Rozelle Rail Yards to Rozelle Bay) therefore requiring steeper non-compliant grades</li> </ul>
		<ul> <li>To optimise grades as far as practicable, entry and exit ramps for the underpass would be located close to The Crescent/Johnston Street/Chapman Road and The Crescent/James Craig Road intersections resulting in potential traffic safety concerns</li> </ul>
		<ul> <li>An underpass would require relocation of the existing high voltage (132 kV) Ausgrid cable which crosses The Crescent to the east of the intersection. This process involves long lead times which would result in delays to the construction program</li> </ul>
		<ul> <li>An underpass is considerably more challenging from a constructability perspective. It would require extensive cut and cover tunnel construction work within the middle of City West Link resulting in lane closures and traffic diversions over an extended period in this important section of the arterial road network</li> </ul>
		• The length of the underpass would require ventilation and fire, life and safety features to be provided. Due its proximity to Rozelle Bay, the underpass would likely require construction as a tanked structure to prevent the inflow of groundwater. Cut and cover tunnelling would also be required in poor ground conditions and would likely encounter contaminated soil and groundwater
		<ul> <li>Underpass would require the removal of the right turn movement to James Craig Road for eastbound vehicles using the underpass (similar to the overpass option). Vehicles affected would need to take alternative routes to access James Craig Road</li> </ul>
		<ul> <li>Construction of the underpass would be significantly more expensive by comparison to the overpass or at-grade (EIS) options.</li> </ul>

Option	Description	Discussion				
The overpass	An overpass connecting The Crescent	The overpass option would result in a number of benefits including:				
	(northbound) to The Crescent (eastbound).	<ul> <li>Improved intersection performance by comparison to the EIS arrangement and comparable to the underpass option</li> </ul>				
		<ul> <li>Provide sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval</li> </ul>				
		<ul> <li>Constructability constraints are more manageable by comparison to a tunnel option, with a significant number of construction activities able to be undertaken off-line, minimising impact on this important section of the arterial road network</li> </ul>				
		Construction program and overall cost would be reduced by comparison to the underpass option.				
		The overpass option would be subject to several disadvantages:				
		<ul> <li>Increased visual impacts by comparison to other options</li> </ul>				
		<ul> <li>Potential impacts to active transport connectivity proposed as part of approved project due to the introduction of the overpass and the need to realign the approved active transport links</li> </ul>				
					<ul> <li>Minor increase in noise and air quality emissions from op-</li> </ul>	• Minor increase in noise and air quality emissions from operational traffic using the overpass
		<ul> <li>Potential impact on the visual setting of a section of The Crescent mural (a potential heritage item) (already impacted/affected by the pedestrian ramp approved as part of the EIS)</li> </ul>				
		• An overpass would require the removal of the right turn movement to James Craig Road for eastbound vehicles using the overpass (similar to the underpass option). Vehicles affected would need to take alternative routes to access James Craig Road.				

### Public and active transport alternatives and induced traffic

### Issue description

Expanding road capacity through motorway construction does not improve transport efficiency as effectively as traffic reduction through new and improved public and active transport, road network optimisation and demand management projects and transit-oriented development, primarily due to the phenomenon of induced traffic.

### Response

Induced traffic demand is also discussed in **Section B.1.1**. Induced demand as a result of the project equates to about 0.3 per cent additional daily trips in the Sydney metropolitan area in 2033. This percentage would vary by geographic location and assessment area and is not anticipated to be affected by the proposed modification. The forecast percentage changes indicate that the Inner West LGA would experience reductions in both daily vehicle kilometres and vehicle hours travelled of 12 per cent and 20 per cent respectively in 2033 as a result of the project.

The NSW government is investing in a combination of motorway and public transport infrastructure projects as part of an integrated strategy to address the travel demands of a forecast growing population in Sydney over the next few decades. The *Future Transport Strategy 2056* (NSW Government, 2018) outlines a number of committed new infrastructure projects in Greater Sydney over the next 10 years, which is presented in **Table B-3**.

Project	Status	Expected completion date				
Motorway projects						
WestConnex – King Georges Road Interchange Upgrade	Approved	Completed – 2016				
WestConnex – M4 Widening	Approved	Completed - 2017				
WestConnex – New M4 Tunnels	Approved	Completed – 2019				
WestConnex – New M5	Approved	2020				
NorthConnex	Approved	2020				
WestConnex – M4-M5 Link Mainline Tunnels (Stage 1)	Approved	2022				
Sydney Gateway	EIS completed exhibition	2023				
F6 Extension – Stage 1 WestConnex to President Avenue, Kogarah (now M6 Stage 1)	Approved	2024				
M12 motorway	EIS completed exhibition	Before the opening of the Western Sydney International Airport				
Western Harbour Tunnel and Warringah Freeway Upgrade project	EIS completed exhibition	2026				
Beaches Link	EIS in preparation	Unknown				

Table B-3: NSW government committed transport infrastructure projects

Project	Status	Expected completion date				
Public transport projects						
Sydney Metro Northwest	Approved	Completed – 2019				
Northern Beaches B-line	Approved	Completed - 2019				
Sydney CBD and South East Light Rail	Approved	Completed – 2019/2020				
Parramatta Light Rail – Stage 1	Approved	2023				
Sydney Metro City and Southwest – Chatswood to Sydenham	Approved	2024				
Sydney Metro City and Southwest – Sydenham to Bankstown	Approved	2024				
Sydney Metro West	EIS in preparation	Unknown				
Parramatta Light Rail – Stage 2	Preliminary investigations	Unknown				
Sydney Metro Greater West	EIS in preparation	2026				

The M4-M5 Link project, including the Rozelle Interchange and Iron Cove Link, forms only one part of the NSW government's strategy to develop a Metropolis of Three Cities, where people can access the majority of jobs and services within 30 minutes. The M4-M5 Link project specifically supports the following objectives of the *Future Transport Strategy 2056*:

- Congestion management
- Unlock capacity on existing road corridors
- Supporting renewal (through the creation of open space at Rozelle Rail Yards and improving walkability through new active transport links).

By improving the efficiency of existing infrastructure and relieving congestion at key intersections in the Sydney road network, the proposed modification aims to support the objectives of the *Future Transport Strategy 2056* (NSW Government, 2018).

### Consistency with strategic plans

### Issue description

In prioritising motor vehicles over other forms of transport, including well connected pedestrian and cycling connections, the modification is not consistent with a number of NSW Government and Council strategic plans, including the 'Roads and Maritime Services Corporate Plan 2018-2021' and 'Going Places', Council's 2019 draft Integrated Transport Strategy.

### Response

### Roads and Maritime Services Corporate Plan

The *Roads and Maritime Services Corporate Plan 2018-2021* includes six priorities that Transport for NSW will commit to over the period 2018 to 2021. How the modification applies to each priority is discussed in **Table B-4**.
Priority	Discussion	
Increase customer value	The modification results in improved pedestrian and cyclist connectivity between new and existing open spaces, public transport services and surrounding communities while also improving the user experience of road, public transport and active transport customers.	
	Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design has improved active transport connectivity, travel times, safety and amenity for pedestrians and cyclists. This is discussed further in Section 3.1 of the Design amendment report.	
Get more out of the network	The modification aims to improve the efficiency of the existing road network by accommodating the predicted increase in traffic volumes at the intersections of City West Link/The Crescent and Johnston Street/The Crescent/Chapman Road. The modification would result in generally improved traffic flows at the intersections by comparison to the EIS design and would ensure that the road network operates satisfactorily in the future with the inclusion of additional traffic associated with the Western Harbour Tunnel project should that project proceed. This would improve the user experience for motorists.	
Keep safety at the heart	The modification has been designed to incorporate health and safety for pedestrians, cyclists and road users in all phases of planning, design and construction.	
	Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the retention and upgrading of the at grade crossing of The Crescent, widening of the shared user path ramp from the footpath on the western side of The Crescent to the Rozelle Bay light rail stop and removing the shared user path bridge.	
Respect our community and the environment	As outlined in chapter 5 of the Modification report, extensive consultation with the community has been undertaken regarding the M4-M5 Link project. This consultation has continued during the preparation of the modification's detailed in <b>Section A.2</b> . This consultation will continue during the detailed planning and construction of the project.	
	Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design and the associated environmental impacts are discussed in further detail in Section 2 of the Design amendment report and Section 3 of the Design amendment report.	
Deliver the Government's program	The approved project and the modification form an important part of Transport for NSW commitment to deliver \$16.1b in investment to 2021, on the road network and in waterway infrastructure.	
Partner to improve services.	The delivery of all services must demonstrate value for NSW taxpayers. The modification would result in improved traffic and transport outcomes and similar active transport and public transport outcomes when compared to the approved project, therefore providing value to the wider community.	

The proposed modification is therefore considered consistent with the *Roads and Maritime Services Corporate Plan 2018-2021.* 

#### Council Transport Strategy

Inner West Council's '*Going Places*' draft Integrated Transport Strategy guides planning for how people move around the Inner West in the future. The draft Strategy proposes:

- A transport hierarchy that puts people first
- A set of values as the basis for future transport decisions
- Priorities for future transport in the Inner West
- Principles and key projects for transport in the Inner West
- Innovative ideas for the future.

The strategy generally focuses on creating a transport planning framework that integrates active and public transport with land uses to support mode shift from single vehicle travel to active and sustainable transport along with implementing active travel improvements to support pedestrians and cyclists.

The approved project and the modification would provide improved active transport connections between the suburbs of Rozelle and Annandale, including the Rozelle Bay light rail stop. It would provide a connection for residents in Annandale to access the future open space in the Rozelle Rail Yards while maintaining pedestrian and cyclist connections from both suburbs to the Rozelle Bay foreshore and Bicentennial Park. It addresses the significant physical barriers to pedestrian and cycling movement which currently exist including the Rozelle Rail Yards, City West Link, The Crescent and the light rail corridor.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. Key changes in relation to improving pedestrian and cyclist connectivity and amenity include:

- Increasing the clear width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrians and cyclists
- Removing the proposed shared user path bridge between Rozelle Rail Yards and the east side of The Crescent
- Retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings at The Crescent and Chapman Road detailed in the Modification report are no longer proposed.

With these changes, the modification provides improved active transport connections to existing and proposed public transport including:

- The Rozelle Bay light rail stop
- Bus services/stops on The Crescent and Victoria Road
- The proposed metro station at White Bay via the Rozelle Rail Yards open space area
- The proposed ferry wharf located in Rozelle Bay near Chapman Road.

#### Connections with future public transport projects

#### Issue description

The modification would restrict connectivity between communities and future planned public transport projects including ferry and bus services and the future West Metro station.

#### Response

After consideration of the issues raised in the submissions, Transport for NSW is proposing a number of design changes including the retention, upgrade and widening of the existing at grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street and the installation of a bicycle lantern at this crossing. This design change and the associated environmental impacts are discussed in further detail in Section 3.1 of the Design amendment report.

Retention of the existing signalised at grade crossing of The Crescent in conjunction with the shared user path ramp proposed on the west side of The Crescent will provide connection between the Rozelle Bay light rail stop and:

- The bus stops on the west and east sides of The Crescent
- The proposed ferry wharf near Chapman Road.

As part of the Metro West project, it is proposed that a new metro station would be established in the Bays Precinct between Glebe Island and White Bay Power Station. It is not clear at this stage how this station will be accessed from the existing road network.

The approved project and the proposed modification will provide an active transport link that connects over City West Link, through the Rozelle Rail Yards and under Victoria Road to link with Anzac Bridge. This active transport link provides an opportunity to connect with the proposed metro station in the Bays Precinct.

The modification proposes the removal of the right turn movement from the overpass into James Craig Road (discussed in **Section B.3.2**). Only a limited number of turning movements are likely to be affected and alternative traffic routes are available to access James Craig Road.

Further detail regarding traffic, public transport and active transport connectivity to the proposed metro station would be addressed in the EIS for the Metro West project.

## **B.2.2 Traffic and transport**

#### Shifting traffic congestion

#### Issue description

By resolving traffic issues at the intersection of The Crescent and City West Link, congestion problems will be created at other points in the road network including on the Western Distributor and along Victoria Road. Due to improved level of service, additional vehicles may divert to Johnston Street and other local streets, impacting upon the Annandale neighbourhood centre. The impact of these additional vehicles should be assessed.

#### Response

Potential impacts of the proposed modification on the wider road network including the Western Distributor, Victoria Road and Johnston Street are discussed in **Section B.1.1**. For the modification, overall network performance is considered to be comparable or slightly improved by comparison to the EIS.

It is noted that both Johnston Street and The Crescent are State Roads with two and one lane in each direction respectively. Some increases in traffic volumes are forecast on parts of the road network as a result of the proposed modification. These include 2,500 additional vehicles per day on Johnston Street (less than 10 per cent change), 1,500 additional vehicles per day on Anzac Bridge (less than one per cent change) and around 400 additional vehicles per day on The Crescent (south) (less than four per cent change). These increases are not considered significant and will have minimal impact on traffic performance and safety on these roads given high existing traffic volumes. Additionally, a sensitivity test was undertaken, which indicated that the increase had minimal impact on wider network performance.

Transport for NSW would continue to minimise potential traffic impacts of the surrounding road network through the preparation of a road network performance review and ensuring appropriate network integration in the areas surrounding the Rozelle Interchange as required by EMM OpTT1, OpTT3 and Conditions E63 and E64.

## B.2.3 Noise and vibration

#### Extent and duration of construction impacts

#### Issue description

Due to the expanded project footprint, the modification has the potential to result in additional construction noise and vibration impacts despite the implementation of management and mitigation measures as required by the Conditions of Approval. Concerns also include the potential for additional sleep disturbance at 19 households due to unanticipated impacts from utility works and construction equipment. Roads and Maritime Services should offer voluntary property acquisition to new residents experiencing noise disturbance as a result of the modification.

#### Response

Potential construction noise impacts of the proposed modification are outlined in Section 6.4.3 of the Modification report and Chapter 5 of Appendix C (Noise and vibration assessment) of the Modification report. Table 6-19 of the Modification report summarised the noise management level (NML) exceedances and shows the 19 highly noise affected receivers referred to in this submission (refer to **Figure B-4)**.

It is noted that some of the affected receivers are adjacent, or near, to major existing roads and are subject to relatively high existing noise levels. The 'existing background noise levels without the project' indicates that existing noise levels next to major roads are in the region of  $LA_{eq}$  60 to 65 dB during the daytime and 55 to 60 dB during the night-time (refer to Table 6-15 of the Modification report). This is comparable to the predicted construction noise levels for many of the assessed work scenarios (refer to Table 6-18 of the Modification report).

Condition E87 identifies at-property treatments to sensitive receivers which are likely to experience noise impacts from out-of-hours works for a prolonged duration. As additional out-of-hours construction impacts are anticipated as a result of the proposed modification, additional properties would require at-receiver noise mitigation. As outlined in the Modification report, it is proposed to amend Condition E87 and specifically Appendix D of the CoA to include additional properties predicted to experience out of hours noise impacts resulting in sleep disturbance. A total of 19 receivers are additionally identified as being within the treatment zone and include properties on Kentville Avenue and the northern extent of Johnston Street (refer to **Figure B-4**). Furthermore, as required by Condition E76, potential out-of- hours works impacts would be minimised by developing out-of-hours respite periods in consultation with the surrounding community.

Notwithstanding the above, construction noise would be minimised as far as practicable through the preparation and implementation of a construction noise and vibration sub-plan to the CEMP (CNVMP) as required by Condition C4(b). The CNVMP would be prepared in consultation with the EPA and Council and would contain measures to reasonably and feasibly reduce construction noise exceedances.

Property acquisition within NSW is governed by the relevant provisions under the *Land Acquisition (Just Terms) Compensation Act* 1991 (NSW). During development and design of road projects, Transport for NSW seeks to minimise the impacts of construction on properties in the vicinity of the works. This can result in changes to the design of the project or the adoption of targeted mitigation measures to minimise impacts. In addition, Transport for NSW may, in its discretion, purchase residential properties which are not within the footprint of the project where the landowner is able to demonstrate exceptional hardship (refer to Roads and Maritime Services *Exceptional Hardship Land Purchase Guideline*.

#### **Operational noise impacts**

#### Issue description

Cumulative operational road noise impacts have not been adequately assessed.

#### Response

Cumulative operational road noise impacts have been assessed in Section 6.4.3 of the Modification report and in Chapter 6 of Appendix C (Noise and vibration assessment) of the Modification report. Operational road traffic noise has been assessed for a do-something and do-something plus scenario in both 2023 (year of opening) and 2033 (opening plus 10 years)

In 2023 the do-something plus assessment includes all WestConnex projects (including M4-M5 Link), the Western Harbour Tunnel project and Sydney Gateway projects. In 2033 the assessment includes all 2023 projects plus Beaches Link and M6 Extension. The operational road traffic volumes used in the assessment are contained in Annexure B of Appendix C (Noise and vibration assessment) of the Modification report.

Operational road traffic noise levels are expected to generally be comparable to the approved project, with noise levels for the proposed modification being within -0.5 dBA to +0.5 dBA of the EIS noise levels for the majority of receivers in the study area. This relatively small increase is however sufficient to result in additional exceedances of NML on Johnston Street in both the *Do Something Plus* scenarios.

The overpass is predicted to increase noise levels at a small number of receivers near Bayview Crescent by between 0.5 dBA and 1.5 dBA. However, noise levels in this area are influenced by higher volumes of traffic on City West Link and The Crescent, in comparison to the relatively lower traffic volumes on the overpass. At-property treatments for the eligible receivers are considered to be the preferred noise mitigation measure.

The assessment identified the number of potential at-property noise treatments for both the 'do something' and 'do something plus' scenarios in Table 6-7 of Appendix C (Noise and vibration assessment) of the Modification report and the location of the receivers considered eligible for treatment is shown in Figure 6-8 of that assessment. Discussion of the various options for operational road noise mitigation is included in Section 6.3 of the Appendix C (Noise and vibration assessment) of the Modification report.

In accordance with Condition E92, the proponent will prepare an ONVR to confirm the noise and vibration control measures that would be implemented for the operation of the project. The ONVR will be prepared in consultation with relevant stakeholders, local Council and the community. In addition, in accordance with Condition E95, the proponent is required to undertake monitoring of operational noise and prepare an operational noise compliance report to document the results of the monitoring.

## B.2.4 Air quality

#### Human health impacts of decreased air quality and exposed spoil

#### Issue description

Human health impacts of increased emissions and exposure of contaminated spoil are dismissed. Cumulative impacts will expose communities to potentially hazardous levels of air pollution.

#### Response

#### **Increased emissions**

Operational traffic emissions are assessed in Chapters 5 and 6 of Appendix D (Air quality assessment) of the Modification report. The assessment includes of a 2033 do-something cumulative scenario which includes all WestConnex projects (including M4-M5 Link), Western Harbour Tunnel, Sydney Gateway and M6 Extension projects.

The results show that while there are some receptors predicted to experience increases in emissions due to the modification by comparison to the EIS, the increases are small and do not change the outcomes of the EIS. The small increase in emissions reflect changes in traffic volumes, the location of road links relative to receptors and the gradient of the overpass.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops including lowering the height of the proposed overpass by around two metres at its apex, so it is a similar height to the green link. The resulting impacts of lowering the height of the overpass upon air quality is assessed in Section 3.5 of the Design amendment report.

Predictions for the most relevant metric when considering human health impacts, the change in annual mean  $PM_{2.5}$  concentrations, were well below the criterion used in the EIS (0.32 µg/m<sup>3</sup> predicted for the modification against a criteria of 1.8 µg/m<sup>3</sup>). As a result, no change to potential health impacts are anticipated. Notwithstanding, CoA relating to ambient air quality goals and ambient air quality monitoring are contained in the project approval (Condition E6 and Condition E24) and Transport for NSW is required to comply with those conditions.

#### Exposure of contaminated spoil

Generally, the proposed works associated with the modification are within the same footprint as the approved project. The nature of the works proposed as part of the modification are generally consistent with the works assessed in the EIS (limited earthworks, piling and surface road works).

Extensive assessment of soil and groundwater contamination was carried out as part of the EIS. Construction works associated with the modification would have the potential to mobilise potentially contaminated soil however, there are a number of CoA designed to manage potential contamination impacts and the potential exposure of nearby sensitive receivers including:

- C4(e) preparation of Soil and Surface Water CEMP sub-plan
- C9 preparation of Construction Monitoring Programs (including for construction dust deposition)
- E1 inclusion of all reasonably practical measures to minimise the emission of dust
- E181 preparation of a site contamination report
- E182 preparation of a site audit statement and site audit report (if required)
- E184 preparation of an unexpected contaminated land and asbestos finds procedure
- E204 classification of waste in accordance with EPA Waste Classification Guidelines.

## B.2.5 Urban design and visual impact

#### Visual impacts on the surrounding area during operation

#### Issue description

The modification would result in adverse visual impacts on the surrounding area, including from homes, the public domain and Rozelle Bay, given the context of the Annandale Heritage Conservation Area, Rozelle Bay foreshore and surrounding parks. Further concerns relate to potential impacts to The Crescent mural and bulk of the green link, shared user path bridge and The Crescent overpass due to fencing, barriers and throw screens.

#### Response

Overall visual impacts of the proposed modification are discussed in Section B.1.3.

Visual impacts associated with barriers, fencing and throw screens have been considered throughout this assessment and are shown in the photomontages provided in Section 6.7.3 of the Modification report.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes. These design changes include:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved user experience through opening up unobstructed views of the Anzac Bridge and city skyline
- Increasing the clear width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Removing the proposed shared user path bridge between Rozelle Rail Yards and the east side of The Crescent.

These changes would reduce the overall visual impact of the overpass and remove altogether the shared user path bridge. The visual impacts of the revised design are discussed further in Section 3.3 of the Design amendment report.

Design of bridge structures, landscaping, and urban design elements (including fencing, barriers and throw screens) would be finalised during detailed design and included in the Urban Design and Landscape Plan (UDLP) which is to be prepared in consultation with local Council and the community as required by Condition E134.

Along the west side of The Crescent the shared user path ramp and overpass would impact on views from motorists, pedestrians and cyclists toward the northern section of the existing mural, however, views to the central and southern sections of the mural would not be impacted. In the EIS there was a pedestrian ramp proposed in this same location which would have a similar impact on views to the mural. New views of the mural would be created for pedestrians and cyclists using the shared user path ramp.

It is proposed that there would be a separation distance of about one metre between the mural and the shared user path ramp. This will ensure that the mural structure (light rail retaining wall) would not be directly affected by the construction of the ramp and would also provide sufficient room for on-going inspection and maintenance of the existing retaining wall and the mural.

To minimise impacts on The Crescent mural archival recording and heritage interpretation would be undertaken in accordance with EMM NAH02 and NAH03 and Condition E167.

Opportunities for development and delivery of public art throughout the Rozelle Rail Yards by local artists would be identified within the UDLP for the project as required by Condition E134(n).

#### Urban design assessment and outcomes

#### Issue description

Council raised concerns that the urban design assessment in the Modification report is inadequate and not peer reviewed. Furthermore, council believes that the elevated structures proposed as part of the modification are not sensitive to the local context, would reduce opportunities for place making within surrounding parks, would be difficult to navigate and would diminish the general sense of safety and security for pedestrians and cyclists. Council state that the modification would undermine the already limited urban design benefits of the EIS design.

#### Response

Existing active transport connectivity between the areas of Rozelle and Lilyfield in the north and Annandale and foreshore open space in the south is significantly constrained by barriers including the Rozelle Rail Yards, City West Link, The Crescent and the light rail corridor.

The approved project is addressing these constraints by delivering multiple active transport links including:

- An east/west link through the Rozelle Rail Yards and under the Victoria Road bridge to link with Anzac Bridge
- A north/south link from Lilyfield Road through the Rozelle Rail Yards and over City West Link to the Rozelle Bay foreshore and Rozelle Bay light rail stop (subject to the modification)
- A further north/south link from Lilyfield Road through the Rozelle Rail Yards and over City West Link and the light rail corridor to Brenan Street (near Whites Creek).

The approved project also delivers up to 10 hectares of public open space within the Rozelle Rail Yards.

As a result of the introduction of the overpass, some changes to the arrangement of active transport links proposed in the EIS are required. Section 6.6.3 of the Modification report provides the urban design assessment for the key structures which are proposed.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes.

This revised design will improve design outcomes, including provision of improved and safer connections between Rozelle Rail Yards, Rozelle Bay light rail stop, the residential area of Annandale and the Rozelle Bay foreshore. The revised design would also provide improved amenity for active transport users and reduced visual impacts by comparison to the proposed design in the Modification report.

The revised design involved consultation with DPIE, the NSW Government Architect's Office, local community groups and other stakeholders.

Further urban design assessment of the revised design is provided in Section 3.2 of the Design amendment report.

Removal of the shaped shared user path bridge would be a significant and positive change in respect to visual impacts. It would reduce the number of elevated structures at the intersection from three to two. This bridge would be a prominent structure with an overall length of around 270 metres and a maximum height of around 11 metres (including safety screens). Removal of this bridge would also reduce the physical (footprint) impact on the proposed Rozelle Rail Yard open space area and the foreshore area adjacent to Rozelle Bay

Landscaping at road surface level is also proposed in some of the traffic islands at the intersection of City West Link/The Crescent and in association with the overpass structure. This will help to soften views of the infrastructure and improve the pedestrian and motorists experience at ground level. The final landscape design will be subject to the UDLP process.

The proposed green link over City West Link would significantly improve pedestrian and cyclist connectivity between surrounding suburbs, recreational spaces and the foreshore compared to the existing conditions.

Given its proposed width, height and the depth of its deck structure, the green link will be a prominent structure. The green link will accommodate landscape plantings along the majority of its length which will soften the structure and provide enhanced amenity for active transport users. The southern section of the green link tapers down to meet the lower level of the light rail platform and as a result the structure is not able to provide the required depth of soil to support landscaping plantings at this end of the green link. Transport for NSW is reviewing the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop.

The overpass and the green link structures have been designed to complement each other in terms of overall height, curvilinear form and structural elements (similar girder and pier types). These structures are simple, refined and elegant with minimal piers and abutments to maximise permeability and visual transparency.

As outlined in **Section B.1.4**, the design of built structures would be consistent with the Crime Prevention Through Environmental Design (CPTED) principles. To further ensure the safety of pedestrians and cyclists all shared paths would comply with relevant Australian Standards.

The removal of the previously proposed shared user path bridge will reduce the overall footprint and visual impacts on the proposed open space area with the Rozelle Rail Yards and along the Rozelle Bay foreshore by comparison to the modification. Opportunities for place making in these areas are unlikely to be affected.

#### Urban Design and Landscape Plan

Urban design outcomes would also be improved throughout the implementation of the UDLP, currently being prepared in consultation with the community and council to create a sympathetic design consistent with community expectation and with a focus on creation of place. This would include the provision for public art within the Rozelle Rail Yards and urban design treatments and plantings on the green link.

Design of bridge structures including the proposed overpass and green link would be finalised during detailed design and included in the UDLP which is to be prepared in consultation with local Council and the community as required by Condition E134.

In accordance with Condition E127 the Design Review Panel must review the UDLP before it is submitted to the Secretary.

### **B.2.6 Active transport**

#### General pedestrian and cyclist impacts

#### Issue description

The modification results in worsened conditions for pedestrians and cyclists due to longer distances, steep climbs and long delays. Furthermore, as pedestrian and cycling connections would be adjacent to widened roads with high traffic volumes, their use could be potentially hazardous and would result in decreased amenity.

#### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved user experience through opening up unobstructed views of the Anzac Bridge and city skyline
- Increasing the clear width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Removing the previously proposed shared user path bridge between Rozelle Rail Yards and the east side of The Crescent
- Retaining the existing at grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street including the introduction of bicycle lanterns at this signalised crossing. Transport for NSW is also proposing to widen this crossing to approximately six metres to provide an improved and safer user experience.

The revised design prioritises the following significant active transport desire lines:

- Rozelle Rail Yards open space to Chapman Road and the Rozelle Bay foreshore
- Rozelle Rail Yards open space to Rozelle Bay light rail stop
- Johnston Street Annandale to Chapman Road and the Rozelle Bay foreshore.

The other key north/south and east/west active transport connections proposed in the EIS are not impacted.

As a result, it is considered that the shared user path bridge is no longer needed as the alternative route is improved and caters for both north/south and east/west pedestrian and cycling desire lines.

A number of options were considered for the pedestrian and cyclist infrastructure linking the Rozelle Rail Yards open space with the Rozelle Bay light rail stop and Bicentennial Park. These options were discussed in section 4.3.2 of the Modification report.

One of the options considered was an elevated shared user path bridge extending south from the Rozelle Bay light rail stop, along the west side of The Crescent, turning east to cross The Crescent near Johnston Street and ramping down to connect with Bicentennial Park in the vicinity of Chapman Road. This option provides similar connectivity to the EIS with no at grade road crossing required. However, this option was not preferred as it would be very challenging to construct, more visually intrusive and likely to negatively impact on adjacent heritage structures and on the amenity of the Rozelle Bay foreshore area.

The proposed upgrade and widening of the existing signalised pedestrian crossing of The Crescent will avoid the need for multiple crossings at this intersection as originally proposed in the modification. As a result, there will be slightly reduced traffic performance at this intersection as a balanced trade-off for maintaining pedestrian/cycling connectivity.

Urban design elements aimed at improving pedestrian safety and experience will also be incorporated into the design of this crossing, including increasing the crossing width to approximately 6 metres and exploring opportunities of incorporating pavements changes to better highlight the pedestrian zone.

All pedestrian and cycling shared paths and bridges associated with the modification would be designed to meet relevant Australian Standards and Austroads guidelines including maximum ramp grades of 1 in 20. They would be of sufficient width and clearly line marked and signposted to ensure safety of pedestrians and cyclists.

These design changes will improve urban design outcomes by providing quicker and safer connectivity and reduced visual impacts by comparison to the proposed modification for pedestrians and cyclists.

Analysis of pedestrian distances and travel times has indicated that the revised design is generally comparable to the EIS design. Further assessment pedestrian distance and travels times with the revised design is provided in Section 3.1 of the Design amendment report.

The modification would continue to comply with Condition E60 requiring the preparation of detailed Pedestrian and Cycling Implementation Strategy and Condition E134 which contains detailed requirements for the UDLP.

#### Connection between Annandale and the Rozelle Bay foreshore

#### Issue description

While the current arrangement allowing a single signalised crossing between Annandale and the Rozelle Bay foreshore, the modification would require multiple signalised crossings to make the same trip, adding time and distance and imposing a significant barrier between residential areas and recreational facilities.

#### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes updates to the intersection arrangement proposed at the intersection of Johnston Street and The Crescent and is now proposing to retain, widen and upgrade the existing signalised at grade pedestrian crossing of The Crescent. This will avoid the need for multiple crossings at this intersection as proposed in the modification. As a result, there will be a reduced traffic performance at this intersection as a trade-off for maintaining pedestrian/cycling connectivity.

Retention of signalised at grade crossing of The Crescent in combination with increasing the width of the proposed pedestrian ramp between the Rozelle Bay light stop and the west side of The Crescent to 4.5 metres to allow for shared use by pedestrians and cyclists will provide an improved connection between the light rail stop and Rozelle Bay foreshore. This would allow connectivity to the bus stops on either side of The Crescent, the proposed future ferry wharf near Chapman Road and recreational facilities in these areas. Further assessment of pedestrian and cycling connectivity is provided in Section 3.1 of the Design amendment report.

#### Suggested conditions

#### Issue description

Should the modification be approved, a number of conditions should be applied:

- Inner West Council to be represented on the Design Review Panel required to be formed according to Condition of Approval E129
- Bicycle lanterns to be incorporated in all new signalised intersections
- Traffic signals proposed at the intersection of Johnston Street, The Crescent and Chapman Road at North Annandale be programmed to favour walk/cycle demands over motor vehicles to respond immediately when a pedestrian or cyclist seeks to cross (demand responsive activation)
- The shared path linking the former Buruwan Park and Johnston Street, beside the community mural, be maintained and widened
- All shared paths adjacent to roadways be buffered with the installation of mature trees and landscaping providing shade and pollution filters
- A new section of shared path be provided along The Crescent, adjoining the existing timber business and beyond the bridge piers - connecting Chapman Road and the City of Sydney's soon-to-beconstructed path at the pedestrian refuge and ramp

- On the proposed shared user path, stairs be provided to minimise unnecessarily long and circuitous
  walking distances and provide an opportunity for people to exit the overbridge quickly and gain the
  attention of passing motorists if they feel unsafe. Stair locations should account for future pedestrian
  movements resulting from revitalisation of the Bays Precinct. The connections should be legible and
  direct to provide faster walking access for people who can use them
- The supports and footings of all elevated structures are not to stand on footpaths or verges
- The Crescent Mural be illuminated and signage or a plaque be installed acknowledging the artists by name
- The modification not preclude future bus services. The final traffic arrangements are to cater for bus access to all roads via all movements at all intersections
- Bicycle parking with weather protection be provided on the land bridge adjacent to the Rozelle Bay light rail stop
- As reflected in Figure 4-1 (page 4-3) of the modification, a path be provided to allow people to walk and cycle between The Crescent and Railway Parade (similar to the connection now provided by the path through Buruwan Park)
- The land bridge linking the light rail stop and future Rozelle Rail Yards recreation area to accommodate mature trees providing shade and amenity; accessible walk/cycle path at least 5m clear width; weather protection for passengers adjacent to the light rail stop; all-weather rest areas, planter boxes or other soft landscaping on the part of the land bridge adjacent to the light rail platform
- The shared use path is at least 6m wide providing physically separated access for people walking and cycling
- The overpass roadway is constructed to accommodate two traffic lanes only, with no potential for increased traffic capacity in future
- A review of overland stormwater flow paths, minor drainage paths and stormwater drainage infrastructure is carried out one year and five years after the project commences operation. All impacts identified are to be addressed and/or mitigated by the Proponent within two years of the date of commencement of the project
- Conditions E63 and E64 are deleted. These conditions impose requirements for a Road Network Performance Plan before the project commences operations and an Operational Road Network Performance Review within 1 year and 5 years of completion. Instead, funding is to be provided to protect local streets from through-traffic and to improve walking and cycling infrastructure
- In relation to the additional construction ancillary facility on The Crescent (C6a), staff must be stationed on the footpath when any vehicle is entering/departing the facility
- This path is used by people walking and cycling, and people cycling westbound (downhill) are travelling fast. Drivers, especially truck drivers who are seated higher, tend to look 20-30m into the distance for approaching vehicles and can fail to see people walking or cycling immediately in front of the truck cabin
- The 'note' associated with Condition E58 be deleted
- Condition E58 requires the Proponent to provide improved walking and cycling connections between Roberts Street and Springside Street Rozelle with connections incorporated in the project's Pedestrian and Cycle Implementation Strategy (required by Condition E60). The 'note' associated with this condition states that work to provide these connections is not specifically required to be undertaken on Victoria Road and could instead include works on the parallel local road network. The approved project includes a new tunnel under Victoria Road linking the Anzac Bridge and Iron Cove Bridge with claimed benefits including spare road capacity on Victoria Road. This spare road capacity must be captured for other transport options including wider footpaths

• The modification must not preclude the possible future delivery of the City West Cycle Link connecting the Greenway at Iron Cove with Anzac Bridge and Glebe Island Bridge. Further, safe legible connections should be provided between the proposed active transport links and the RRY northern path.

#### Response

The recommended conditions and changes to the modification proposed by Inner West Council have been noted. A number of the recommended conditions are not related to the scope of the modification and its potential impacts. The inclusion of the recommended conditions is a matter for the DPIE.

The existing project approval includes a robust set of CoA to minimise potential construction and operational impacts to local communities. These conditions have been prepared having regard to the potential impacts of the project and the recent experiences from construction of similar infrastructure projects in Sydney.

The Modification report proposes some changes to the existing CoA. The updated proposed changes and justification for them are outlined in **Part D**.

The Modification report and this Response to submissions report has been provided to DPIE for review and assessment. As part of the assessment, DPIE will prepare an Environmental Assessment Report and recommendations that will be provided to the NSW Minister for Planning and Public Spaces for determination of the modification.

## **B.3 Port Authority of NSW**

## **B.3.1 Construction works**

#### Extent of works

#### Issue description

The extent of the civil works at The Crescent/City West Link intersection appear to be larger than those originally approved.

#### Response

As outlined in Section 4.2 of the Modification report, there would be additional civil works required as part of the modification including construction of the overpass. The green link is part of the approved project while the shared user path bridge is no longer part of the revised design. Although these works are additional to the works in the approved project, they would be undertaken within the existing approved project footprint Refer to **Figure B-3** for the approved and proposed project footprint.

#### **Duration of works**

#### Issue description

The Crescent/City West Link intersection works will take longer than originally proposed with an increase from six months to one year.

#### Response

The modification would result in changes to the indicative timeframes for some construction activities by comparison to the approved project, however these changes are not considered to be significant. The change in program is primarily as a result of the introduction of the new overpass. Importantly there is no change proposed to the duration of the overall program for construction of Stage 2 of the M4-M5 Link project (Rozelle Interchange and Iron Cove Link) which is due to be completed in late 2023.

The modification would minimise the duration of construction impacts on nearby residents by reducing the need for further construction activities to accommodate the proposed Western Harbour Tunnel project at City West Link, The Crescent and Johnston Street, should that project proceed in the future. All required construction works would be delivered as part of one, rather than multiple, construction programs.

## B.3.2 Traffic and transport

#### Impacts to port services and businesses during construction

#### Issue description

Given the context of the surrounding Glebe Island and White Bay port precinct, the Port Authority outlines that it is essential that any impacts from the Rozelle Interchange works on the port's critical businesses and services are minimised and managed appropriately and in a coordinated manner.

More significant construction activities especially related to bridge span lifts (associated with The Crescent overpass, green link and shared user path bridge) and vehicles access/egress to / from to C6a into The Crescent would result in additional temporary road and lane closures that would need to be managed to mitigate impacts to port-related traffic. The Port Authority request that measures to mitigate construction impacts to port-related traffic, White Bay Cruise Terminal passenger traffic and traffic associated with the businesses operating along James Craig Road at Rozelle Bay, be developed in consultation with Port Authority.

#### Response

No changes to construction traffic volumes from the construction sites as described in the EIS are proposed. In the EIS the traffic volumes for the C6 civil site were:

- Daily: 10 heavy vehicles in and out (20 movements per day) and 20 light vehicles in and out (40 movements per day)
- AM peak hour: Two heavy vehicles in and out (four movements per hour) and no light vehicles in and out (zero movements per hour)
- PM peak hour: Two heavy vehicles in and out (four movements per hour) and five light vehicles out (five movements per hour).

No re-assessment of the 2021 construction traffic scenario was therefore required to be undertaken.

In relation to proposed vehicle access/egress to and from The Crescent construction ancillary facility (C6a), the number of vehicle movements to be generated from this site is limited as there are only around nine carparking spaces to be provided on-site and a limited number of small delivery vans and rigid trucks are anticipated. Access and egress would be restricted to left in/left out movements only.

Construction traffic impacts would continue to be managed in accordance with measures outlined in the Traffic, Transport and Access Management Sub-Plan (TTAMP) of the Construction Environmental Management Plan (CEMP) as required by Condition C4a. Condition C4a requires that along with the Sydney Coordination Office and relevant councils, the TTAMP is to be developed in consultation with the Port Authority of NSW when considering impacts on port land.

The TTAMP would outline management measures to minimise impact to traffic due to construction of bridge span lifts (associated with the overpass and green link) and vehicles access/egress to and from The Crescent civil site (C6a). Bridge span lifts are temporary works and would be undertaken at times that would minimise impacts to traffic flow. Bridge span lifts would be carried out under a Road Occupancy Licence and in consultation with Transport for NSW's Transport Management Centre.

Transport for NSW commits to continued engagement with the Port Authority of NSW during construction of the Rozelle Interchange. In addition, there are a number of conditions that aim to mitigate potential traffic impacts during construction of the project including:

- E52: management of construction vehicles
- E53: real time monitoring of construction spoil haulage vehicles
- E54: preparation and implementation of a construction parking and access strategy
- E61: preparation of a road dilapidation report
- E62: measures to rectify damage to roads.

#### Permanent removal of the right turn movement from The Crescent to James Craig Road

#### Issue description

The removal of the right turn movement from The Crescent to James Craig Road (eastbound) removes an existing access to the port and adjacent Transport for NSW owned land along the north side of Rozelle Bay for vehicles coming from Annandale and along the Crescent. This affects not only port users, but also all cruise passengers accessing White Bay Cruise Terminal, and all the businesses along James Craig Road at Rozelle Bay.

No details on alternative routes were provided in the Modification report and The Port Authority is concerned about potential impacts on other routes, particularly from heavy vehicles associated with port tenants coming from the south and looking for a way to access James Craig Road. The Modification report did not assess the capability and impact on the relevant roads and intersections as removing this access route may transfer port traffic to residential streets in the Annandale, Lilyfield and Rozelle areas.

#### Response

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

The proposed modification would only remove the ability for motorists using the overpass to turn right from The Crescent (eastbound) into James Craig Road. Motorists from Annandale using Johnston Street and The Crescent to access James Craig Road would have to utilise an alternate route such as:

- 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.

Depending on the trip origin, anticipated alternate routes to access James Craig Road from The Crescent (south) or Johnson Street (refer to **Figure B-13**) would include:

- From Annandale: Booth Street, Moore Street, Balmain Road, City West Link and The Crescent (eastbound) to then turn right into James Craig Road. City West Link and The Crescent are State Roads (these roads provide for vital or major movements of goods and services, people and public transport), while Booth Street, Moore Street and Balmain Road are Regional Roads (these roads support and link State Roads and provide for medium level movements of people, goods and services and public transport).
- From Camperdown/Forest Lodge/Glebe: Pyrmont Bridge Road/Bridge Rd, Anzac Bridge and The Crescent (westbound) to then turn left into James Craig Road. All of these roads are classified as State Roads.

These alternative routes are considered to be appropriate to accommodate the limited number of vehicle movements likely to be impacted.

Future demand for the right turn movement into James Craig Road from vehicles travelling from the south via Johnston Street and The Crescent is forecast to be limited (up to about 66 vehicles per hour in the peak periods). Most of the demand for the right turn movement into James Craig Road (around 75%) is generated from City West Link eastbound traffic in the AM peak.



Figure B-13 Alternative routes to access James Craig Road

#### **Operational traffic modelling assumptions**

#### Issue description

It is unclear where the estimated impact on "about 40 vehicles" per hour has come from, or if there was any consultation with the various affected parties at the port and the maritime land at Rozelle Bay to seek traffic numbers to inform this estimate. Port Authority requests additional information be provided regarding the number and types of vehicles (e.g. light or heavy vehicles) using the current access route via The Crescent from the south to access James Craig Road, including current movements and estimates of future movements along this route. Port Authority also requests information about the methodology used to estimate movements along this route be provided/clarified, and that direct consultation with tenants and operators of businesses at the port (Glebe Island/White Bay) and the maritime land at Rozelle Bay be undertaken as part of this process.

#### Response

As stated in **Section A.5.6** of this report, the maximum forecast peak hour demand from Johnston Street and The Crescent (south) turning right into James Craig Road is predicted to be up to 66 vehicles in the future peak hours. The majority of traffic turning right into James Craig Road originates from City West Link.

The estimated impact was based on traffic modelling, which predicted traffic demands for future years 2023 and 2033. As explained in Chapter 8 of the EIS, the traffic modelling was based on land use and employment forecasts, which included significant growth associated with development of the port and the Bays Precinct. The analysis showed that:

- There is a significant growth in forecast traffic to and from the port and the Bays Precinct (about seven to 14 per cent growth per annum)
- Of all traffic from Johnston Street and The Crescent (south), only three per cent has James Craig Road as a destination in the AM peak and two per cent in the PM peak
- The vast majority of traffic from Johnston Street and The Crescent (south) is forecast to travel to Anzac Bridge eastbound, Victoria Road northbound or City West Link westbound
- Most of the demand for the right turn movement into James Craig Road (about 75 per cent) is generated from City West Link eastbound.

The predicted traffic demands at this intersection were supported by a survey undertaken in 2017 as part of the traffic assessment for the Glebe Island Concrete Batching Plant EIS. This survey showed a total of 65 vehicles making the right turn in the AM peak hour and 12 vehicles making the right turn in the PM peak hour from all origins. In the AM peak hour around 80% of the vehicles making this right turn were light vehicles and around 20% were heavy vehicles. In the PM peak hour around 50% were light vehicles and 50% were heavy vehicles.

#### Cumulative traffic impacts

#### Issue description

The construction traffic impact assessment does not include an updated cumulative assessment/model of construction traffic impacts on James Craig Road and the intersection of James Craig Road/The Crescent, including all existing port—related traffic, traffic from Hanson's proposed concrete batching plant, traffic from other major transport infrastructure projects, and the WestConnex Rozelle Rail Yards civil site using James Craig Road. The cumulative construction traffic impact assessment on James Craig Road and its intersection with The Crescent should be undertaken considering additional likely impacts from the proposed MOD2 works (larger civil works required in the vicinity including overpass construction, the new ancillary facility C6a, etc).

The Port Authority requests that the cumulative traffic assessment in Appendix A Technical Working Paper: Traffic and Transport of the M4—M5 Link Submissions and Preferred infrastructure Report (Jan 2018) for the year 2021 (for James Craig Road and the James Craig Rd/The Crescent intersection) be updated with the latest project information including the proposed MOD2, and recent/updated traffic data from other existing and proposed projects.

#### Response

The proposed modification would not result in changes to the approved construction traffic volumes for the C6 civil site as described in the EIS. In the EIS predicted traffic volumes for this site include:

- Daily: 10 heavy vehicles in and out (20 movements per day) and 20 light vehicles in and out (40 movements per day)
- AM peak hour: Two heavy vehicles in and out (four movements per hour) and no light vehicles in and out (zero movements per hour)
- PM peak hour: Two heavy vehicles in and out (four movements per hour) and five light vehicles out (five movements per hour).

The C6a construction site on the southern side of The Crescent would be used for some light vehicle parking (nine spaces). The number of vehicle movements to/from this site would be limited and movements would be restricted to left in/left out to The Crescent.

On this basis it is considered that no detailed re-assessment of the 2021 construction traffic scenario is required.

Section D2.4.1 of the SPIR provided a cumulative construction impact assessment on roadway LoS and intersection performance around Lilyfield and Rozelle and included the following proposals:

- Multi-user facility at Glebe Island
- Hanson concrete batching plant at Glebe Island
- Construction logistics site.

The results from the SPIR analysis demonstrate that mid-block roadway LoS remains satisfactory (LoS C or better) on James Craig Road in both the AM and PM peaks and that intersection LoS at The Crescent/James Craig Road deteriorates from LoS B to LoS C in the AM peak hour and from LoS C to LoS E in the PM peak hour.

As outlined in Section 6.13.3 of the Modification report, the proposed Glebe Island Concrete Batching Plant (SSD 8554) and Glebe Island Multi-User Facility would both require the use of James Craig Road for access. The proposed modification would result in a minor change to access arrangements by removing the right turn movement onto James Craig Road for vehicles using the overpass. As the majority of vehicles accessing these facilities would likely be approaching from either City West Link, Victoria Road or Anzac Bridge, and alternative traffic routes are available for vehicles potentially impacted, it is considered unlikely that additional cumulative impacts would occur.

Potential future projects planned for the White Bay precinct, such as Sydney Metro West, would undertake their own environmental assessments, including consideration of cumulative traffic impacts during both the construction and operational phases.

The Transport for NSW Transport Coordination division brings together the Sydney Coordination Office and Transport Management Centre to lead the planning and coordination for proactive real-time management of the traffic and transport network. The division manages traffic and transport disruptions for a number of projects and precincts in Sydney, including all stages of WestConnex. When major disruption events are expected across Sydney, mitigation measures are put in place to support customer journeys and to keep Sydney moving.

Transport for NSW will continue to liaise with both the Sydney Coordination Office and Transport Management Centre to ensure a coordinated approach to the management of cumulative construction traffic and parking impacts from projects in the Rozelle and White Bay precinct.

Transport for NSW commits to continued engagement with the Port Authority of NSW during construction of the Rozelle Interchange. In addition to the TTAMP and CEMP, there are a number of CoA that are designed to address potential traffic impacts during construction including:

- E52: management of construction vehicles
- E53: real time monitoring of construction spoil haulage vehicles
- E54: preparation and implementation of a construction parking and access strategy
- E61: preparation of a road dilapidation report
- E62: measures to rectify damage to roads.

## **B.4 NSW Environment Protection Authority**

## B.4.1 Noise

#### Construction noise impacts

#### Issue description

Construction noise impacts will result from the elevated construction of The Crescent overpass and shared user path bridge (bridge works) and intersection works at the Johnston Street / Chapman Road / The Crescent intersection. These impacts will be most noticeable to receivers to the west in Annandale. Extensive community engagement and the provision of respite from occasional night works will be an important mitigation measure.

#### Response

Potential construction noise impacts of the proposed modification are outlined in section 6.4.3 of the Modification report and section 5.2, 5.3 and 5.4 in Appendix C (Noise and vibration assessment) of the Modification report, which includes out of hours works, sleep disturbance and cumulative noise impacts.

Discussion of construction noise impacts upon the nearest receivers is provided in Section B.2.3.

As a result of predicted additional exceedances, it is recommended that Condition E87 'treatment zone' for mitigation of extended out-of-hours construction noise is extended to include an additional 19 receivers in this area including properties on Kentville Avenue and the northern extent of Johnston Street (refer to **Figure B-4**).

Respite periods would be undertaken in accordance with Condition E76 which requires that the proponent identifies appropriate respite periods for out of hours works in consultation with the local community at each affected location.

As required by Condition C4(b), construction noise would be minimised as far as practicable through the preparation of a CNVMP. The CNVMP would be prepared in consultation with the EPA and Council and would contain measures to reasonably and feasibly reduce construction noise exceedances.

#### **Operational noise impacts**

#### Issue description

The noise assessment (Appendix C to the EIS for Mod 2) indicates that the changes resulting from the modified proposal would typically range between LAeq, T -0.5 – +0.5 dB(A) principally resulting from a redistribution of traffic volume and heavy vehicle mix.

However, residences located to the west of the proposed Crescent overpass in Annandale (NCA 21 and 23) may experience additional increases in noise level to that predicted in the original Environmental Impact Statement (EIS) (LAeq, T + 0.5 - +1.5dB(A)). This change would be largely indiscernible to the average listener.

While these changes are small in an absolute sense, they will have a reasonably significant outcome in terms of noise mitigation, and most notably the number of properties predicted to be eligible for at property treatment (architectural acoustic upgrades e.g. mechanical ventilation, windows etc).

#### Response

Operational road noise impacts have been assessed in section 6.4.3 of the Modification report and in Chapter 6 of Appendix C (Noise and vibration assessment) of the Modification report. Operational road traffic noise has been assessed for a 'do something' and 'do something plus' scenario in both 2023 (year of opening) and 2033 (opening plus 10 years).

A discussion of the operational noise impacts and the recommended mitigation measures for those noise impacts is provided in **Section B.2.3**.

In accordance with Condition E92, the proponent will prepare an ONVR to confirm the noise and vibration control measures that would be implemented for the operation of the project. The ONVR will be prepared in consultation with relevant stakeholders, local Council and the community. In addition, in accordance with Condition E95, the proponent is required to undertake monitoring of operational noise and prepare an operational noise compliance report to document the results of the monitoring.

#### Conditions of approval

#### Issue description

The EPA notes that the existing planning approval includes extensive conditions relating to both construction and operational noise and vibration impacts and management. The EPA is therefore not recommending any changes to the noise and vibration requirements in the planning approval, noting that the existing conditions would apply to the proposed modification.

Additional mitigation measures (to address operational traffic noise) will be confirmed as part of detailed design should be carried over to any modified approval as per conditions in the existing planning approval. The EPA reiterates that mitigation of noise at the source and pathway is preferred over receiver-based treatments where feasible and reasonable.

#### Response

The EPA comment regarding the extensive planning conditions in the existing planning approval relating to construction and operational noise and vibration impacts and management is noted and supported.

As a result of predicted additional exceedances during construction, it is recommended that Condition E87 'treatment zone' for mitigation of extended out of hours construction noise is extended to include an additional 19 receivers in this area including properties on Kentville Avenue and the northern extent of Johnston Street (refer to **Figure B-4**). Condition E87 identified properties eligible for at-receiver noise mitigation in the form of at-property treatments as a result of noise impacts from out of hours work over an extended duration.

Construction noise would be minimised as far as practicable through the preparation of a construction noise and vibration sub-plan to the CEMP (CNVMP) as required by Condition C4(b). The CNVMP would be prepared in consultation with the EPA and Council and would contain measures to reasonably and feasibly reduce construction noise exceedances.

In relation to operational traffic noise impacts, the number of properties subject to noise mitigation would be confirmed during preparation of the ONVR. Condition E92 requires that in preparing the ONVR the proponent must:

 Review the suitability of the operational noise mitigation measures identified in the EIS and SPIR and, where necessary, investigate and identify additional noise and vibration mitigation measures required to achieve the noise criteria outlined in the NSW Road Noise Policy (DECCW, 2011) and NSW Industrial Noise Policy (EPA, 2000), including the timing of implementation.

The preferred mitigation option would be determined during detailed design.

## B.5 NSW Health: Sydney Local Health District

## B.5.1 Strategic context and justification

#### Issue description

The Building Better Health guidelines should be referenced in this modification proposal and used as a reference when considering major development in the Inner West.

#### Response

The Building Better Health guidelines (NSW Health 2016) outline nine key areas to focus on health promotion: food, physical activity, housing, transport, employment, safety, open space, social infrastructure and cohesion. Of these key areas, the modification and the approved project would directly impact upon:

- Physical activity the approved project and the modification would provide active transport connections between Rozelle/Lilyfield, Annandale and the Rozelle Bay foreshore. Existing connections between these areas are significantly constrained by physical barriers created by the Rozelle Rail Yards, City West Link, The Crescent and the light rail corridor.
- Transport and physical connectivity the approved project and the modification would provide improved active transport connections in both a north-south and east-west direction including to the Rozelle Bay light rail stop, bus services along Victoria Road and The Crescent, the proposed ferry wharf in Rozelle Bay near Chapman Road and to the proposed metro station to be located in the vicinity of White Bay Power Station.
- Public open space the approved project and the modification would provide improved access to 10 hectares of public open space in the Rozelle Rail Yards and to open space along the Rozelle Bay foreshore for residents of Rozelle, Lilyfield and Annandale.

The Building Better Health guidelines also outline environmental health risks that should be considered to protect populations from environmental risks. Environmental risk assessments have been undertaken in the EIS and subsequent Modification reports for the M4-M5 Link project which included assessment of environmental health risks associated with dust emissions during construction and air quality emissions during operation.

The existing project approval includes a robust set of conditions to minimise potential construction impacts to local communities. These conditions have been prepared having regard to the potential impacts of the project and recent experiences from construction of similar infrastructure projects in Sydney. These include:

- Conditions E6 and E24 outlining the ambient air quality goals and monitoring requirements during operation
- Condition E1 which requires that all reasonably practicable measures are implemented to minimise the emission of dust and other air pollutants during the construction and operation of the Project
- Condition C9(e) which requires dust deposition monitoring to be undertaken during construction.

## B.5.2 Noise and vibration

#### Issue description

New receivers will experience noise guideline exceedances during construction, particularly in Annandale (on Bayview Crescent, Kentville Avenue, near the intersection of The Crescent and Johnston Street, and on the northern aspects of Johnston Street). These receivers have been identified as eligible for the investigation of noise mitigation treatment, it is recommended that all reasonable and feasible actions are undertaken to minimise noise exceedances and their impacts.

Some noise increases are also expected during operation for additional receivers as a result of this modification.

#### Response

A discussion about additional receivers experiencing noise guideline exceedances during construction and operation, along with proposed mitigation and management measures is provided in **Section B.2.3**.

## B.5.3 Air quality

#### Air pollution impacts in Annandale

#### Issue description

Worsened air pollution for some parts of Annandale as a result of this modification should be mitigated. It is noted that air pollution is expected to be comparable to what would occur without the M4-M5 Link or during the operation of the M4-M5 Link without the proposed modification.

#### Response

A discussion about operational air quality impacts is provided in Section B.2.4.

## **B.5.4 Construction fatigue**

#### Issue description

Addressing construction fatigue related to this modification is critical as the health impact related to construction noise and disruption in particular can be significant. In the Rozelle, Annandale, and Balmain area, there is a confluence of concurrent and consecutive projects underway or planned for the area, including a number of projects not specifically mentioned within this report. Therefore, more stringent mitigation measures than would usually be employed for comparable projects should be considered because of the cumulative impacts of the various projects. This may include redrafting relevant parts of the conditions of consent and/or ensuring that the impacts on these communities are adequately minimised in the construction management plans. It is particularly important to consider vulnerable populations such as the elderly, people with disabilities, those with chronic illnesses and children when developing mitigation strategies.

#### Response

A discussion around additional receivers experiencing noise guideline exceedances during construction, along with updated mitigation and management measures is provided in **Section B.2.3**.

The existing project approval includes a robust set of conditions to minimise potential construction impacts to local communities. These conditions have been prepared having regard to the potential impacts of the project and recent experiences from construction of similar infrastructure projects in Sydney. This includes Conditions E87 and E88 which are designed to address impacts from extended out of hours works and construction fatigue.

For further discussion on cumulative construction noise and construction fatigue see Section 6.13 and in Appendix C (Noise and vibration assessment) of the Modification report. Cumulative impacts associated with other projects planned for the area including Western Harbour Tunnel project and the Sydney Metro West project would be assessed in the EISs for these projects.

The modification would minimise the duration of construction impacts on nearby residents by reducing the need for further construction activities to accommodate the proposed Western Harbour Tunnel project at City West Link, The Crescent and Johnston Street, should that project proceed in the future. All required construction works would be delivered as part of one, rather than multiple, construction programs.

## B.6 NSW Roads and Maritime Services – Maritime

## B.6.1 Traffic and transport

#### Permanent removal of the right turn movement from The Crescent to James Craig Road

#### Issue description

Vehicles would be prevented from turning right from The Crescent or Johnston Street into James Craig Road. The proposed overpass would negatively impact the access to Roads and Maritime Office facilities as well as key maritime tenancies including Sydney Superyacht Marina and Sydney Boathouse, and would affect future development sites in the Rozelle Bay area.

The modification states that alternate routes are available, however these alternate routes have not been listed. We are unable to specifically comment on the extent of the impact on Roads and Maritime operations. Regardless, we believe that any alternate route would be inferior and would have an adverse impact on Roads and Maritime and the tenants within Rozelle Bay.

#### Response

The potential impacts associated with removal of the right turn movement from The Crescent to James Craig Road, including the use of alternative routes, are discussed in **Section B.3.2**.

On the basis of this assessment it is anticipated that access to existing and future businesses in the Rozelle Bay and White Bay areas would be impacted to only a minor degree.

## Part C

Response to community and organisation submissions

# C.Part C – Response to community and organisation submissions

## C.1 General

196 submissions expressed general support or objection to the proposed modification.

## C.1.1 General support

#### Issue description

11 submissions expressed general support of the proposed modification.

#### Response

The general support of the proposed modification is noted.

## C.1.2 General objection

#### Issue description

185 submissions expressed general objection to the proposed modification.

#### Response

The WestConnex M4-M5 Link project would result in the following key benefits and opportunities:

- Ease congestion on surface roads by providing an underground motorway alternative and allowing for increased use of surface roads by pedestrians and cyclists and for public transport
- Reduce through traffic on sections of major arterial roads including City West Link, Parramatta Road, Victoria Road, King Street, King Georges Road and Sydenham Road, facilitating urban renewal opportunities to be realised along parts of the Parramatta Road and Victoria Road corridors
- Improve network productivity on the metropolitan network, with more trips forecast to be made or longer distances travelled on the network in a shorter time. The forecast increase in vehicle kilometres travelled (VKT) and reduction in vehicle hours travelled (VHT) is mainly due to traffic using the new motorway, with reductions in daily VKT and VHT also forecast on non-motorway roads
- Reduce travel times on key corridors, such as between the M4 Motorway corridor and the Sydney Airport/Port Botany precinct and between the main centres on the Global Economic Corridor, including Sydney city, Sydney Olympic Park, Parramatta and Norwest Business Park
- Deliver up to 10 hectares of new open space at the Rozelle Interchange which would provide an open space link between Bicentennial Park at Glebe and Easton Park at Rozelle
- Deliver new north–south and east–west pedestrian and cycleway connections to link Rozelle and Lilyfield with Annandale, Balmain, Glebe and The Bays Precinct
- Facilitate future growth in Sydney's transport network by allowing for connections to the proposed future Western Harbour Tunnel and Warringah Freeway Upgrade project (Western Harbour Tunnel project) and Sydney Gateway project.

The WestConnex Project is listed as a 'high priority initiative' in the *Australian Infrastructure Plan: The Infrastructure Priority List* (Infrastructure Australia 2016). The modification also supports the NSW Government's commitment to deliver WestConnex for Sydney, in response to the recommendations from the *State Infrastructure Strategy 2018–2038* (Infrastructure NSW 2018), the Greater Sydney Region Plan: A Metropolis of Three Cities (Greater Sydney Commission, 2018) and the *Future Transport Strategy 2056* (NSW Government, 2018).

The proposed modification is a result of design and constructability improvements identified by John Holland CPB (the contractor). The modification aims to improve intersection performance and optimise active transport connections in the area surrounding the intersection of The Crescent and City West Link. The proposed modification would:

- Improve intersection performance on this congested section of the road network including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections
- Adjust the alignment of active transport links to avoid conflict with The Crescent overpass (the
  overpass) while improving the overall connectivity proposed within the M4-M5 Link Environmental
  Impact Statement (EIS) and Conditions of Approval (CoA) for the project by providing an improved
  connection between the suburbs of Rozelle and Annandale and public transport infrastructure including
  the Rozelle Bay light rail stop
- Improve the efficiency of construction and minimise the duration of construction impacts on nearby residents by reducing the need for further construction activities to accommodate the proposed Western Harbour Tunnel project at City West Link and The Crescent, should that project proceed in the future
- Improve capacity at the intersections so that they can maintain performance with traffic generation from future development proposed in the vicinity of the project including the proposed Western Harbour Tunnel project if the development proceeds.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes. A detailed description of these changes and revised environmental assessments are provided in the Design amendment report.

The project approval includes a robust set of conditions to minimise potential construction and operational impacts to local communities and these conditions would also apply to the proposed modification. Some minor changes to the CoA and Environmental Management Measures (EMM) are proposed as a result of the proposed modification to ensure that additional impacts are mitigated and managed. These changes are detailed in **Part D**.

## C.2 Strategic context and justification

747 submissions raised issues regarding strategic context and justification.

## C.2.1 Justification of the proposed modification

#### Future traffic improvements

#### Issue description

190 submissions expressed concern with the justification of the proposed modification. Submitters raised concerns that the modification would result in limited traffic improvements as a result of the addition of the overpass. Submitters expressed concern that the proposed modification would induce traffic demand and not resolve Sydney's traffic congestion challenges.

#### Response

The NSW Government is investing in a combination of motorway and public and active transport infrastructure projects with the aim of addressing congestion in Sydney. WestConnex forms one component of the strategy to develop a Metropolis of Three Cities, where people can access the majority of jobs and services within 30 minutes. Further detail of these transport infrastructure projects is provided in **Section C.2.2**.

As outlined in Table 6-13 of the Modification report, the modification would result in the majority of intersections within the study area performing at a similar or improved level of service (LoS) when compared to the EIS. Improvements in LoS were identified for the intersection of City West Link/M4-M5 link ramps, City West Link/The Crescent, The Crescent/James Craig Road, Victoria Road/The Crescent, The Crescent/Johnston Street/Chapman Road (refer to **Table C-4**).

Improvements at these intersections are a result of the introduction of the overpass resulting in an improved flow of traffic from Annandale, via Johnston Street and The Crescent towards Victoria Road and the Anzac Bridge.

Some increases in traffic volumes are forecast on parts of the road network as a result of the proposed modification. These include 2,500 additional vehicles per day on Johnston Street (less than 10 per cent change), 1,500 additional vehicles per day on Anzac Bridge (less than one per cent change) and around 400 additional vehicles per day on The Crescent (south) (less than four per cent change). These increases are not considered significant and will have minimal impact on traffic performance and safety on these roads given high existing traffic volumes and the intended function of these roads in the road network.

Induced demand on the wider network is discussed in Section 4.2.1 in Appendix H of the EIS, along with Section B11.8.21 of the M4-M5 Link Submissions and Preferred Infrastructure Report (SPIR). Induced demand as a result of the project is predicted to equate to about 0.3 per cent additional daily trips in the Sydney metropolitan area in 2033. Induced demand is discussed further in **Section C.6.5**.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. These changes include:

 Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the pedestrian and cycling green link (green link). This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline

- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Increasing the width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed
- Retaining the right-hand turn movement from Johnston Street to The Crescent southbound
- Removing the proposed shared user path bridge between the proposed Rozelle Rail Yards open space and the east side of The Crescent.

These changes would result in improved connectivity for pedestrians, cyclists and traffic, reduced visual impacts and improved urban design outcomes. Additionally, these changes would also result in slight reduction in traffic performance (level of service and average delay) at The Crescent/Johnston Street/Chapman Road intersection, though slight improvement when compared with the performance predicted in the EIS (refer to **Table C-4**)

#### Other environmental and social benefits

#### Issue description

31 submissions expressed concern with the justification of the proposed modification. Submitters raised concerns that the modification provides only traffic improvements without improvements to other environmental and social aspects including promoting liveable communities and public green spaces.

#### Response

As outlined in Section 9.1 of the Modification report, in addition to traffic improvements, the proposed modification would:

- Adjust the alignment of active transport links to avoid conflict with the overpass while improving the
  overall connectivity proposed within the EIS and CoA for the project by providing a connection between
  the suburbs of Rozelle and Annandale and public transport infrastructure including the Rozelle Bay light
  rail stop
- Improve the efficiency of construction and minimise the duration of construction impacts on nearby residents by reducing the need for further construction activities to accommodate the proposed Western Harbour Tunnel project at City West Link and The Crescent, should that project proceed in the future.

The approved project will result in the provision of up to an additional 10 hectares of open space at the former Rozelle Rail Yards and improved active transport links both in the north/south and east/west directions to address significant physical barriers to movement which currently exist.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. This included meetings with the community, DPIE, NSW Government Architect's Office and other stakeholders. The revised design includes improved connection between these open spaces and to public transport infrastructure such as the Rozelle Bay light rail stop. It also includes a number of design changes proposed to improve active transport connectivity and reduce visual and urban design impacts of the modification. Further details of this design change and assessment of potential environmental impacts is provided in Section 2 and Section 3 of the Design amendment report.

#### The Western Harbour Tunnel and Warringah Freeway Upgrade project

#### Issue description

31 submissions expressed concern that the proposed modification is "future proofing" for the Western Harbour Tunnel which has not yet been approved.

#### Response

As outlined in Section 9.1 of the Modification report, the proposed modification would:

- Improve intersection performance on this congested section of the road network including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections
- Improve capacity at the intersections so that they can maintain performance with traffic generation from future development proposed in the vicinity of the project including the proposed Western Harbour Tunnel project if that future development proceeds.

Improvements at these intersections are as a result of the introduction of the overpass resulting in a freer flow of traffic from *Annandale*, via Johnston Street and The Crescent towards Victoria Road and the Anzac Bridge. These benefits would be achieved even in the event that the Western Harbour Tunnel project does not proceed.

Several examples exist within NSW where projects have developed infrastructure for a proposed interfacing project that is not yet approved. Examples include:

- M4 East project building ramps, tunnel stubs and ventilation outlet for the M4-M5 Link project at Haberfield
- New M5 project building ramps and tunnel stubs for the M4-M5 Link project at St Peters and tunnel stubs and ventilation outlet for the M6 Stage 1 project at Arncliffe
- M4-M5 Link project building tunnel portal, ramps, tunnel stubs and ventilation outlet for the Western Harbour Tunnel project at Rozelle
- Sydney Metro North West project building an operations control centre and stabling and maintenance facility at Rouse Hill, which would also service the Sydney Metro City and Southwest project.

While the Western Harbour Tunnel project is not yet approved, it has been identified as a priority transport infrastructure project in a number of NSW Government strategy documents including *Future Transport Strategy 2056*. The EIS for the Western Harbour Tunnel project has recently completed its public exhibition period and the submissions received are currently being considered by Transport for NSW.

## C.2.2 Consistency with strategic plans and policy

#### Issue description

552 submissions expressed concern with the proposed modification not being consistent with NSW Government strategic plans and policy. Submitters raised concerns that the proposed Modification prioritises motor vehicles over public transport, limits mobility for pedestrians and reduces connectivity to public transport, community facilities and public open spaces and is therefore not in line with the following:

- Greater Sydney Commission's: Greater Sydney Region Plan: A Metropolis of Three Cities
- Transport for NSW Future Strategy 2056
- Better Placed: Aligning Movement and Place
- The Bays Precinct Urban Transformation Plan
- The Australian Infrastructure Audit 2019.

#### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes a number of upgrades to the existing pedestrian and cycling network in the area which provides improved connectivity to community facilities, public open spaces and public transport.

This includes the retention, widening and upgrade of the at-grade signalised crossing of The Crescent, which would ensure a connection is maintained from Annandale to the open space areas along the Rozelle Bay foreshore and Bicentennial Park, and to the proposed ferry wharf at Chapman Road. The revised design also includes the widened shared user path ramp that would provide improved connectivity to the Rozelle Bay light rail stop and bus stops on either side of The Crescent.

The approved project and the proposed modification will provide active transport links that connect over City West Link, through the Rozelle Rail Yards open space and under Victoria Road to link with Anzac Bridge. This active transport link provides an opportunity to connect with the proposed metro station in the White Bay Precinct.

The revised design includes several refinements to improve active transport connectivity. However, as a result there will be slightly reduced traffic performance at The Crescent/Johnston Street/Chapman Road intersection. However, the intersection performance will remain similar to or slightly improved by comparison to the EIS. Further details of this design change and assessment of potential environmental impacts are provided in Section 2 and Section 3 of the Design amendment report.

The NSW government is investing in a combination of motorway and public transport infrastructure projects as part of an integrated strategy to address the travel demands of a forecast growing population in Sydney over the next few decades. The *Future Transport Strategy 2056* outlines a number of committed new infrastructure projects in Greater Sydney over the next 10 years, which are presented in **Table C.1**.

Table C-1: NSW government committed transport infrastructure projects

Project	Status	Expected completion date		
Motorway projects				
WestConnex – King Georges Road Interchange Upgrade	Approved	Completed – 2016		
WestConnex – M4 Widening	Approved	Completed - 2017		
WestConnex – New M4 Tunnels	Approved	Completed – 2019		
WestConnex – New M5	Approved	2020		
NorthConnex	Approved	2020		
WestConnex – M4-M5 Link Mainline Tunnels (Stage 1)	Approved	2022		
Sydney Gateway	EIS completed exhibition	2023		
F6 Extension – Stage 1 WestConnex to President Avenue, Kogarah (now M6 Stage 1)	Approved	2024		
M12 motorway	EIS completed exhibition	Before the opening of the Western Sydney International Airport		
Western Harbour Tunnel and Warringah Freeway Upgrade project	EIS completed exhibition	2026		
Beaches Link	EIS in preparation	Unknown		
Public transport projects				
Sydney Metro Northwest	Approved	Completed – 2019		
Northern Beaches B-line	Approved	Completed - 2019		
Sydney CBD and South East Light Rail	Approved	Completed – 2019/2020		
Parramatta Light Rail – Stage 1	Approved	2023		
Sydney Metro City and Southwest – Chatswood to Sydenham	Approved	2024		
Sydney Metro City and Southwest – Sydenham to Bankstown	Approved	2024		
Sydney Metro West	EIS in preparation	Unknown		
Parramatta Light Rail – Stage 2	Preliminary investigations	Unknown		
Sydney Metro Greater West	EIS in preparation	2026		

WestConnex forms only one part of the NSW government's strategy to develop a Metropolis of Three Cities, where people can access the majority of jobs and services within 30 minutes. WestConnex, including the M4-M5 Link, are projects that are specifically supported by the key strategic policy documents of the NSW Government including *Future Transport Strategy 2056* (Transport for NSW, 2018), the *Greater Sydney Region Plan: A Metropolis of Three Cities* (Greater Sydney Commission, 2018), and the *Australian Infrastructure Audit 2019* (Infrastructure Australia, 2019). The modification is generally consistent with all relevant NSW Government strategic plans.

#### Greater Sydney Region Plan: A Metropolis of Three Cities:

The modification relates specifically to Part 3 – Infrastructure and collaboration. Greater Sydney is growing and is becoming more complex, necessitating the development of infrastructure to support that growth. Four overarching objectives have been set to achieve a whole-of-government approach that will provide the appropriate infrastructure in the places to support the growth.

The first objective is for infrastructure to support the three cities. WestConnex and the M4-M5 Link provides important, improved and efficient connections between Parramatta and the city. The modification supports this by providing improved traffic outcomes for the approved project along City West Link, The Crescent and Johnston Street.

The modification results in improved active transport connections between communities in Rozelle and Annandale to public transport including the Rozelle Bay light rail stop, bus stops on The Crescent and proposed ferry wharf near Chapman Road. The modification would provide efficient and accessible connections to the broader network of active transport links being developed as part of the approved project. These links provide north/south and east/west connectivity over City West Link, through future open space at the former Rozelle Rail Yards and under Victoria Road to Anzac Bridge and the White Bay precinct.

The second objective requires infrastructure to align with forecast growth. As the population of Sydney is predicted to grow significantly, road projects are required to support that future growth. The modification, together with the approved M4-M5 Link project and potential future road projects such as the Western Harbour Tunnel project should it be approved, will provide improved traffic outcomes through this section of the road network.

The third objective requires that infrastructure adapts to meet future needs. As Sydney's population grows, the demands on the Sydney transport network (roads, public transport and active transport) will inevitably increase. The modification together with the approved M4-M5 Link project will provide additional road network capacity, improved connections to existing and proposed public transport services and improved active transport connectivity in both a north/south and east/west direction. Objective four is not applicable to the modification.

#### Future Transport Strategy 2056

The M4-M5 Link project is identified as a committed project in the *Future Transport Strategy 2056*. The approved project and the modification specifically support the following strategy objectives:

- Congestion management
- Unlock capacity on the existing road corridors
- Supporting renewal (through the creation of open space at Rozelle Rail Yards and new active transport links.

Through improving the efficiency of existing infrastructure and relieving congestion at key intersections in the Sydney road network, the proposed modification supports the objectives of the *Future Transport Strategy 2056*.

Large infrastructure projects have long lead-times and can be disruptive to communities during construction. Once built these projects can also be difficult and costly to alter. The proposed modification has identified a series of improvements to the approved project to ensure that the Rozelle Interchange project is constructed efficiently, and, in a manner, which avoids the need for subsequent alterations, thereby resulting in reduced amenity impacts for the local community.

#### Better Placed: Aligning Movement and Place

The modification would result in improved active transport connections between the communities of Rozelle and Annandale to the Rozelle Bay light rail stop and open space at Bicentennial Park and the Rozelle Rail Yards. The modification is considered to be generally consistent with the key design objectives which formed part of the movement and places framework. The seven objectives include:

- Better fit: contextual, local and of its place
- Better performance: sustainable, adaptable and durable
- Better for community: inclusive, connected and diverse
- Better for people: safe, comfortable and liveable
- Better working: functional, efficient and fit for purpose
- Better value: creating and adding value
- Better look and feel: engaging, inviting and attractive.

The modification meets these objectives through the following:

- Balances the different movement needs of motorists, pedestrians and cyclists
- Supports the needs of different people by providing access to places of work, public transport, open space, local schools and shops, and other areas of interest (e.g. Tramsheds)
- Considers both the existing conditions and future context of the area, particularly the future context within the Rozelle Rail Yards open space and along the Rozelle Bay foreshore
- Provides opportunities for physical activity, social interaction and includes areas of visual interest (e.g. green link)
- Provides for improved and safe active transport movement with a good quality of amenity for users
- Considers and responds to the legitimate concerns raised by the local community in submissions received by proposing a number of design changes through the revised design.
### The Bays Precinct Sydney Transformation Plan

Two of the identified precincts within the Bays Precinct Transformation Plan relate to the modification – the Rozelle Bay and Bays Waterways precinct and the Rozelle Rail Yards precinct. The Bays Precinct Transformation Plan identifies the future development of Rozelle Bay and the Bays Waterways as having new land and maritime uses including a mix of commercial and open space working harbour industries and on-water recreation facilities. Opportunities to improve public access to the waterfront and waterways and to improve water quality are objectives for this precinct. The modification and the approved M4-M5 Link project are expected to improve active transport accessibility to the Rozelle Bay foreshore area.

The forecast improvements in intersection performance at this part of the road network as a result of the modification would provide some additional capacity for future traffic associated with the population and employment growth expected in the Bays Precinct over the next few decades.

The modification would provide an opportunity for the corridor of land between The Crescent and Rozelle Bay to be developed in the future in accordance with the Residual Land Management Plan (RLMP). The removal of the shared user path bridge reduces the physical and visual impact on this foreshore area.

Water quality of drainage run-off would be improved by the treatments proposed in the design of open space within Rozelle Rail Yards and at the outlet of Whites Creek as part of the approved M4-M5 Link project.

Within Rozelle Rail Yards the approved project would provide up to an additional 10 hectares of public open space to serve existing residents in the suburbs of Rozelle, Lilyfield and Annandale and future residents within the Bays Precinct. There would also be significantly improved active transport connections provided within this open space area in both a north/south and east/west direction.

### Australian Infrastructure Audit 2019

The Australian Infrastructure Audit takes stock of the most important issues facing our infrastructure as Australia prepares for a future that is set to be fundamentally different to what we have experienced in the past.

The key chapter of the Australian Infrastructure Audit relevant to the modification is Chapter 3 – Infrastructure services for users. Section 3.4 details the needs and challenges for infrastructure in relation to fast-growing cities such as Sydney. One of those key challenges is that without action, infrastructure constraints will add to economic, social and environmental costs, eroding the productivity of these cities and reducing quality of life for residents. Of note, is that rising populations in Sydney are resulting in increased road congestion and increases in average commute times.

The modification would assist in alleviating travel times for this area of Sydney's road network. By identifying solutions and better outcomes early, Transport for NSW is playing its role in resolving the challenge of existing infrastructure constraints.

## C.2.3 Consistency with NSW Government commitments

### Issue description

29 submissions raised concerns that the elevated overpass is not consistent with the WestConnex commitment to minimising visual impacts through placing roads underground (breach of a promise given by the then Premier Baird in 2016).

### Response

The proposed overpass forms an upgrade to the arterial road network within Annandale and Rozelle. It is ancillary to but is not a part of the motorway interchange associated with the Rozelle Interchange, which remains mostly underground as previously approved. The Modification report considered an at-grade option (the EIS arrangement) and an underpass option. The overpass option was considered the preferred option when considering a variety of engineering, constructability and environmental constraints. Refer to Section **C.4.1** for further details on this assessment.

The approved M4-M5 Link project had a number of elevated design features in the vicinity of The Crescent/City West Link intersection, such as the green link, tunnel portal, ventilation building and outlets. It is considered that the proposed overpass and realigned green link are reasonably consistent with the existing and emerging built form character in the vicinity of this major intersection. For further consideration of visual impacts see **Section C.7.3**.

# C.3 Assessment process

215 submissions raised issues regarding the assessment process.

## C.3.1 Approval process

### Issue description

15 submissions expressed concern with the approvals process for the proposed modification. Submitters raised the following concerns:

- This modification does not match the definition of modifications for State Significant Development (SSD)
- The approvals process should not allow for major changes to be considered as modifications to a
  project approval.

### Response

The M4-M5 Link project is not a State Significant Development (SSD) project so the requirements relating to a modification for SSD projects do not apply.

An application for approval of State Significant Infrastructure (SSI) was submitted to the Minister for Planning and Public Spaces in 2017 under Section 5.15 of the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). Subsequently, the M4-M5 Link project was declared by Ministerial Order to be SSI and critical State significant infrastructure (CSSI), under Section 5.12 (4) and Section 5.13 of the EP&A Act. In 2018, the M4-M5 Link project was approved by the Minister under Section 5.19 of the EP&A Act.

Where the approval has been granted by the Minister for SSI, Section 5.25(2) of the EP&A Act permits a proponent to request the Minister to modify the Minister's approval for SSI, where that modification is not consistent with the existing Ministerial approval. Section 5.25(3) requires that the request for the Minister's approval to modify the existing approval be lodged with the Planning Secretary. Under this subsection, the Planning Secretary may provide the proponent with environmental assessment requirements (SEARs) for the proposed modification and the proponent must comply with these before the matter will be considered by the Minister.

The modification addressed the relevant SEARs set out for the M4-M5 Link EIS as listed in Appendix A (Environmental Assessment Requirements) of the Modification report.

It is usual for modifications to be sought for CSSI projects to reflect changes proposed during detailed design. The reasons for seeking a modification are outlined in sections 1.4.2 and 4.1 of the Modification report.

The assessment process for modifications to CSSI is robust and includes the following components:

- The Modification report was prepared to assess the positive and negative impacts associated with the modification and to recommend any changes to CoA or EMM to mitigate and manage these impacts
- The Department of Planning, Industry and Environment (DPIE) placed the modification on public exhibition for a period of five weeks to provide the community with an opportunity to comment on the modification
- The revised design is proposed by Transport for NSW to address a number of issues raised in the submissions. This was aided with feedback from meetings with DPIE and the NSW Government Architect's Office and consultation with local community groups and other stakeholders
- The revised design will be presented in the Design amendment report which is to be placed on public exhibition for a period of 14 calendar days

 The Modification report, submissions received, Design amendment report, this Response to submissions report and additional submissions report will be considered by DPIE in its assessment and determination of the modification.

### C.3.2 Transparency of assessment

### Issue description

29 submissions expressed concern that a rigorous and thorough assessment of the proposed modification had not been undertaken as a result of:

- Limited detail is provided about the potential design and constructability improvements claimed in the Modification report
- The modification being pursued because of program and cost considerations by the contractor
- The true justification for the modification not being revealed to the public.

### Response

The Modification report was prepared under Section 5.25 of the EP&A Act by a team of qualified professionals and presented a balanced, merit-based environmental impact assessment in accordance with the EP&A Act, the SEARs and applicable NSW assessment guidelines. Under Section 5.25 of the EP&A Act, a modification means changing the terms of the approval, including revoking or varying a condition of the approval or imposing an additional condition on the approval.

Detail regarding the need, justification and level of information for the modification was included in the Modification report. This Response to submissions report includes further details (referenced in **Table C-2**).

Environmental assessment information	Modification report section	Response to submissions report section	Design amendment report section
Statement of project need and justification	1.4.2	C.2.1	
Analysis of design options	4.3	C.4.1	
Separate technical assessments for key issues (traffic & transport, noise and vibration and air quality)	6.3, 6.4 & 6.5 Appendix B, C & D		3.1, 3.4 & 3.5
Other assessment (urban design, landscape & visual and non-aboriginal heritage)	6.6, 6.7 & 6.8		3.2, 3.3 & 3.6

Table C-2: Detailed information of assessment

# C.3.3 Quality of documentation

### Issue description

192 submissions expressed concerns with the quality of documentation and quality of assessment. Submitters raised the following concerns:

- Diagrams being too small, unclear, inconsistent and difficult to interpret
- No digital information including 3D visualisation and virtual drive throughs were provided
- The use of misleading language that was written intentionally to confuse or deceive the reader
- The modification design was not compared with the design presented in the EIS
- Insufficient options assessment for the overpass and the active transport connections
- Lack of consideration for economic, amenity, pedestrian and cycling connectivity and environmental considerations in the design
- No economic analysis of changes to surrounding property and lifestyle was undertaken
- The design focused on engineering constraints rather than urban design
- The assessment being based on an indicative design that does not therefore provide adequate details for a comprehensive assessment
- Indicative views were not used from more representative locations
- Lack of consideration of existing site conditions
- Insufficient detail of environmental management measures
- Lack of consideration and response to the scale of impact during both operational and construction phases.

### Response

### Quality of documentation

The Modification report provided clearly labelled figures to present information about the proposed design elements. The style of the figures and language used was consistent with the M4-M5 Link EIS.

The Modification report included a number of elevation drawings and photomontages to provide an understanding of the visual impact of the proposed design elements. The use of digital information including 3D visualisation and virtual drive throughs was not considered necessary for the modification.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design is included in this Response to submissions report.

### Design not compared to EIS

The Modification report was prepared to address the SEAR for the proposed modification and provided several environmental assessments which compared the expected environmental impacts of the indicative design presented in the proposed modification to the approved design presented in the EIS. Individual assessments considered potential impacts of the modification on the surrounding environment, including interactions with the surrounding community and the subsequent impacts on amenity.

Chapter 3 of the Modification report outlines the relevant aspects of the approved project that were then compared to the proposed modification design. An options assessment of the modifications key design elements is included in Chapter 4 with Chapter 6 providing environmental assessments which compared impacts to the corresponding impacts assessed in the EIS (e.g. traffic, noise and vibration, air quality and visual impacts).

### Limited options assessment and considerations in design

The options assessment for the City West Link/The Crescent intersection was included in Section 4.1.3 of the Modification report. The options analysis has been updated (refer to **Section C.4.1.1**). This analysis provides a balanced assessment of positives and negatives associated with each option with consideration of a variety of factors including constructability and engineering constraints, economic considerations, active transport connections, intersection performance, visual impacts and urban design outcomes.

### Design focused on engineering constraints not urban design

The design of the modification was undertaken by the contractor in consultation with Transport for NSW. The design was informed by an options assessment that considered a range of issues and developed an outcome that allowed for good design and improved constructability. The assessments presented in the Modification report were based on a concept design as is usual for environmental assessments seeking approval. Should the modification be approved, a detailed design process would be undertaken prior to commencing construction of the modification.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved design outcomes including lowering of the overpass and removal of the shared user path bridge. Further details of revised urban design assessment are provided in Section 3.2 of the Design amendment report.

The Urban Design and Landscape Plan (UDLP) for the project would further outline design details of the modification including plantings, materials and finishes, lighting, wayfinding signage and landscaping. The UDLP preparation process will include consultation with the relevant councils, Infrastructure NSW (former UrbanGrowth NSW), stakeholders, the community and affected businesses and landowners as required by Condition E134.

The revised design which is proposed by Transport for NSW will improve design outcomes, including provision of improved and safer connections between Rozelle Rail Yards, Rozelle Bay light rail stop, the residential area of Annandale and the Rozelle Bay foreshore. The revised design would also provide improved amenity for active transport users and reduced visual impacts by comparison to the proposed modification.

The reduced height of the overpass and removal of the shared user path bridge will reduce visual clutter and allow for improved outlook in an easterly and north-easterly direction toward Rozelle Bay, Anzac Bridge and the city skyline. It would also reduce the footprint and visual impacts on the proposed open space area with the Rozelle Rail Yards and in the area along the Rozelle Bay foreshore by comparison to the modification. As a result, opportunities for place making in these open space areas are unlikely to be affected.

The proposed green link over City West Link would significantly improve pedestrian and cyclist connectivity between surrounding suburbs, recreational spaces and the foreshore compared to the existing conditions.

The overpass and the green link structures have been designed to complement each other in terms of overall height, curvilinear form and structural elements (similar girder and pier types). These structures are simple, refined and elegant with minimal piers and abutments to maximise permeability and visual transparency.

The revised design includes retaining the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street including the introduction of bicycle lanterns at this signalised crossing. Transport for NSW is also proposing to widen this crossing to approximately six metres and paving treatment to provide an improved and safer user experience. Further urban design assessment of the revised design is provided in Section 3.2 of the Design amendment report.

### Assessment based on indicative design

As stated in Section 4.1 of the Modification report, the EIS assessed an indicative concept design, which was subject to refinement as part of the detailed design process by the appointed contractor. After the planning approval was granted for the project, a contractor was appointed to construct Stage 2 of the project (Rozelle Interchange and Iron Cove Link) on behalf of Transport for NSW.

The contractor or Transport for NSW may offer an alternate design or construction methodology that has a beneficial project outcome including environmental and social impacts. Where this occurs, a post-approval process under the EP&A Act is undertaken. Where the proposed changes are not considered to be consistent with the Planning Approval, a modification is required under Section 5.25 of the EP&A Act. This is the process that has been followed for the proposed modification.

Detailed design and construction planning by the contractor are currently continuing in parallel with the early stages of construction of the project.

The representative views provide an accurate visual representation of the proposed modification as exhibited, including the overpass and green link. While the views from each individual receptor will be slightly different the viewpoints selected are considered to be reasonably representative of the views from the most sensitive receivers. Refer to **Section C.7.1** for further discussion on viewpoints.

### Consideration of existing conditions

The existing environmental conditions are detailed for each issue in Chapter 6 of the Modification report. These existing conditions were prepared with the relevant information to each of their respective disciplines and to the level of detail appropriate for the modification assessment.

### Insufficient detail of Environmental Management Measures

A robust set of EMM are provided in Part E of the SPIR. Recommended changes to EMM as a result of the modification were included in Chapter 8 of the Modification report.

### Consideration and response to the scale of impact during both operational and construction

A robust set of CoA have been prepared in response to the assessment included in the EIS and the SPIR and were designed to minimise impacts during construction and operation of the project.

The environmental assessment detailed in Chapter 6 of the Modification report, and further detail provided in the technical appendices, were prepared after careful consideration of the scale of both construction and operational impacts proposed as part of the changes from the modification. The assessment was used to inform changes to the CoA and EMM which were provided in Chapter 7 and Chapter 8 of the Modification report. Any further changes proposed to the EMM and CoA as a result of the revised design are provided in **Part D**.

# C.4 Modification design

965 submissions raised issues regarding the proposed design of the modification.

### C.4.1 The Crescent overpass

### Issue description

695 submissions expressed concern with the proposed design for the overpass including:

- Why an underground option for the overpass was not selected
- Why the EIS design (at-grade road connection) is not proposed
- The height of the overpass has not considered local development standards that are applicable in this area.
- The overpass being located in the vicinity of Jubilee Park.

### Response

Various options were considered to meet the aims of the proposed modification. As outlined in section 4.3.1 of the Modification report, three main options were considered to improve the performance of The Crescent and City West Link intersection during operation of the project. These options are, shown in **Figure C-1** and included:

- At-grade (option 1) an at-grade signalised intersection (EIS arrangement) containing three right turn lanes from The Crescent (northbound) to The Crescent (eastbound)
- The underpass (option 2) a tunnel underpass connecting The Crescent (northbound) to The Crescent (eastbound)
- The overpass (option 3) an overpass connecting The Crescent (northbound) to The Crescent (eastbound).

The overpass option was considered the preferred option when considering a variety of engineering and environmental constraints including constructability and cost, intersection performance, active transport connectivity, visual impact and urban design considerations.

The at-grade option does not provide adequate intersection performance or capacity to handle traffic from future projects. Also, this option would result in widening of road carriageway into adjacent open space areas to the north within Rozelle Rail Yard and to the east along the foreshore of Rozelle Bay, which is not preferred.

The underpass option would need to navigate below existing drainage infrastructure as a result increasing the tunnel gradients. It would require an existing Ausgrid high voltage cable to be relocated with significant implications for the construction program and overall construction costs. It would also be more challenging from a constructability perspective requiring traffic lane closures and diversions over an extended period of time in a particularly busy section of the arterial road network. For these reasons this option was not preferred.

The options assessment undertaken for the Crescent/City West Link intersection in the Modification report has been updated to reflect some of issues raised in the submissions received during the public exhibition period and the results of option assessment work previously undertaken by Transport for NSW. The updated options assessment is provided in **Table C-3**.

Regarding the height of the overpass in the context of local development standards, section 2.2 of the EIS provides an overview of the environmental planning instruments (EPIs) relevant to the project, including the applicable local environmental plans (LEPs). Notwithstanding this, the EPIs are not applicable to SSI projects.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the lowering of the overpass by around two metres at its apex to be consistent with the height of the adjacent green link. At this height, the overpass will be generally consistent with the height of other existing and proposed structures including the elevated light rail corridor and the proposed ventilation building within the Rozelle Rail Yards (refer to **Figure C-2**.)

The overpass is to be located within an arterial road corridor and will be separated from the closest residential properties in Annandale by proposed active transport infrastructure and the light rail corridor.

The overpass is located a considerable distance to the north-west of Jubilee Park and would not impact on this park.



Figure C-1 Options considered for the intersection of The Crescent and City West Link

Table C-3: Options assessment for The Crescent/City West Link intersection

Option	Description	Discussion					
At-grade intersection arrangement (EIS)	An at-grade signalised intersection containing three right turn lanes from The Crescent (northbound) to The Crescent (eastbound).	The arrangement proposed in the EIS would result in a number of benefits including:					
		Minimal visual change by comparison to the existing arrangement					
		• Improved active transport connectivity from the Rozelle Rail Yards to Chapman Road an Annandale using the green link alignment proposed in the EIS design.					
		The EIS arrangement would be subject to several disadvantages:					
		• The at-grade intersection arrangement would result in inferior intersection performance by comparison to the other options and as a result would negatively impact on the road network in this area of Rozelle and Annandale					
		• The arrangement would not provide sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval					
		<ul> <li>Additional future works would likely be required at the intersection to provide additional capacity resulting in extension of the construction program</li> </ul>					
		• To further upgrade the at-grade intersection to achieve satisfactory capacity would require further widening of the road carriageways within the Rozelle Rail Yards and along the Rozelle Bay foreshore.					
The underpass	A tunnel underpass connecting The	The underpass option would result in a number of benefits including:					
	Crescent (northbound) to The Crescent (eastbound).	• Improvement in intersection performance relative to the at-grade (EIS) arrangement and similar to overpass option					
		• Sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval					
		Similar visual impact to at-grade (EIS) option					
		Similar active transport connectivity to at-grade (EIS) option					
		The underpass option would be subject to several disadvantages:					

Option	Description	Discussion
		<ul> <li>Underpass would need to navigate below existing drainage infrastructure (e.g. Whites Creek and the drainage channel from the Rozelle Rail Yards to Rozelle Bay) therefore requiring steeper non-compliant grades</li> </ul>
		<ul> <li>To optimise grades as far as practicable, entry and exit ramps for the underpass would be located close to The Crescent/Johnston Street/Chapman Road and The Crescent/James Craig Road intersections resulting in potential traffic safety concerns</li> </ul>
		<ul> <li>An underpass would require relocation of the existing high voltage (132 kV) Ausgrid cable which crosses The Crescent to the east of the intersection. This process involves long lead times which would result in delays to the construction program</li> </ul>
		<ul> <li>An underpass is considerably more challenging from a constructability perspective. It would require extensive cut and cover tunnel construction work within the middle of City West Link resulting in lane closures and traffic diversions over an extended period in this important section of the arterial road network</li> </ul>
		<ul> <li>The length of the underpass would require ventilation and fire, life and safety features to be provided. Due its proximity to Rozelle Bay, the underpass would likely require construction as a tanked structure to prevent the inflow of groundwater. Cut and cover tunnelling would also be required in poor ground conditions and would likely encounter contaminated soil and groundwater</li> </ul>
		<ul> <li>Underpass would require the removal of the right turn movement to James Craig Road for eastbound vehicles using the underpass (similar to the overpass option). Vehicles affected would need to take alternative routes to access James Craig Road</li> </ul>
		<ul> <li>Construction of the underpass would be significantly more expensive by comparison to the overpass or at-grade (EIS) options.</li> </ul>

Option	Description	Discussion				
The overpass	An overpass connecting The Crescent (northbound) to The Crescent (eastbound).	The overpass option would result in a number of benefits including:				
		Improved intersection performance by comparison to the EIS arrangement and comparable to the underpass option				
		<ul> <li>Provide sufficient capacity for additional traffic generation predicted should other proposed projects, including the proposed Western Harbour Tunnel project, receive development approval</li> </ul>				
		• Constructability constraints are more manageable by comparison to a tunnel option, with a significant number of construction activities able to be undertaken off-line, minimising impact on this important section of the arterial road network				
		Construction program and overall cost would be reduced by comparison to the underpass     option.				
		The overpass option would be subject to several disadvantages:				
		<ul> <li>Increased visual impacts by comparison to other options</li> </ul>				
		• Potential impacts to active transport connectivity proposed as part of approved project due to the introduction of the overpass and the need to realign the approved active transport links				
		• Minor increase in noise and air quality emissions from operational traffic using the overpass				
		• Potential impact on the visual setting of a section of The Crescent mural (a potential heritage item) (already impacted/affected by the pedestrian ramp approved as part of the EIS)				
		• An overpass would require the removal of the right turn movement to James Craig Road for eastbound vehicles using the overpass (similar to the underpass option). Vehicles affected would need to take alternative routes to access James Craig Road.				



Figure C-2 The revised design - the overpass (long section)

# C.4.2 Pedestrian and cycling green link

### Issue description

754 submissions expressed concerns with the proposed design of the green link. Submitters raised concern as to why the EIS design of the green link is no longer proposed.

#### Response

The proposed overpass has resulted in the need to change the alignment of the green link and therefore the proposed arrangement of active transport connections.

The proposed overpass reaches its maximum height in the middle of the City West Link/The Crescent intersection, roughly where the green link would cross the intersection under the approved EIS design. It is not possible for the green link to travel above this section of the overpass without it being significantly elevated resulting in steep grades and increased visual impacts. Similarly, it is not possible for the green link to minimum height clearance required for traffic using City West Link and The Crescent.

As a result, a new alignment for the green link was investigated. The green link is a significant structure and pylons and girders are required to support its weight. Only limited areas are available within the intersection layout to place these supporting pylons. As a result, this also influences the alignment of the bridge.

The proposed green link over City West Link would significantly improve pedestrian and cyclist connectivity between surrounding suburbs, recreational spaces and the foreshore compared to the existing conditions. Existing connectivity is constrained by significant physical barriers such as the Rozelle Rail Yards, City West Link and The Crescent.

The overpass and the green link structures have been designed to complement each other in terms of overall height, curvilinear form and structural elements (similar girder and pier types). These structures are simple, refined and elegant with minimal piers and abutments to maximise permeability and visual transparency.

This revised design will improve design outcomes, including provision of improved and safer connections between Rozelle Rail Yards, Rozelle Bay light rail stop, the residential area of Annandale and the Rozelle Bay foreshore. The revised design would also provide improved amenity for active transport users and reduced visual impacts by comparison to the proposed design in the Modification report.

The green link would span from the roof of the Rozelle ventilation facility, over multiple traffic lanes on City West Link and The Crescent before landing at the platform of the Rozelle Bay light rail stop. From there the widened shared user path ramp and the upgraded at grade signalised crossing of The Crescent would complete the connection to the Rozelle Bay foreshore. As a result, the shared user path bridge is no longer proposed as the alternative route is more direct and caters for both north/south and east/west pedestrian and cycling desire lines.

The green link would be constructed in accordance with the intent of Condition E120 of the CoA and would be consistent with Figure 5.8 of Appendix L of the EIS including provision of adequate soil depth to support a diverse range of vegetation along the majority of its length.

The proposed modification would maintain the same connectivity provided in the EIS, albeit in a slightly different arrangement. Refer to Section 3.1 of the Design amendment report for the assessment of active transport connectivity associated with the revised design.

## C.4.3 Shared user path bridge and connections

### Issue description

322 submissions expressed concerns with the proposed design of the shared user path bridge and active transport connections. Submitters raised concerns with the following:

- The need for the shared user path bridge when a connection is already provided via the green link
- If the at-grade shared path adjacent to The Crescent on the Rozelle Bay side will be maintained, altered or removed.

### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes. These design changes mean that the link between the Rozelle Rail Yards open space and the Bicentennial Park foreshore area is provided via the green link, widened shared user path ramp and upgraded at-grade signalised pedestrian crossing of The Crescent. This connection is greater in distance and travel time compared to the EIS design; however, the revised design is improved compared to the modification design and is generally consistent with Condition E120. As a result, the shared user path bridge is no longer required.

No changes are proposed to the at-grade shared path arrangement approved in the EIS, which runs along the southern and eastern sides of The Crescent adjacent to Rozelle Bay. This approved path connects to the existing shared path near Chapman Road, which then continues south toward Bicentennial Park.

## C.4.4 The Crescent construction ancillary facility (C6a)

### Issue description

Two submissions expressed concerns that the additional construction ancillary facility, C6a, would result in a loss a green space, amenity and parking access to Rozelle Bay.

### Response

The proposed construction ancillary facility (C6a) is located on the south side of The Crescent to the west of James Craig Road and adjacent to Rozelle Bay. The site has previously been used for port-related uses and is occupied by hard stand. Use of this site during construction will not result in additional loss of open space or public carparking (refer to **Figure C-3**).

The C6a site was established as a minor construction ancillary facility in accordance with Condition of Approval C24. The proposed modification would not increase the footprint of the C6a site but would allow the use of the site for a limited number of additional purposes which are not permitted by Condition C24 including:

- Light vehicle parking for workers (around 9 spaces) and
- Material laydown areas and a limited number of associated vehicle movements (small delivery vans and rigid trucks).

On completion of construction activities, this site and the nearby C6 civil site, which fronts onto Rozelle Bay, will be returned as residual land and made available for a future use to be nominated in the RLMP prepared in accordance with Condition E112.



Imagery © Nearmap (2020)

# C.4.5 Suggested design changes

### Suggested changes within the scope of the modification

#### Issue description

163 submissions suggested the following changes to the proposed modification:

- Maintain the pedestrian and cycling crossing over The Crescent at Chapman Road and Johnston Street intersection
- Retain the existing path along the west side of The Crescent from Railway Parade to Johnston Street
- Provide a path that connects the Rozelle Bay light rail stop to the Railway Parade path
- Provide a direct connection from the Rozelle Rail Yards to Rozelle Bay and Glebe foreshore parklands
- Provide a direct connection from Buruwan Park to the Rozelle Bay foreshore
- Provide a direct connection to the future Metro West (Bays Precinct) station and foreshore ferry wharf
- The existing narrow bike shoulder on The Crescent to the south of Chapman Road under the rail bridge should be maintained and continued to a point adjacent to the proposed City of Sydney skate park
- Provide a bike lane or shared path on the northern side of Johnston Street from The Crescent to Kentville Street (as part of the Pedestrian and Cycling Implementation Strategy to be prepared in accordance with Condition E60)
- Separate at-grade pedestrian and cycling paths from roads by a minimum 1 metre
- Provide adequate waiting space/cycle turn bays on ground level paths and where cyclists must wait at a median so that cyclists using the crossings do not have to wait in a cycle lane
- Change the footpath ramp from Rozelle Bay light rail stop from a pedestrian only to a shared use path
- Provide a separated path for pedestrian and cyclists rather than a shared user path (to be consistent with the Cycle Strategy for Greater Sydney) on the paths and on the shared user path bridge
- Install a physical barrier between pedestrian and cyclist paths to increase safety for children and other pedestrians
- Provide elevators or stairs to the shared user path bridge to allow improved access to the bridge from the east
- Lower considerably the proposed height of the shared user path bridge
- Replace the overpass with a short 120m tunnel option with a single land bridge (i.e. a slot cut and cover trench or tunnel running underneath Whites Creek)
- Lower the height of the overpass
- Relocate the on ramp to the overpass further west to utilise space created in Buruwan Park
- Move the overpass and part of City West Link further to the north-west into the Rozelle Rail Yards to allow the green link to be maintained in the position proposed in the M4-M5 Link EIS
- Maintain the right-hand turn from Johnston Street onto The Crescent southbound
- Widen The Crescent between Johnston Street and the City West Link to allow for 4 lanes exiting onto the City West Link towards the city to increase the number of cars able to exit The Crescent
- Widen the City West Link citybound by one traffic lane between The Crescent and James Craig Road, to allow 4 lanes to enter from The Crescent
- Retain only the existing 2 traffic lanes on The Crescent travelling south to Annandale so as not to
  encourage use of Johnston Street as a major traffic thoroughfare. This would reduce the risk of
  pedestrian accidents on Johnston Street from increased traffic flow
- Raise the level of City West Link enough to allow an underpass for pedestrian and cyclists.

- Introduce an intersection with continuous flow allowing traffic to turn left from Johnston Street into The Crescent at any time
- Improve the urban design of the retaining wall along the boundary of the light rail corridor which faces east towards The Crescent
- Provide landscaping (such as planter boxes) or vegetation on the southern section of the green link adjacent to the Rozelle Bay light rail stop
- Improve the urban design of the sides of the overpass structure by introducing green walls
- Increase the number of trees, landscaping and green space in the design
- Provide indigenous planting along the foreshore
- Install bike lanterns at signalised intersections
- Position the cyclist and pedestrian beg-buttons on the left
- Provide wide and well-lit pedestrian and cycling paths
- Provide benches on pedestrian and cycling paths
- Reinstate bus stops near Buruwan Park and White Bay for buses travelling over Anzac Bridge into the city
- Provide an underpass crossing of The Crescent near Johnston Street for pedestrians and cyclists
- Reduce the number of lanes on The Crescent from 8 lanes to 6 lanes and make 4 of those lanes sunken with one lane either side for local traffic.

### Suggested changes relating to the M4-M5 Link project but not within the scope of the modification

#### Issue description

11 submissions suggested the following changes to the M4-M5 Link project:

- Provide a direct connection from Lilyfield Road to Anzac Bridge (underpass or overpass)
- Provide a direct connection from Victoria Road to City West Link and the foreshore (underpass or overpass)
- Raise the height of the existing noise wall between City West Link and adjacent suburbs
- Improve light sequencing for cyclists/pedestrians as currently The Crescent and James Craig Road intersections require cyclists/pedestrians to wait for two cycles of lights
- Create a hybrid public space within the Rozelle Rail Yards that combines active transport and social experiences such as nature, art and design.

### Suggested changes outside the scope of the modification and M4-M5 Link project

### Issue description

18 submissions suggested the following changes that are outside of the scope of works for the modification and the M4-M5 Link project:

- On-street parking should be removed along the east (park) side of The Crescent and a bike path constructed as far as Nelson Street roundabout
- Path on the western side of The Crescent, from Johnston Street to the existing pedestrian refuge near View Street and opposite the proposed City of Sydney skate park, needs to be converted to a shared path. In addition, the existing pedestrian refuge should be modified into a formalised crossing such as a zebra crossing
- Provide a bike lane or shared path on the eastern side of Johnston Street to extend south (as part of the Pedestrian and Cycling Implementation Strategy to be prepared in accordance with Condition E60)

- Improve the pedestrian crossing in front of the Annandale North Public School on Johnston Street
- Widen the footpath in front of and opposite the Annandale North Public School
- Provide new fencing along the median strip and footpath in front of the Annandale North Public School
- Improve the pedestrian crossing in Wigram Street near Booth Street so that cars will see pedestrians and cyclist before they enter the crossing
- Change the roundabout at Nelson Street and The Crescent to allow traffic to enter it from Nelson Street (i.e. enabling right hand turns onto The Crescent)
- Introduce 90-degree parking on both sides of Johnston Street and resident parking restrictions
- Move the Iron Cove Link tunnel entry/exit by extending the tunnels to the eastern side of the Gladesville Bridge
- Improve the signage around the Annandale North Public School
- Relocate traffic light buttons for pedestrians closer to the actual crossing at the Annandale North Public School
- Consider a light rail spur from the Rozelle Bay light rail stop across the City West Link, through the Rozelle Rail Yards, along the existing rail easement to White Bay and potentially beyond
- Install natural filtration units near parks and local schools
- Create a shared path or cycle path between The Crescent and Rose Street.

### Response (all suggested design changes)

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design was prepared following the review of a number of elements of the proposed design. The process also involved meetings with DPIE and the NSW Government Architect's Office and consultation with local community groups and other stakeholders. Further details of the design process are provided in Section 1.5 of the Design amendment report.

In response to this consultation, Transport for NSW revised the proposed modification design to achieve improved connectivity, visual amenity and design outcomes. These design changes include:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline
- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Increasing the width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of pavement treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed
- Retaining the right-hand turn movement from Johnston Street to The Crescent (southbound)
- Removing the proposed horseshoe shaped shared user path bridge (shared user path bridge) between the proposed Rozelle Rail Yards open space and the eastern side of The Crescent.

Further details of the revised design and assessment of potential environmental impacts is provided in Section 3 of the Design amendment report. Some of the other suggested design changes relating to the modification, such as those relating landscaping and lighting, will be considered as part of the UDLP process as required by Condition E134.

A number of the suggested design changes are beyond the scope of this modification and extend to areas outside of the approved project footprint or relate to elements of the approved M4-M5 Link project that are not the subject of this modification.

# C.5 Community and stakeholder engagement

660 submissions raised issues regarding community and stakeholder engagement.

### C.5.1 Prior to exhibition

### Issue description

118 submissions expressed concerns that consultation undertaken was focused on government agencies and did not include local schools and the community and that details of consultation undertaken were not recorded accurately with many issues raised by stakeholders not recorded in the Modification report.

### Response

Section 5.4 of the Modification report outlines the consultation carried out for the proposed modification. Specific community notification was undertaken in August 2019 via a media release to the community and other stakeholders and included information on the modification and how to make a submission.

Transport for NSW has continued to engage and consult with the community and stakeholders. The consultation activities included:

- Media releases issued to Sydney metropolitan news organisations
- M4-M5 Link Community Update Brochure provided via letterbox drop and uploaded to the WestConnex website (www.westconnex.com.au)
- M4-M5 Link Community Update email sent to all registered stakeholders
- WestConnex Community Reference Group meetings attended by various stakeholders with updates provided on the project
- Doorknock and letterbox drop of nearby residents in Rozelle and Annandale
- Meetings and briefings provided to local, State and Commonwealth government agencies, elected representatives and other industry and other stakeholders
- Meetings with TAFE NSW Annandale and Annandale North Public School P&C.

The summary of key issues raised by stakeholders during consultation prior to exhibition is outlined in chapter 5 of the Modification report and in **Section A.2** of this report. **Section A.5** provides clarifications on errors and discrepancies in the Modification report.

Transport for NSW considered the issues and concerns raised in the submissions and through the consultation process and reviewed a number of elements of the proposed design. This process also included meetings with DPIE and the NSW Government Architect's Office and consultation with local community groups and other stakeholders. The design change process is further detailed Section 1.5 of the Design amendment report.

As part of this process, Transport for NSW has revised the approach to consultation for this Response to submissions report to be more extensive and inclusive, working with stakeholders, including the community in consultation sessions prior to lodgement of this report, to ensure improved communication. Further details of this consultation is provided in **Section A.2.3**.

# C.5.2 During exhibition

### Issue description

111 submissions expressed concerns regarding the consultation undertaken during exhibition including:

- The public exhibition period did not provide enough time for the community to review the large amounts of documentation associated with the proposed modification and the original EIS
- The community not being made aware of the modification until well into or toward the end of the public exhibition period
- Difficulties in making an online submission using the DPIE submissions portal and not being able to provide submissions over email
- Minimal communication with the community about the proposed design changes
- Consultation (including doorknocking) was not undertaken with all residents affected as it was focussed on the Annandale area and not Rozelle and Lilyfield and was undertaken during business hours on weekdays
- Messaging to the community regarding connectivity improvements is not consistent with the proposed design
- Consultation methods did not provide the community with all relevant information
- Only two community update sessions were held with the community.
- The community is to be notified 3 weeks prior to the public exhibition period commencing.

### Response

Under the EP&A Act, the Secretary of DPIE is responsible for determining the timing and duration of public exhibition periods for Modification reports. For the modification, the public exhibition period was originally 28 days. In response to community and organisation concerns the Planning Secretary of DPIE later extended the public exhibition period by a further 7 days to a total of 35 days.

During exhibition, targeted doorknocking and letterbox drops were undertaken with residents in Annandale as they are located closest to the footprint of the proposed works.

The project held two open information sessions for residents in the areas impacted, where a briefing on the overpass and active transport links modification was given by Transport for NSW. Opportunities were provided at the community information sessions for the contractor and Transport for NSW to answer queries from the local community.

Information briefings and workshops were also provided to residents of Rozelle, the Inner West Bicycle User Group, Bicycle NSW, Lilyfield residents community group and Annandale Foreshore community group regarding the modification during the exhibition period.

The Modification report was available on the DPIE major projects website and was displayed at community centre locations determined by DPIE. The process of making an online submission through the online portal is a process determined and administered by DPIE.

### The website providing information in relation to the project was established

(<u>www.westconnex.com.au/projects/m4-m5-link-rozelle-interchange</u>) and will be maintained for the duration of works, and for a minimum of 24 months following the completion of construction of the project as required by Condition B17.

In addition, media releases were provided to Sydney metropolitan news organisations providing details of the modification and how to make a submission.

Further details of the consultation activities undertaken during the public exhibition period are detailed in **Section A2.2**.

The public exhibition period for the modification provided an opportunity for the community to provide feedback on the proposed modification design. Notification of the public exhibition period for the modification was provided to the community via the following sources:

- Notices in local newspapers
- Community update brochure (website, email and letterbox drop)
- Media releases
- Doorknocking
- Community information sessions.

In response to the community consultation process and submissions received, Transport for NSW has revised the approach to consultation for to be more extensive and inclusive, working with stakeholders, including the community prior to re-exhibition, to ensure improved communication and consultation.

### C.5.3 Other engagement

### Issue description

556 submissions expressed concerns with the level of community input into the modification design process and requested the following:

- That the community's requests and suggestions are acknowledged and taken into consideration in the design process
- That the community be re-engaged and provided with greater opportunity to have direct influence on design decisions
- That open community consultation forums be provided, with relevant authorities present as well as resources such as maps, models and other visual aids
- That the community be provided with information about the economic cost of environmental impacts including air quality changes.

### Response

Following the public exhibition period for the proposed modification Transport for NSW considered the issues raised in the submissions and reviewed the consultation process and a number of elements of the proposed design. The process also involved meetings with DPIE and the NSW Government Architect's Office and consultation with local community groups and other stakeholders.

As part of this process, Transport for NSW has revised the approach to consultation for this Response to submissions report to be more extensive and inclusive by working with stakeholders and including the community prior to re-exhibition of the modification, to ensure improved communication and consultation. This is discussed further in Section 1.5 of the Design amendment report.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes. Further details of the revised design and assessment of potential environmental impacts are provided in Section 3 of the Design amendment report.

# C.6 Traffic and transport

1109 submissions raised issues regarding potential traffic, transport and access impacts resulting from the proposed modification

## C.6.1 Assessment methodology

#### Issue description

One submission expressed concerns with the Traffic and Transport Assessment methodology including that no road safety audit was conducted on pedestrian and cyclist safety.

### Response

Sections 2.1, 2.2 and 2.3 of the Appendix B (Traffic and transport assessment) of the Modification report outline the relevant guidelines and policies, key assumptions and methodology for the assessment. The assessment was carried out to meet the relevant SEARs relating to traffic and transport as outlined in Appendix A (Environmental Assessment Requirements) of the Modification report.

Following public exhibition of the proposed modification, Transport for NSW has undertaken a preliminary road safety audit focusing on the design of The Crescent and Johnston Street intersection. The preliminary audit has identified some kerbing and line marking adjustments and additional signage to advise motorists of the changed traffic conditions. These recommendations will be considered during the detailed design process and in the preparation of the independent road safety audit required by Condition E56.

### C.6.2 Disruptions to commuters, residents, pedestrians and cyclists

### Issue description

Five submissions expressed concerns that construction of the modification would result in the removal of safe cycling access routes, causing disruptions and safety concerns for residents and pedestrians due to increased construction traffic including heavy vehicles.

### Response

Potential disruptions to traffic flow on the road network and pedestrian/cyclists access routes during construction were noted in the EIS. Section 6.6 of the EIS outlines potential traffic management and access issues during construction of the project. This includes changes to the road network including the traffic staging approach (Section 6.6.1) and changes to pedestrian and cycling facilities during construction (Section 6.6.2).

Pedestrian, cyclist and traffic arrangements would be confirmed by the contractor during detailed construction planning in accordance with the relevant requirements of the project approval and communicated to the local community. The relevant requirements of the project approval include:

- Preparation of a Traffic, Transport and Access sub-plan to the Construction Environmental Management Plan (CEMP) (Condition C4a)
- Preparation of a Construction Parking and Access Strategy (Condition E54)
- Maintenance of safe pedestrian and cycling access around work sites during construction (Condition E57).

As noted in Section 6.3.3 of the Modification report, the modification is not anticipated to result in increased construction traffic generation by comparison to the EIS. A small number of additional light vehicle movements are expected from the C6a construction ancillary facility site. All traffic movements from this site will be left in/left out to The Crescent and a new driveway crossover will be created. Potential additional impacts to surrounding residents, pedestrians and cyclists are therefore not considered likely.

## C.6.3 Operation - health and safety

### Health and safety of pedestrians and cyclists

### Issue description

765 submissions expressed concerns with the safety of pedestrians and cyclists from the change in arrangement of pedestrian and cycling pathways and roadways, as a result of:

- The proposal provides indirect pedestrian and cycling access involving multiple road crossings and longer pedestrian and cycling trips (with most concerns regarding the removal of the existing signalised pedestrian crossing over The Crescent which connects to Bicentennial Park)
- Not enough space is available at the Johnston Street/The Crescent intersection for groups of people (school classes) to stand and wait in-between crossings. Due to the multiple crossings proposed at this intersection, students would continue to use the unsafe crossing on Johnston Street outside the Annandale North Public School
- The proposed design of the Johnston Street/The Crescent intersection includes multiple bends which will be challenging for buses and trucks to negotiate without mounting the adjacent pedestrian and cycling paths
- Removal of the right-hand turn from Johnston Street onto The Crescent causing increases in traffic entering Chapman Road to make a U-turn and then turn left onto The Crescent heading south
- The proposed pedestrian pathways being too narrow, sloping towards the road or having a steep incline
- Increased number of pedestrians and cyclists adjacent to roads with higher amounts of traffic
- Shared user paths encouraging pedestrian and cyclist collisions. Pedestrian and cycling movements should be separated
- The design of the shared user path bridge including sweeping curves allowing cyclists to travel at high speeds around blind corners
- The shared user path bridge being 8 metres high and therefore unsafe for pedestrian and cyclists
- The proposed concrete plaza adjacent to the Rozelle Bay light rail stop and the caged active transport bridges would be unsafe places for people to use
- The need for cyclists to dismount to cross the light rail tracks
- Proposed changes to active transport links would impact on the mental and physical health of the community.

### Response

### Crossings at The Crescent / Johnston Street / Chapman Road intersection

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes an improved arrangement of The Crescent / Johnson Street / Chapman Road intersection to improve pedestrian and cyclist accessibility (further detail provided in Section 3.1 of the Design amendment report).

The revised design changes active transport connections to create improved routes compared to the proposal in the Modification report and routes that in most cases are similar in travel distance and time to the EIS. The revised design provides for an improved and safer crossing of The Crescent, retains and improves the existing connection to the foreshore and Bicentennial Park for pedestrians and cyclists travelling from the north or west, and removes the need to traverse multiple sets of traffic lights at this intersection. The reduced number of crossings lowers the likelihood of pedestrian and cyclist collisions. An assessment of the pedestrian and cycling connectivity for the revised design is provided in Section 3.1 of the Design amendment report.

This improved connectivity to open space areas within the Rozelle Rail Yards and along the Rozelle Bay foreshore would also provide more opportunities for physical activity, and greater social connection between precincts, supporting mental wellbeing.

The revised modification design would also eliminate the need to queue and wait at multiple crossings across this intersection. The provision of adequate space at the intersection for school children and other groups of people to wait until it is safe to cross the road would be incorporated in the detailed design.

As a result, traffic performance at this intersection will be reduced by comparison to that reported in the Modification report, as a trade-off to maintain appropriate pedestrian/cycling connectivity. Intersection performance (as measured by LoS, average delay and queue length) will remain generally consistent with or marginally improved by comparison to the levels predicted in the EIS.

### Right turn from Johnston Street to The Crescent south

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the retention of the right turn movement from Johnston Street to The Crescent southbound. This right turn movement was proposed to be removed as part of the modification. This change will ensure that existing local connectivity for motorists is retained. It will avoid the potential for traffic to enter Chapman Road and undertake a U-turn movement before heading south on The Crescent. It also avoids the need for local traffic to divert to alternative routes.

Further details of the traffic impacts associated with the revised design are provided in Section 3.1 of the Design amendment report.

### Width, grade and separation of active transport links

The overall width of the green link would be around 15 metres, inclusive of two planting zones on either side of the bridge. This leaves a central shared user path of around seven metres wide which is considered to be of sufficient width to allow for both pedestrians and cyclists. The shared path would be clearly line marked to manage pedestrian and cyclist movements. The width of the pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent would be increased to 4.5 metres to allow for shared use by pedestrians and cyclists.

All pedestrian and cycling shared paths and bridges associated with the modification would be designed to meet relevant Australian Standards and Austroads guidelines including maximum ramp grades of 1 in 20.

A number of the proposed active transport links are grade separated. The main area where pedestrians and cyclists are located at-grade and immediately adjacent to active traffic is The Crescent/Johnston Street intersection. This intersection crossing is to be widened and upgraded with pavement treatments and bicycle lanterns to improve the safety of pedestrians and cyclists. If considered necessary during detailed design pedestrian fencing could be installed to provide appropriate separation of pedestrians/cyclists and traffic at this location.

Enhanced pedestrian and cycle facilities at the Rozelle Bay light rail stop would be investigated and implemented in consultation with Transport for NSW as required by Condition E59. These facilities would

be incorporated into a detailed Pedestrian and Cycling Implementation Strategy as required by Condition E60.

### Shared user path bridge

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the removal of the shared user path bridge. The green link, shared user path ramp and upgraded at-grade signalised crossing of The Crescent provides a connection between the Rozelle Rail Yards open space, Rozelle Bay light rail stop, The Crescent/Johnston Street intersection and Rozelle Bay foreshore. This connection provides for pedestrian and cycling desire lines in both a north-south and east-west direction.

### Green link

Cyclists using the green link would need to dismount to cross the light rail tracks at the Rozelle Bay light stop to access Railway Parade for safety reasons. This is consistent with existing arrangements. Depending on the direction of travel, there are two other nearby locations where cyclists can cross beneath the light rail tracks:

- Between the west side of The Crescent and Railway Parade under the light rail bridge adjacent to the former Buruwan Park
- Using the shared user path ramp from the Rozelle Bay light rail stop to the west side of The Crescent and under the light rail bridge on Johnston Street.

The revised design for the green link includes additional landscaping and urban design treatments at the southern end of the structure adjacent to the Rozelle Bay light rail stop. The design of the green link will incorporate security fencing/screens to its perimeter for safety reasons. The proposed bridge is of sufficient width (around 15 metres) and incorporates landscaping that should ensure these security fences/screens do not enclose the space.

### Effects on mental and physical health

Improved connectivity to open space areas, public transport and regional active transport links would provide further opportunities for physical activity which supports mental health and wellbeing.

Overall connections between communities and active and passive transport infrastructure would be generally consistent with the EIS and Conditions E120 and E121. This would include a pedestrian and cyclist infrastructure connecting Rozelle and future open space in the Rozelle Rail Yards to the Rozelle Bay light rail stop in Annandale and the Rozelle Bay foreshore and Bicentennial Park. As a result, changes to the active transport links are not expected to result in detrimental impacts to the mental and physical health of the community.

Existing active transport connectivity in this area is already significantly constrained by the physical barriers created by the Rozelle Rail Yards, City West Link, Victoria Road, The Crescent and the light rail corridor. The proposed active transport links and new public open space at the Rozelle Rail Yards will significantly improve active transport connectivity and open space provision in the area, which should result in benefits to the mental and physical health of the community.

### Safety of motorists

### Issue description

10 submissions expressed concerns that the modification would result in reduced safety for motorists as a result of:

• Additional traffic leading to increased risk of crashes for vehicles driving and parking on surrounding roads

- The confusing layout of the overpass ramp (vehicles wishing to use the overpass to turn right at the intersection of The Crescent/City West Link will need to occupy the left lane on Johnston Street)
- Buses, trucks and other long vehicles negotiating the bends at the intersection of The Crescent and Johnston Street will effectively occupy two traffic lanes thereby impacting on traffic safety
- Blind spots for motorists travelling northbound on The Crescent through the intersection of The Crescent and Johnston Street due to the light rail bridge abutments. Particular concerns about this blind spot were raised in relation to the placement of a bus stop close to this location
- Northbound vehicles on The Crescent will now be directed under the Johnston Street light rail bridge which has a restricted clearance height of 4.3 metres whereas the current clearance height for northbound vehicles on The Crescent is 5.6 metres.

### Response

The frequency of crashes is expected to change relative to the forecast traffic volume changes. In the EIS, potential future crashes were calculated using the historical crash rates and applied to the forecast average daily traffic flows. Reviewing the forecast daily changes in traffic volumes indicates a minimal change in daily volumes across the network. Based on these forecasts, a minimal change in crashes is also forecast on the roads assessed in the EIS. Increases in traffic volumes are forecast on parts of the road network as a result of the proposed modification. These include:

- 2,500 additional vehicles per day on Johnston Street (less than 10 per cent change)
- 1,500 additional vehicles per day on Anzac Bridge (less than one per cent change) and
- 400 additional vehicles per day on The Crescent (south) (less than four per cent change).

These increases are not considered significant and will have minimal impact on traffic performance and safety on these roads given high existing traffic volumes and the intended function of these roads in the road network

Only relatively limited increases of around 70 to 90 vehicles in peak hour are expected on Johnston Street and The Crescent as a result of the modification. Both Johnston Street and The Crescent are State Roads with two lanes and one lane in each direction respectively.

The proposed grade separated overpass at the City West Link/The Crescent intersection would remove the at-grade right turn movement, which would reduce safety issues associated with conflicting movements at the intersection.

At the intersection of Johnston Street and The Crescent, it is proposed that there would be two citybound traffic lanes, the left lane will be used to access the overpass and the right lane will be used to access the City West Link at-grade intersection. Line marking and directional signage would be installed in accordance with Austroads and Transport for NSW standards to provide clear and unambiguous direction to motorists thereby reducing the potential for last minute traffic manoeuvres.

A swept path analysis has been undertaken to confirm that heavy vehicles and buses can safely negotiate the revised intersection arrangement at Johnston Street/The Crescent. Vehicles turning left at Johnston Street onto The Crescent northbound may experience buses pulling in and out of the northbound indented bus stop. A swept path analysis analyses the movement and path of different parts of a vehicle when that vehicle is undertaking a turning manoeuvre. Sight lines are restricted at this intersection by the railway bridge structure. However, risk of a crash is considered low given that vehicles making this left turn are likely to be travelling at a slow speed, which reduces stopping distance requirements. This risk only applies to traffic in the kerbside lane wishing to access the overpass. The need for advanced warning signage in relation to the bus stop would be investigated by the contractor during detailed design. Buses positioned in the indented bus stop on The Crescent citybound will not impede traffic movement on this section of the overpass.

Citybound vehicles using The Crescent will be restricted by the 4.3 metres clearance under the Johnston Street light rail bridge. Vehicles using Johnston Street are currently restricted by this clearance height. Heavy vehicles using The Crescent would be affected by this height restriction, however this is likely to only affect a very small number of heavy vehicles on this route as total heavy vehicles are forecast to be less than one per cent of this movement in 2023 and about 1.3 per cent in 2033. Existing bus services using The Crescent have a height of around 3.5 metres and therefore will not be affected by the reduced clearance height. Advanced signage will be provided to warn affected heavy vehicles of this height restriction and advise them to use another route if necessary.

Transport for NSW has undertaken a preliminary road safety audit focusing on the design of The Crescent and Johnston Street intersection with the details summarised in Section 3.1 of the Design amendment report.

## C.6.4 Operational intersection and traffic performance

### Issue description

35 submissions expressed concerns with the intersection and traffic performance as a result of the proposed modification. Submitters noted that the intersection and traffic performance in this area is currently acceptable but would be negatively affected by the proposed modification as a result of:

- The number of pedestrian and cyclist crossings at The Crescent / Johnston Street / Chapman Road intersection disrupting traffic flow
- Only one traffic lane being available at the start of the overpass, potentially causing traffic queues on Johnston Street and The Crescent
- Traffic flow from the Western Harbour Tunnel project City West Link exit and the overpass feeding onto the Anzac Bridge would be much greater than the forecast traffic flow from Victoria Road. Therefore, Victoria Road's dedicated Anzac Bridge lane should be removed and allocated to Western Harbour Tunnel project and The Crescent.

### Response

The modification would improve intersection performance on the congested section of the road network nearby the project footprint, including at the City West Link/The Crescent and The Crescent/Johnston Street/Chapman Road intersections (refer to **Table C-4**).

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes including a review of the pedestrian crossing arrangement proposed at The Crescent / Chapman Road / Johnston Street intersection. The revised design proposes to retain, widen and upgrade the existing signalised at-grade pedestrian crossing of The Crescent. This will include pavement treatments and installation of bicycle lanterns. This will avoid the need for multiple crossings at this intersection as originally proposed in the modification report.

As a result, there will be slightly reduced traffic performance at this intersection as a trade-off to maintain appropriate pedestrian/cycling connectivity. However, the intersection performance will remain similar to or slightly improved by comparison to the EIS. Further details of this design change and assessment of potential environmental impacts is provided in Section 3.1 of the Design amendment report.

Pedestrian and cyclist crossings at the intersection ensure that access for the community is maintained to existing and proposed active transport and recreational infrastructure. Operational signal phasing of traffic and pedestrian signals would be determined with regard to traffic and pedestrian volumes.

The one traffic lane on the overpass is able to accommodate the forecast traffic demand in 2023 (year of opening) and 2033 (10 years after opening). Where the overpass diverges to two lanes near its exit adjacent to James Craig Road, the length and number of lanes is forecast to provide sufficient room for queuing on the approach to this leg of the intersection without any impact on the operation of the upstream intersection at The Crescent/Johnston Street/Chapman Road.

At the southern end (entry) of the overpass, line marking and signage would be required to advise northbound motorists on Johnston Street and The Crescent (northbound) to use the correct lane to access the overpass. At the eastern end (exit) of the overpass, line marking and signage would be required to advise motorists that traffic in the left-hand lane will travel to Anzac Bridge via the 'mousehole', and traffic in the right-hand lane will travel to Victoria Road (northbound).

Proposed changes to the layout of approach roads to Anzac Bridge are aiming to improve traffic merging arrangements, which will benefit traffic flow and safety. The changes are proposed to 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 has also considered the operation of the buses on Victoria Road/Anzac Bridge. Line marking and signage will be provided to advise motorists of these changes.

Prior to the commencement of operation of the M4-M5 Link project, a Road Network Performance Plan would be prepared in accordance with Condition E63. The Road Network Performance Plan would include updated analysis/modelling of traffic impacts, assessment of road network performance and identification of mitigation measures to address predicted impacts. This would include the Anzac Bridge approach roads. Similarly, an Operational Road Network Performance Review would be undertaken within 12 months and 5 years after the commencement of operation as required by Condition E64. The review would address performance of the road network and assess the adequacy of mitigation measures.

Table C-4: Rozelle Interchange: key intersection performance (LoS) – Peak hour

Key intersections	2015	Year 2023			Year 2033				
	Base	Project EIS	Cumulative EIS	Project Modification	Cumulative Modification	Project EIS	Cumulative EIS	Project Modification	Cumulative Modification
AM peak hour			1	1	1		I	I	
City West Link/M4-M5 link ramps	-	В	В	А	В	В	В	В	В
City West Link/The Crescent	В	С	С	В	В	D	С	С	С
The Crescent/James Craig Road	А	В	А	А	А	В	В	В	В
Victoria Road/The Crescent	В	С	С	В	В	D	D	С	С
The Crescent/Johnston Street/Chapman Road*	С	С	С	С	С	С	F	С	С
PM peak hour									
City West Link/ M4-M5 link ramps	-	В	В	А	А	В	С	А	В
City West Link/The Crescent	D	В	С	В	В	С	С	В	В
The Crescent/James Craig Road	В	А	А	А	А	А	А	А	А
Victoria Road/The Crescent	F	С	С	С	С	С	С	С	С
The Crescent/Johnston Street/Chapman Road*	F	F	F	С	С	F	F	Е	D

\*As a result of the submissions following public exhibition of the Modification report, Transport for NSW has revised the design that would impact the intersection performance of The Crescent / Johnston Street / Chapman Road intersection compared to the approved project (EIS) and modification designs. This is discussed further in Section 3.1 of the Design amendment report.

### C.6.5 Wider network performance and induced demand

#### Issue description

683 submissions expressed concerns that the modification would induce traffic demand, increasing congestion and attracting more traffic into the City of Sydney and surrounding suburbs including Annandale, Balmain, Leichhardt, Forest Lodge, Glebe, Lilyfield, and Rozelle. Submitters requested that traffic improvements should be made once real traffic is experienced rather than relying on modelling.

#### Response

Some increases in traffic volumes are forecast on parts of the road network as a result of the proposed modification. These include 2,500 additional vehicles per day on Johnston Street (less than 10 per cent change), 1,500 additional vehicles per day on Anzac Bridge (less than one per cent change) and around 400 additional vehicles per day on The Crescent (south) (less than four per cent change). These increases are not considered significant and will have minimal impact on traffic performance and safety on these roads given high existing traffic volumes and the intended function of these roads in the road network.

However, increased traffic volumes able to enter the network as a result of the proposed modification are likely to impact on parts of the road network that are already congested such as:

- Victoria Road northbound in the AM peak, which is already affected by tidal flow arrangements in Drummoyne
- Anzac Bridge/Western Distributor in the AM peak, which is already affected by queuing back from Bathurst Street and the Sydney Harbour Bridge.

These increases in traffic volumes are likely to result in increased travel times in the AM peak direction on Iron Cove Link and Victoria Road (inbound to the city). The proposed modification improves the flow of traffic from City West Link, removing congestion and delays for traffic travelling towards Victoria Road. However, it is likely that this congestion would move onto Victoria Road in a northbound direction and result in increased travel time at this location compared to the EIS scenario.

During the PM peak hour, the results for the proposed modification are similar to those in the EIS, with the difference considered to be minimal and non-significant.

Induced demand on the wider network is discussed in section 4.2.1 in Appendix H of the EIS, along with section B11.8.21 of the SPIR. Induced demand as a result of the project equates to about 0.3 per cent additional daily trips in the Sydney metropolitan area in 2033. This percentage would vary by geographic location and assessment area and is not anticipated to be affected by the proposed modification. The forecast percentage changes indicate that the Inner West Council and City of Sydney Local Government Area (LGA) would experience reductions in both daily VKT, and daily VHT as a result of the project. These include:

- The Sydney LGA would experience reductions in both daily VKT and VHT of two per cent in 2033
- The Inner West Council LGA is also forecast to experience reductions in both daily VKT and VHT of 12 per cent and 20 per cent respectively in 2033 as a result of the project.

The traffic related impacts of the proposed modification would be mitigated through the EMM and CoA of the approved project. These include:

- EMM OpTT3: requires Transport for NSW to develop a strategy to ensure appropriate network integration in the areas surrounding the Rozelle Interchange
- Condition E63: requires preparation of a Road Network Performance Plan
- Condition E64: requires preparation of an Operational Road Network Performance Review.

Regarding the use of modelling rather than real traffic data, the traffic assessment undertaken for the EIS and modification is based on detailed traffic modelling that has been peer reviewed and accepted by DPIE. It is appropriate to design the roads and intersections to provide sufficient capacity to accommodate the predicted future traffic volumes in advance. An Operational Road Network Performance Review would be undertaken within 12 months and five years after the commencement of operation as required by Condition E64. The review would address performance of the road network using real traffic data and assess the adequacy of mitigation measures.

### C.6.6 Operation - road network connectivity

### Right-turn movement from Johnston Street to The Crescent

### Issue description

203 submissions raised concerns that removing the right turn movement from Johnston Street (northbound) to The Crescent (southbound) would affect connectivity for local residents connecting to other neighbouring suburbs such as Forest Lodge and Glebe while also increasing traffic on local streets as motorists seek alternate routes.

### Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes, including retention of the right turn movement from Johnston Street to The Crescent southbound. This right turn movement was proposed to be removed as part of the modification.

This change will ensure that existing local connectivity for motorists is retained. It will avoid the potential for traffic to enter Chapman Road and undertake a U-turn movement before heading south on The Crescent. It also avoids the need for local traffic to divert to alternative routes. Further details of this design change and assessment of the traffic impacts associated with this design change is provided in Section 3.1 of the Design amendment report.

### Right-turn movement from The Crescent to James Craig Road

### Issue description

10 submissions raised concerns with removal of right-hand turn to James Craig Road from The Crescent city-bound. Concerns were also raised that the alternate routes for access to James Craig Road were not outlined in the Modification report.

### Response

The proposed modification would remove the ability for motorists using the overpass to turn right from The Crescent (eastbound) into James Craig Road. Motorists wanting to access James Craig Road from the areas to the south would need to use another route to access City West Link further to the west and then turn right into James Craig Road or access the Anzac Bridge further to the east and then turn left into James Craig Road.

Traffic modelling undertaken for the modification indicates that future demand for the right turn movement onto James Craig Road from traffic originating in the south via Johnston Street and The Crescent (south) is limited (up to about 66 vehicles per hour). Most of the demand for the right turn movement into James Craig Road (around 75% in AM peak) is generated from City West Link eastbound traffic. This traffic on City West Link would still be able to make the right turn movement.

Anticipated alternate routes to access James Craig Road would include (shown in Figure C-4):

- From Annandale: Booth Street, Moore Street, Balmain Road, City West Link and The Crescent (eastbound) to then turn right into James Craig Road. City West Link and The Crescent (eastbound) are State Roads (these roads provide for vital or major movements of goods and services, people and public transport), while Booth Street, Moore Street and Balmain Road are Regional Roads (these roads support and link State Roads and provide for medium level movements of people, goods and services and public transport)
- From Camperdown/Forest Lodge/Glebe: Pyrmont Bridge Road/Bridge Road, Anzac Bridge and The Crescent (westbound) to then turn left into James Craig Road. All of these roads are classified as State Roads.

While these alternate routes may involve slightly longer travel distances and times depending on the point of origin, they are considered to be appropriate to accommodate the limited number of vehicle movements likely to be impacted.



Figure C-4 Alternative routes to access James Craig Road
# C.6.7 Operation – active transport connectivity

## Issue description

1038 submissions raised concerns that the proposed modification design would result in impacts to active transport connectivity primarily as a result of:

- Increased travel times, distances and additional number of crossings
- Connections to open space, facilities (schools, childcare centres, Tramsheds etc.) and existing and future public transport would be removed
- The green link would not provide connectivity with the wider pedestrian and cycling path network and would be used mostly by locals only.

In addition, submitters suggested that Transport for NSW work with Inner West Council to develop an integrated cycle network rather than independent isolated projects.

## Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes including:

- The widening of the footpath ramp between the Rozelle Bay light rail stop and the west side of The Crescent to 4.5 metres wide to enable its use as a shared user path
- Retention, widening and upgrade of the existing at-grade signalised crossing of The Crescent including pavement treatments and installation of bicycle lanterns. As a result of this change, the multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed
- Removal of the shared user path bridge.

The revised design changes active transport connections to create more improved routes compared to the proposal in the Modification report and routes that in most cases are similar in travel distance and time to the EIS (with exception of Rozelle Rail Yards and The Crescent (west) to Chapman Road. The revised design at the intersection of The Crescent/Johnston Street/Chapman Road provides for an improved and safer crossing of The Crescent, retains and improves the existing connection to the foreshore, Bicentennial Park and the proposed ferry wharf adjacent to Chapman Road for pedestrians and cyclists travelling from the south or west, and removes the need to traverse multiple sets of traffic lights at this intersection. The reduced number of crossings lowers the likelihood of pedestrian and cyclist collisions. An assessment of the pedestrian and cycling connectivity associated with the revised design is provided in Section 3.1 of the Design amendment report.

The widened shared user path ramp would also provide improved connectivity to the Rozelle Bay light rail stop and bus stops on either side of The Crescent.

The approved project is delivering multiple active transport links, which provide broader connectivity including:

- An east/west link through the Rozelle Rail Yards and under the Victoria Road bridge to link with the Anzac Bridge and potentially connecting with a new metro station at White Bay
- A north/south link from Lilyfield Road through the Rozelle Rail Yards and over City West Link to the Rozelle Bay light rail stop and Rozelle Bay foreshore (also part of the modification)
- A further north/south link from Lilyfield Road through the Rozelle Rail Yards and over City West Link and the light rail corridor to Brenan Street where it will connect with the Whites Creek corridor.

The green link in combination with shared user path ramp and crossing of The Crescent provides links with the wider network, including along the Rozelle Bay foreshore to Bicentennial Park and through the Rozelle Rail Yards open space and under the Victoria Road bridge to Anzac Bridge.

Condition E60 requires the preparation of a detailed Pedestrian and Cycle Implementation Strategy as a component of the UDLP. This strategy will be prepared in consultation with the relevant councils and Bicycle NSW.

# C.6.8 Public transport

## Issue description

10 submissions expressed concern that the proposed modification would:

- Increase public transport travel times (including buses from the north that use Victoria Road)
- Reduce the number of public transport options with the removal of the bus stops at the corner of Lilyfield Road and Victoria Road and at Buruwan Park.

Submissions were also concerned that the Modification report did not assess the changes to public transport such as buses including the frequency of these services.

## Response

### Increase in bus travel times

The Modification report outlines potential impacts on public transport services including changes to travel times on the Victoria Road and Anzac Bridge bus corridor. As outlined in Appendix B (Traffic and transport assessment) of the Modification report, for a project only scenario, citybound bus journey times are comparable in the AM peak to the EIS.

In the outbound direction in the AM peak, bus travel time is forecast to increase for the same reasons that affect the general traffic times i.e. the additional traffic on Victoria Road (northbound). The increased traffic volumes on Victoria Road mean that the queue caused by capacity constraints at the northern end of Victoria Road in Drummoyne is longer and takes longer to dissipate. In 2023, bus travel times are forecast to increase from about 17 minutes to about 20 minutes, while in 2033, bus travel times are forecast to increase from about 19 minutes to about 25 minutes.

In the PM peak hour, the citybound and outbound bus travel times are forecast to increase slightly but are comparable to the bus travel times in the EIS.

While bus travel times are predicted to increase for some trips, Transport for NSW has committed to develop a strategy to ensure appropriate network integration in areas surrounding the Rozelle Interchange (refer EMM OpTT3). This strategy will help to manage potential traffic and travel time impacts.

### Location of bus stops

The bus bay on the west side of The Crescent (northbound), previously located just south of the City West Link intersection, has been relocated further south on The Crescent to north of the Johnston Street intersection as part of works related to the approved project. This would ensure the stop is close to the start of the shared user path ramp and provides connectivity with the Rozelle Bay light rail stop. Given the low frequency of the buses using this stop (9-12 minutes in the AM peak period and 5-12 minutes in the PM peak period), the expectation is that the performance of The Crescent/Johnston Street/Chapman Road intersection would not be impacted. No change to the permanent location of the bus stop on the east side of The Crescent (southbound) is proposed. The modification does not affect the permanent bus stop located near the corner of Victoria Road/Lilyfield Road, which would be located in similar position to existing following completion of construction.

It is noted that the modification would result in improved access to the Rozelle Bay light rail stop for residents in Annandale, Rozelle and Lilyfield by comparison to existing conditions and would result in a slightly improved arrangement by comparison to the EIS.

# C.6.9 Property access and parking

## Issue description

15 submissions expressed concerns that the proposed modification would result in:

- A reduced amount of parking availability in the area
- A reduction of the ability to park at 45° angle to the kerb along Johnston Street due to increased traffic
- A restriction of access to and from the property at 300 Johnston Street. The modification only allows left turn entry to and exit from 300 Johnston Street whereas currently right turn entry and exit movements are also allowed.

## Response

### Parking

There would be a temporary loss of four car parking spaces located on the north side of Chapman Road during construction. This is likely to have a temporary impact on users of open space and local businesses located in the vicinity. On completion of construction, these spaces would be relocated in the vicinity of their current location.

The proposed The Crescent/Johnston Street/Chapman Road intersection upgrade would also result in the loss of two permanent on-street parking spaces on the northern side of the citybound carriageway of Johnston Street. No other parking will be impacted.

Potential impacts on existing parking along Johnston Street as a result of increased traffic is not anticipated. Johnston Street is a designated State Road with two traffic lanes in each direction and a sign posted speed limit of 50 km/h (40 km/h in school zones). Predicted increases in traffic volumes on Johnston Street are 2,500 additional vehicles per day (less than 10 per cent change) and are not considered significant or likely to affect access to kerbside parking.

### Driveway access at 300 Johnston Street

Driveway access at 300 Johnston Street, which serves a number of residential units will be located within the new intersection arrangement at The Crescent/Johnston Street and would need to be accommodated in the intersection design.

Condition A1(g) for the residential development at 300 Johnston Street (MP10\_0116), restricts all access to Johnston Street to left in/left out movements only. Right turn movements in and out of this driveway would negatively impact on traffic flow and safety at this intersection under both its existing and proposed configurations. The proposed modification would not result in a change to these arrangements.

# C.7 Urban design and visual impact

974 submissions raised issues regarding urban design and visual amenity impacts resulting from the proposed modification

# C.7.1 Assessment methodology

### Urban design and landscape plan process

#### Issue description

585 submissions expressed concerns that the modification is not consistent with the current UDLP for the project and request that the UDLP be updated and completed prior to the start of construction.

### Response

The UDLP for the Rozelle Interchange contained in the EIS was indicative only and has not been approved. A draft UDLP is being prepared by the contractor in accordance with Condition E134. The UDLP must be prepared in consultation with relevant Councils, Infrastructure NSW (former UrbanGrowth NSW) and the local community.

Should the modification be approved the UDLP will be prepared to reflect the approved design changes and any associated changes to the CoA.

In accordance with Condition E135 the UDLP must be submitted to DPIE for approval at least one month prior to construction of permanent built surface works that are subject to the UDLP or one month prior to construction of earth works for final surface contouring of the Rozelle Rail Yards open space, whichever is sooner.

### Urban design principles

#### Issue description

12 submissions expressed concerns that the design of the modification and proposed pedestrian and cycling connectivity is not consistent with urban design principles established in the M4-M5 Link EIS.

#### Response

Appendix L of the EIS details urban design principles which have guided the design of the Rozelle Interchange and include:

### An integrated and collective approach

Create holistic and integrated design solutions generated by collaboration across disciplines, the community, stakeholders and government bodies.

### An environmental vision

Create a sustainable and enduring design response which enhances and connects local ecologies, and green spaces.

#### Cross scale connection of spaces

Prioritise local and regional significant connections that respond to broader issues, and support aims and initiatives of the local neighbourhoods and the city.

## A motorway integrated within its context

Understand the existing landscape and respond in a respectful manner that seeks to enhance and contribute to its context.

• Place sensitive design

Celebrate and work with the character of each place and destination, responding to their unique histories, materiality, architecture, built fabric, cultural context, landform and topography.

## • A multidimensional user focus

Consider holistically how a diversity of users experience space including all ages, abilities and transport modes for a truly inclusive, universally accessible and safe outcome.

## Revitalisation, opportunity and economics

Establish opportunities for development that supports and connects existing neighbourhoods, complements and stimulates local economies and provides opportunity for growth across existing and future local industries.

The majority of the built form of the Rozelle Interchange remains unaffected by the proposed modification and will be developed in a manner which is generally consistent with the approved project. The approved project will integrate the necessary motorway infrastructure with a parkland setting and improve connectivity in the area.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved connectivity, visual amenity and urban design outcomes. The development of revised design involved:

- Transport for NSW held a number of meetings with DPIE to discuss issues raised by submissions during the public exhibition for the modification and to further analyse the various design options considered for the intersection of City West Link/The Crescent
- An independent Special Design Review Panel was convened by the NSW Government Architect's Office, comprising members of the State Design Review Panel, to consider the proposed modification and provide recommendations in relation to the proposed design
- Based on issues raised by submissions and the feedback received from the Special Design Review Panel, Transport for NSW proposed a series of design changes
- The proposed design changes were then presented to the Special Design Review Panel who provided further feedback
- The proposed design changes were further refined in response to the feedback provided by the Special Design Review Panel
- A number of meetings were held with the local community and other stakeholders to present the proposed design changes and to obtain further feedback
- The revised design was confirmed, and further environmental assessment was carried out.

An updated assessment of the revised design against the EIS urban design principles is provided in Section 3.2 of the Design amendment report.

# Representative viewpoints

### Issue description

Two submissions expressed concerns that the visual impact assessment did not include several indicative views thereby did not provide an adequate visual representation of the modification. Indicative views requested included:

- The view of the proposed overpass from the residents of 300 Johnston Street, Bayview Crescent, Pritchard Street or Railway Parade
- The view of the proposed overpass from the eastern and/or south eastern side of the City West Link and The Crescent intersection.

### Response

A visual impact assessment undertaken in Section 6.7.3 of the Modification report. The assessment included analysis of views from various sensitive receivers and included photomontages from six indicative receiver locations including:

- View looking north-west from the corner of The Crescent and Johnston Street (motorists and pedestrians/cyclists)
- View looking east from Rozelle Bay light rail stop (light rail users and pedestrians/cyclists)
- View looking north from Rozelle Bay light rail stop (light rail users and pedestrians/cyclists)
- View looking east from City West Link (motorists)
- View looking west from the corner of The Crescent and James Craig Road (motorists and pedestrian/cyclists)
- View looking north-east from Bayview Crescent and Pritchard Street (residences).

The representative views in the above photomontages provide an accurate visual representation of the proposed modification as exhibited, including the overpass and green link. While the views from each individual receptor will be slightly different the viewpoints selected are considered to be reasonably representative of the views from the most sensitive receivers.

The view looking northeast from Bayview Crescent and Pritchard Street is considered similar to the view that would be available from the northern most residence at 300 Johnston Street, albeit from slightly further away.

Adjacent to 300 Johnston Street the overpass and shared user path ramp will largely be located below the height of the existing retaining wall and mural along the western side of The Crescent and ramping up to maximum height in the vicinity of the Rozelle Bay light rail stop. As a result, while these structures will be visible, they should not unduly impact on the views from this property in a north easterly and easterly direction toward Rozelle Bay, Anzac Bridge and the distant city skyline.

The analysis also considered visual impacts from several other locations that were not represented in the photomontages such as residential receivers in the vicinity of Lilyfield Road, Rozelle and recreational receivers in Bicentennial Park. Indicative views were selected having regard to proximity of infrastructure to sensitive receivers and, where appropriate, to be consistent with views identified in the EIS.

Other sensitive receivers such as residents along Lilyfield Road and users of Easton Park would also have views of the proposed infrastructure but these views would be further removed and with intervening structures and landscaping in the foreground, minimising any potential impacts.

The landscape character and visual impact assessment of the revised design in provided in Section 3.3 of the Design amendment report.

# C.7.2 Urban design impacts

### Impact on existing character

#### Issue description

723 submissions expressed concern about the impact of the proposed modification on the existing character of the area *including*:

- The proposed modification including the overpass, widening of roads and introduction traffic lightcontrolled intersection is not consistent with the existing character and urban fabric of the neighbourhood
- The proposed design detracts from the unique and valuable assets of the area including the existing suburb, harbour and local foreshore
- The proposed design is focused on optimising the area for the convenience of vehicles rather than for people (pedestrians and cyclists)
- Artworks, such as The Crescent mural, would no longer exist and no opportunity is provided for future community artworks.

### Response

The area surrounding the modification is an inner urban area at the junction of several important roadways including City West Link, Victoria Road, Johnston Street, The Crescent and the Western Distributer. The area also contains the elevated Inner West light rail line and associated bridge and viaduct structures. The wider area contains several large and prominent structures including the Anzac Bridge, the White Bay Power Station, the Glebe Island silos and port development around the edge of Rozelle Bay. Large areas of public open space are also in the immediate area along the foreshore of Rozelle Bay.

As detailed in the EIS, most of the mature tree plantings in the former Buruwan Park, within and adjacent to sections of the light rail corridor and along the east side of The Crescent have been removed as part of construction works associated with the approved project. As a result, the character along this section of The Crescent is now more open and exposed. Replacement tree planting will be proposed as part of the UDLP and in accordance with the requirements detailed in Condition E177.

The established low-rise heritage residential area of Annandale is located to the south west but separated from the proposed works by the light rail corridor, the residential development at 300 Johnston Street and local streets such as Bayview Avenue. This provides a clear demarcation in the built form character of the areas on either side of the rail corridor.

The approved project includes the construction of a ventilation building and outlets within the Rozelle Rail Yards, tunnel portals and elevated active transport bridges crossing City West Link and The Crescent. In this context, although the overpass and realigned green link are elevated built form elements, they are generally consistent with the existing and emerging character in the vicinity of this major road junction. The removal of the shared user path bridge from the modification design reduces the visual clutter in the vicinity of the intersection.

Following completion of construction, the area between The Crescent and the Rozelle Bay foreshore would be available for future development in accordance with the RLMP required in accordance with Condition E112. Given the proposed design changes which includes the removal of the shared user path bridge, no elevated structures are proposed within this foreshore area which could restrict the functionality and visual appearance of this area.

The revised design provides a satisfactory intersection performance at this busy section of the arterial road network while taking into consideration the needs of pedestrians and cyclists.

No direct impacts to The Crescent mural are proposed. However, views to the northern section of the mural would be partly obscured as a result of the overpass and shared user path ramp. The approved project also included a pedestrian ramp from the Rozelle Bay light rail stop to The Crescent that would have partially blocked views to a section of the mural. The modification would not increase the visual impact on the mural. Archival recording and heritage interpretation of the mural would be undertaken in accordance with EMM NAH02 and NAH03 and Condition E167. Opportunities for development and delivery of public art within the Rozelle Rail Yards using local artists would be identified within the UDLP as required by Condition E134(n).

## Shadowing, light spill and other elements

### Issue description

12 submissions expressed concerns with the proposed modification regarding the following:

- The overpass increasing light spill on adjacent areas impacting residents and nocturnal wildlife
- The overpass overshadowing and obstructing views of the green link
- Additional roads increasing light pollution in the area
- Active transport links not being shaded and as a result pedestrians and cyclists being exposed to elements such as noise, wind and heat.

### Response

### Light spill

The introduction of the overpass and realignment of the green link may result in additional lighting impacts to some nearby residents including at 300 Johnston Street. Existing arterial roads, intersections and the Rozelle Bay light rail stop in this area are already well-lit, minimising any potential additional impacts.

Potential lighting impacts would be managed in accordance with Condition E122 which aims to minimise light spill to residential properties and requires lighting to be consistent with the requirements of Australian Standard 4282-1997 *Control of the obtrusive effects of outdoor lighting* and relevant Australian Standards in the series *AS/NZ 1158 – Lighting for roads and public spaces*.

### **Shadowing**

In order to reduce its visual prominence, the design of the overpass has been refined, lowering its height by around two metres at its apex. This results in the overpass being a similar height to the green link which will reduce potential overshadowing impacts. It will also assist in improving the outlook for pedestrians and cyclists using the green link in an easterly and north-easterly direction towards Rozelle Bay, Anzac Bridge and the city skyline. Most shadowing from the overpass and green link would fall within the road and road reserves on City West Link and The Crescent. Removal of the shared user path bridge has reduced the potential shadowing that could have impacted the Rozelle Bay foreshore.

### Active transport design

The design of active transport connections, including the green link, are consistent with those presented and approved in the EIS. The inclusion of vegetation along the green link will provide some protection to pedestrians and cyclists from the elements while also improving the user experience. Providing weather protection to the green link would increase its visual impact and possibly compromise the effectiveness of landscaping which is proposed along the structure. Design details such as weather protection and shading of the active transport links would be determined through the UDLP process.

# Crime littering and graffiti

### Issue description

Two submissions expressed concerns that the proposed active transport connections and in particular the green link may encourage crime, littering and graffiti.

### Response

Crime prevention through environmental design (CPTED) is a crime prevention strategy that focuses on the planning, design and structure of cities and neighbourhoods. It reduces opportunities for crime by using design and place management principles that reduce the likelihood of essential crime ingredients from intersecting in time and space.

The green link would be around a 15-metre-wide structure. It is expected that the green link would be well utilised as it would be the primary connection between Rozelle/Lilyfield and Annandale, the Rozelle Bay light rail stop and the foreshore open space areas of Bicentennial Park.

The proposed active transport links are direct and safe with good surveillance available from the Rozelle Rail Yards open space, the Rozelle Bay light rail stop and motorists and pedestrians/cyclists. The curvature of the green link and the landscaping proposed along the majority of its length will limit surveillance opportunities to some extent but nonetheless this link would provide appropriate safety for users. Lighting would be provided to the proposed active transport links for surveillance and security. Overall, the proposed active transport links for surveillance and would be designed to minimise opportunities for crime, graffiti and littering.

Proposed design changes, including the removal of the shared user path bridge would result in a safer and improved user experience.

As required by Condition E134, the UDLP would address issues such as CPTED principles, lighting, rubbish bins, wayfinding and landscaping in more detail.

# C.7.3 Visual impacts

### **Elevated structures**

#### Issue description

449 submissions expressed concerns with the visual amenity of the modification including:

- The overpass, green link and shared user path bridge resulting in visual impacts on the surrounding area, including upon existing and proposed parkland and the Rozelle Bay foreshore. These structures will also obstruct existing views of Rozelle Bay and Anzac Bridge
- The junction of the green link and the Rozelle Bay light rail stop looks like a "concrete plaza" which is visually unattractive
- The height of the shared user path bridge.

#### Response

In Section 6.7 of the Modification report the visual impacts of the overpass, green link and shared user path bridge from a number of sensitive viewing locations have been assessed and photomontages were prepared to assist in demonstrating the visual impact.

The assessment considered the effects of the modification as a standalone project and then assessed the modification and cumulative impacts associated with approved elements of the M4-M5 Link project such as the tunnel portals, ventilation building and outlets.

Visual impacts were assessed as being high from a number of vantage points primarily as a result of the built form elements to be developed as part of the Rozelle Interchange which included the green link albeit in a different alignment. For the most part the visual impact ratings were generally not affected by the addition of the proposed modification.

For some residential properties in Annandale on Bayview Crescent and the property at 300 Johnston Street the visual impacts associated with the modification were assessed as being high. This was as a result of the views from these elevated receivers towards the overpass, the realigned green link and the shared user path bridge and the proximity of the infrastructure.

The existing visual character of the area is dominated by multi-lane arterial roads, several elevated bridge structures, port related maritime uses and an elevated rail corridor. As part of the approved project there are also a number of prominent structures proposed in the Rozelle Rail Yards including a ventilation building, ventilation outlets, tunnel portal structure and the green link which crossed the City West Link and The Crescent. Having regard to this context, it is considered that the proposed overpass and realigned green link are reasonably consistent with the existing and emerging built form character in the vicinity of this major intersection.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. This revised design would result in an overall reduced visual impact of the overpass and result in improved pedestrian and cyclist amenity for users of the green link from improved views towards the Anzac Bridge and city and would include:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline
- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Removing the proposed shared user path bridge between the proposed Rozelle Rail Yards open space and the east side of The Crescent.

Indicative visualisations of the revised design are presented in Figure C-5 to Figure C-9.

The potential to provide landscaping at the junction of the green link with the Rozelle Bay light rail stop is constrained due to the required clearance for the roadway below and the existing level of the Rozelle Bay light rail stop which the green link interfaces with (refer to Section 6.6.3 of the Modification report). As a result, the green link ramps down at its southern end to meet the light rail platform and this southern section of the structure is not able to provide the necessary soil depth required to support the continuation of tree planting across the full length of the bridge.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved landscaping and design treatments at this southern end of the green link where it meets the light rail stop. Elements such as planter boxes and sculptural design elements could potentially be included to provide a sense of place, improve the user experience and appearance of the green link. These elements would be considered as part of the UDLP process.



Figure C-5: Indicative view looking east from City West Link (10 years following project opening)



Figure C-6: Indicative view looking west from The Crescent (east) (10 years following project opening)



Figure C-7: Indicative view from the green link towards the Rozelle Bay light rail stop (10 years following project opening)



Figure C-8: Indicative view from the Rozelle Bay light rail stop along the green link (10 years following project opening)



Figure C-9: Indicative view from the Rozelle Bay light rail stop looking south east (10 years following project opening)

## Changes to roads

### Issue description

10 submissions expressed concerns that increased traffic volumes and queues, increased traffic lanes, significant road signage and increase in the time it takes to cross the intersections will result in increased visual impacts.

### Response

The works to be carried out at the Johnston Street/The Crescent intersection will largely occur within the existing road reserve and include works such as kerb adjustments, road paving, adjusting traffic signals and line marking. There will also be some localised road widening to provide one additional traffic lane on the east side of The Crescent for (southbound) traffic.

Landscaping at road surface level is proposed within some of the traffic islands at the intersection of City West Link/The Crescent and in association with the overpass structure. This will help to soften views of the infrastructure and improve the pedestrian and motorists experience at ground level. There are also opportunities to incorporate lighting of the bridge structures to create visual interest.

Some additional traffic control signage is likely to be required to guide motorists through this part of the road network and this will be determined during detailed design and in accordance with relevant Austroads and Transport for NSW standards.

This section of the arterial road network already supports high traffic volumes particularly during peak periods. The proposed modification will result in some increases in traffic volumes on parts of the road network such as Johnston Street, The Crescent (south) and Anzac Bridge but the increases are not significant in the context of the already high traffic volumes on these arterial roads.

In relation to traffic volumes, queues and travel times, the performance of local intersections will be maintained or improved by comparison to the EIS (refer to **Table C-4**). The improved performance will be reflected in reduced queue lengths and reduced average delay (refer to Section 3.1 of the Design amendment report).

The changes to operational traffic configurations and volumes associated with the proposed modification is therefore not considered likely to have a significant visual impact and would be generally consistent with the approved EIS design.

# C.8 Noise and vibration

192 submissions raised issues regarding noise and vibration impacts arising from the proposed modification

# C.8.1 Assessment methodology

## Issue description

Six submissions expressed concerns over noise and vibration assessment for the proposed modification including:

- Noise controls to reduce impacts on nearby residents have not been appropriately identified
- A noise level deemed to be unacceptable for human occupation has not been identified
- The Transport for NSW noise abatement strategy does not allow for appropriate mitigation or compensation
- The extent of night-time noise impacts has not been assessed
- The noise assessment only assesses indicative impacts
- 2dB(A) is not an adequate measurement to determine an acceptable increase in road traffic noise
- The construction and operational noise assessment did not account for properties west of the overpass receiving elevated noise impacts due to the prevailing winds.

## Response

## Noise controls not identified

Feasible and reasonable management and mitigation measures are identified for the project and noted in Appendix C (Noise and vibration assessment) of the Modification report. This includes the development of a Construction Noise and Vibration Management Plan (CNVMP) for the project. The CNVMP will be implemented for the duration of construction of the project to minimise noise as far as practicable as required by Condition C4(b) of the CoA. The CNVMP would be prepared in consultation with the EPA and relevant councils and would contain measures to reasonably and feasibly reduce construction noise exceedances. In addition, a suitably qualified Acoustics Advisor will be engaged during construction to review management strategies, mitigation and undertake noise and vibration monitoring as per Condition A24.

In addition, the existing CoA for the approved project provide a robust framework for managing potential noise impacts during construction and operation. Condition 87 ensures respite in the form of at-property treatments to sensitive receivers which are likely to experience noise impacts for a prolonged duration. As additional out-of-hours construction impacts are anticipated as a result of the proposed modification, additional properties have been recommended for at-receiver noise mitigation in the form of at-property treatments (refer to the Noise Insulation Program as required by Condition E89). Furthermore, as required by Condition E76, potential out-of-hours works impacts would be minimised by developing out of hours respite periods in consultation with the surrounding community.

Ongoing construction noise and vibration assessments will confirm predicted impacts at relevant receivers in the vicinity of the activities to assist with the selection of appropriate management measures to be implemented during the works, consistent with the requirements of Interim Construction Noise Guideline (ICNG) and Construction noise and vibration guideline (CNVG). The Acoustics Advisor will be engaged during construction and will review the noise and vibration assessments, confirm that proposed mitigation measures proposed are appropriate and are implemented, and suggest improvements that could be made to reduce noise and vibration impacts.

However, it is acknowledged that even with feasible and reasonable mitigation measures it may not always be practicable to prevent exceedances of construction noise goals, particularly those associated with outof-hours work which need to be undertaken at specific times to minimise impacts on the road network and ensure public and worker safety. Management measures to mitigate these impacts will include notifying the community of noise impacts anticipated at specific times. Additional mitigation measures for affected receivers may include offering individual briefings on potential impacts and mitigation measures, respite periods and alternate accommodation.

A preferred noise mitigation option during operation would be determined during detailed design, considering whole-of-life engineering considerations and the overall social, economic and environmental effects.

## Noise levels for human occupation

The NSW ICNG is used to assess and manage impacts from construction noise on residences and other sensitive land uses in NSW.

The ICNG contains procedures for determining project specific Noise Management Levels (NMLs) for sensitive receivers based on the existing background noise in the area. The 'worst-case' noise levels from construction of a project are predicted and then compared to the NMLs in a 15-minute assessment period to determine the likely impact of the project.

The NMLs are not mandatory limits, however where construction noise levels are predicted or measured to be above the NMLs, feasible and reasonable work practices to minimise noise emissions are to be investigated. The project specific  $LA_{eq(15minute)}$  NMLs are provided in Table 3-2 of Appendix C (Noise and vibration assessment) of the Modification report.

## No allowance for mitigation or compensation

The assessment considered operational traffic changes on all arterial and sub-arterial roads within the operational assessment area which includes changes associated with use of the overpass. Locations which have been identified to experience an increase in noise and are above the NSW Road Noise Policy (EPA, 2011) (RNP) base criteria have been identified as being further considered for operational road traffic noise mitigation. This includes additional exceedances at residences situated along Johnston Street in Annandale.

The overall goal of the architectural treatment is to provide similar acoustic amenity and internal noise levels to those experienced within a receiver where the external noise criteria have been met. Dependant on the level of exceedance, the architectural treatments provided by Transport for NSW typically include:

- Ventilation systems that meet the Building Code of Australia fresh air requirements with the windows and doors shut
- Upgraded windows, glazing and solid core doors on the exposed façades
- Upgrading window and door seals
- The sealing of wall vents.

Noise mitigation measures would be identified as part of the Operational Noise and Vibration Review (ONVR) to be prepared in accordance with Condition E92. The ONVR is to be prepared in consultation with DPIE, relevant councils and the local community.

# Assessment of indicative impacts

A number of construction scenarios were developed to assess the likely impacts associated with the modification. These scenarios were used to group a number of similar construction activities and included an outline of the equipment to be used and their locations. Consistent with the requirements of the ICNG, the assessment provided a 'realistic worst case' noise impact assessment for construction scenarios based on proposed works within a 15-minute period.

These scenarios may change during detailed design when additional information regarding construction activities and staging is available, however the 'realistic worst case' scenario considered for the noise impact assessment for construction allows for flexibility in the detailed design process as modelled impacts will likely be greater than the actual impacts during construction.

### Acceptable increase in road traffic noise

Potential road traffic noise impacts were assessed against relevant NSW criteria (as outlined in the RNP) that have been established on the basis of the relationship between noise and annoyance and, in the case of night-time criteria, for sleep disturbance. The noise impact assessment was detailed in Appendix C (Noise and vibration assessment) of the Modification report.

The noise assessment carried out for the modification would be updated during detailed design to reflect the final design as is the case for all CSSI projects. In accordance with the RNP a 2 dB(A) criteria is an accepted measure for determining an increase in road traffic noise and has been consistently used in the assessment for all road projects in NSW. A change of 2 dB(A) is considered barely perceptible to the human ear.

### Prevailing winds

The construction noise modelling was undertaken using the algorithm ISO 9613 which accounts for a moderate enhancement of noise due to metrological conditions (wind). The operational noise assessment used the Calculation of Road Traffic Noise (CoRTN) algorithm which also has a moderate enhancement of noise propagation included. Both algorithms increase noise in all directions to account for favourable noise propagating conditions or prevailing winds. Whilst it is not a requirement of the noise policies for construction or operational road traffic noise, the modelling includes enhanced metrological conditions as wind conditions are very rarely still, and wind is often a feature of the area.

# C.8.2 Noise impacts during construction

### Issue description

Six submissions expressed concerns relating to potential impacts from noise generated during construction of the proposed modification.

### Response

The construction of the proposed modification would generally be in similar locations to the construction works that were assessed for the approved project, meaning the impacts during construction are generally expected to be consistent with the EIS. The works around The Crescent, Chapman Road and Johnston Street may however impact a relatively small number of additional receivers given the need to complete construction work for the overpass slightly further to the east and south than was assessed for the approved project.

The assessment in Section 6.4.3 of the Modification report identifies potential noise impacts during construction. The construction noise assessment identified that the predicted daytime impacts for the majority of works are limited to Noise Catchment Area (NCA) 21 and NCA 25 (NCAs are shown in **Figure C-10**). Other noise catchments either have no residential receivers or receivers are sufficiently separated from the works to generally be compliant with the daytime NMLs.

The highest impacted residential receivers are in NCA21 (to the west of The Crescent) along Bayview Crescent where the nearest receivers are located closest to the works associated with the construction of The Crescent overpass and the works proposed at the intersection of The Crescent, Johnston Street and Chapman Road. The Modification report outlines that noise impacts are also predicted at the Petersham College, Annandale TAFE during the daytime period. However, it is noted that these receivers are generally located adjacent, or near to major roads and therefore are subject to relatively high existing background noise levels.

The modification would result in an expansion of the project footprint along Johnston Street, further south along The Crescent and along Chapman Road (refer to **Figure C-3**). Works within the expanded footprint would generally consist of general pavement activities including milling, resheeting and line marking activities.

Out-of-hours works associated with the proposed modification include bridgeworks which require the craning of bridge spans over trafficable lanes, roadworks where the upgrade ties into trafficable lanes and works to the intersection of The Crescent, Johnston Street and Chapman Road. Noise impacts associated with these scenarios would be due to the use of large cranes and a mix of other plant operating simultaneously. Out -of- hours noise impacts within NCA 21 are predicted to result in exceedances of criteria during the noisiest works

Due to the likelihood of additional out-of-hours construction impacts as a result of the modification, it is proposed to amend Condition E87 and Appendix D to provide additional properties at-receiver noise mitigation in the form of at-property treatments for the additional properties predicted to experience out-of-hours noise impacts resulting in sleep disturbance. A total of 19 additional receivers are identified as being within the treatment zone and include properties on Kentville Avenue and the northern extent of Johnston Street. It is noted that properties in Bayview Avenue are already located within the at-property treatment zone identified in Condition E87 (refer to **Figure C-11**).

As well as the additional treatments outlined above, construction noise would be minimised as far as practicable through the preparation of a CNVMP as required by Condition C4(b) of the CoA. The CNVMP would be prepared in consultation with the EPA and Council and would contain measures to reasonably and feasibly reduce construction noise exceedances (for further details see Appendix C (Noise and vibration assessment) of the Modification report).



Figure C-10: Noise catchment areas



Figure C-11: Additional at-property noise treatment zone (compared to the EIS)

# C.8.3 Noise impacts during operation

# Issue description

189 submissions expressed concerns with operational noise generated from the modification including:

- General increase in noise from additional traffic
- Additional noise from traffic using the overpass
- Noise generated from traffic travelling over road expansion joints on the overpass
- The noise generated from additional traffic, in addition to aeroplanes passing over.

## Response

Operational traffic noise impacts were assessed in Section 6.4.3 and Appendix C (Noise and vibration assessment) of the Modification report. Operational road traffic noise levels are expected to generally be comparable to the approved project, with noise levels for the proposed modification being within -0.5 dBA to +0.5 dBA of the EIS noise levels for the majority of receivers in the study area. This relatively small increase is however sufficient to result in additional exceedances on Johnston Street in the Do Something scenario. In total, 158 additional receivers are identified as eligible for consideration of mitigation in the Do Something scenario due to the proposed modification. In the Do Something Plus scenario, the heavy vehicle traffic volumes on Johnston Street are reduced and an additional 12 receivers are identified for treatment in this scenario.

Noise levels in the area adjacent to the proposed overpass are controlled by high volumes of traffic on City West Link and The Crescent, in comparison to the relatively lower traffic volumes on the overpass. Whilst a noise barrier would potentially reduce road traffic noise levels from vehicles using the overpass, it would likely be ineffective in significantly reducing the overall road traffic noise levels at nearby receivers given the relatively low contribution from the overpass. A noise barrier would also increase visual impacts.

In the EIS some residential receivers in NCA 21 along Bayview Crescent and Johnston Street have already been predicted to experience road traffic noise from the approved project exceeding the relevant criteria established by RNP. As a result, these receivers are already eligible to be considered for noise mitigation.

If a detailed design investigation (as indicated by the ONVR required by Condition E92) confirms the findings in the EIS and Appendix C (Noise and vibration assessment) of the Modification report, then atproperty treatments for the triggered receivers would be considered as the preferred noise mitigation measure.

In relation to operational noise from traffic travelling across road expansion joints, the overpass and the joints would be designed to minimise the effects of this noise upon sensitive receivers. During detailed design Transport for NSW and the contractor will consider how the overpass can be designed to minimise this potential noise source.

Aircraft noise monitoring was undertaken as part of baseline studies for the EIS between July and November 2016. The monitoring included maximum noise level events caused by aircraft flyovers. Whilst noise from aircraft is recognised as a feature of the local ambient noise environment, the assessment of impacts from aircraft movements is not required to be assessed, as this project is a road infrastructure project only. Further discussion about the assessment of aircraft noise is provided in Part C10.1.1 (Table C10-1) and Part C10.2.1 of the SPIR.

No additional management and mitigation measures for operational noise are required beyond those outlined in the SPIR and CoA for the project. Should future mitigation be required this would be confirmed during detailed design and identified in the ONVR as required by Condition E92.

# C.9 Air quality

204 submissions raised issues regarding potential air quality impacts resulting from the proposed modification

# C.9.1 Assessment methodology

### Issue description

Two submissions expressed concerns over the air quality assessment for the proposed modification including:

- Appropriate background air quality data was not used. In particular, data from 2018 and 2019 was not
  provided or used for the modelling of air quality impacts
- The PM<sub>2.5</sub> criterion used for the assessment was inappropriate
- The motor vehicle emission data used to model air quality projections for the modification is outdated and unsatisfactory
- Mitigation measures proposed to reduce air quality impacts are inadequate
- The extent to which existing local air quality exceeds current air quality criteria specified under the NEPM.

# Response

## Background air quality data

When establishing the impact of the project on local ambient air quality, it is best to use monitoring and meteorological data that is directly comparable to the EIS. This helps to better understand both the existing (background) air quality conditions and the predicted contribution of the project to air quality conditions.

A full analysis of the use of background air quality data was completed for the EIS. As this assessment was trying to understand the changes (if any) due to the modification, it is considered appropriate to use that same EIS data.

# PM<sub>2.5</sub> criterion

For the PM<sub>2.5</sub> criterion, the criteria presented in Table 4-1 of the Appendix D (Air quality assessment) of the Modification report are assessment criteria required by the NSW EPA and provided in the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (NSW EPA, 2016). The annual PM<sub>2.5</sub> incremental criterion has been used on all recent major road tunnel projects in Sydney and is accepted by the NSW EPA.

### Motor vehicle emission data

In relation to motor vehicle emission data, the same emissions data are used for the modification as were used for the EIS. This is done to enable a comparison between the two and show any likely differences in impacts.

The emissions factors for light duty vehicles used for the ambient air quality modelling were based on the NSW EPA emissions model, which is based on real-world monitoring data, and not based on manufacturers specifications. The emission model/emission data (Permanent International Association of Road Congresses (PIARC)) was updated in 2012. These emissions were the most up to date at the time of assessment. Section C9.1.3 of the SPIR elaborates further on the specific components of vehicle emission data used.

# Mitigation measures to reduce air quality impacts

No additional mitigation measures have been recommended within the Modification report. Part E of the SPIR details the EMM to reduce air quality impacts anticipated from the project. CoA relating to ambient air quality goals and ambient air quality monitoring are contained in the project approval (Condition E6 and Condition E24) and Transport for NSW is required to comply with those conditions.

## Air quality criteria

The air quality criteria applicable to the project assessment is detailed in Table 4-1 of the Appendix D (Air quality assessment) of the Modification report. The report notes the high background levels for both maximum 24-hour and annual average PM<sub>2.5</sub>, and that annual average levels already exceed the 8  $\mu$ g/m<sup>3</sup> criterion across much of Sydney. As a result, it was considered that assessing the project against these levels was problematic during the EIS process and the use of other metrics was investigated which were more meaningful from a health impact perspective.

The key metric that emerged during the assessment of the M4-M5 Link project was the change in the annual mean PM<sub>2.5</sub> concentration ( $\Delta$ PM<sub>2.5</sub>). For the M4-M5 Link project EIS, the value for PM<sub>2.5</sub> was 1.8 µg/m<sup>3</sup>, representing a risk threshold of 1 in 10,000 for all-cause mortality for ages 30 and over.

Figure 6-4 of the Appendix D (Air quality assessment) of the Modification report shows the predicted changes in annual mean  $PM_{2.5}$  for both the EIS and the proposed modification. Differences are discernible along Johnston Street and The Crescent where the main changes are proposed. Even though there is a larger area of increased annual mean  $PM_{2.5}$  when compared to the EIS, these increases are well below 1.8  $\mu$ g/m<sup>3</sup>, with the largest increase in annual mean  $PM_{2.5}$  at a residential workplace and recreational (RWR) receptor being 0.32  $\mu$ g/m<sup>3</sup>. No change to potential health impacts are anticipated.

# C.9.2 Air quality impacts during construction

# Issue description

Four submissions expressed concerns relating to potential air quality impacts during construction of the proposed modification.

# Response

A detailed assessment of potential construction impacts for the project was carried out in the EIS. This was a qualitative risk assessment based on a precinct wide approach, with the precinct including a number of construction sites including the Rozelle civil and tunnel site (C5), The Crescent civil site (C6) and The Victoria Road civil site (C7).

The EIS assessment identified areas at risk of potential impacts based on their proximity to works and sensitivity to dust and the potential magnitude of dust generating construction activities proposed at these sites. Due to the high dust generating potential of the construction activities which included building demolition, significant earthworks, tunnelling and civil works, risks were categorized in the EIS as in the range of medium to high within the Rozelle precinct.

The key elements of the proposed modification include the construction of a new overpass, realignment of active transport links, upgrade of The Crescent/Johnston Street intersection and use of a minor construction ancillary facility, established in accordance with Condition C24, as a construction ancillary facility. The proposed construction ancillary facility (C6a) would support the approved construction activities at The Crescent civil site (C6).

The proposed modification is generally within the same footprint as the approved project, with minor extensions of footprint limited to areas within existing road reservations on The Crescent and Johnston Street (refer to **Figure C-3**). As a result, it is not anticipated that the construction dust risk profile would be different to that assessed in the EIS.

Activities occurring in the limited extended footprint areas would include things such as re-sheeting, kerb adjustments and line marking, which are not significant generators of dust and do not require significant excavations likely to result in the uncovering of contaminated soil. As such, no additional human health risks are anticipated resulting from dust or spoil and the mitigation measures proposed in the EIS would remain unchanged for the proposed modification.

Potential air quality impacts during construction would be managed by existing CoA including Condition C4 which requires the preparation of an Air Quality Management CEMP sub-plan and Condition C9 which requires the preparation of a dust deposition monitoring program.

# C.9.3 Air quality impacts during operation

# Air quality changes from additional traffic

### Issue description

197 submissions expressed concerns relating to potential operational air quality impacts from increased emissions, affecting the health of the community and local wildlife due to the elevated overpass and increased traffic congestion.

## Response

As outlined in section 6.5.3 of Appendix D (Air quality assessment) of the Modification report, the proposed modification would result in minor increases in NO<sub>x</sub> and PM<sub>2.5</sub> emissions when compared to the Do Something Cumulative scenario in the EIS (which includes the M4-M5 Link, all other WestConnex stages and NorthConnex complete and open to traffic, and in addition, the proposed future Sydney Gateway, Western Harbour Tunnel and Beaches Link and M6 Stage 1 projects complete and operational). This minor increase is largely a result of the gradient associated with the overpass which increases emissions. It is noted that when compared to the Do Minimum scenario, both the EIS and modification scenarios show a reduction in emissions for both NO<sub>x</sub> and PM<sub>2.5</sub>.

Although minor increases in emissions are noted, no major changes were identified between the EIS and the proposed modification. Predictions for the most relevant metric when considering health impacts to people and wildlife, the change in annual mean  $PM_{2.5}$  concentrations, were well below the criterion used in the EIS. It is concluded that the differences in ground level concentrations due to the proposed modification when compared to the EIS, are minor, and do not change the outcomes of the EIS. No additional mitigation is therefore considered necessary.

Existing CoA are robust and relate to ambient air quality goals (Condition E6) and ambient air quality monitoring (Condition E24).

# Pedestrian and cyclist proximity to ventilation facilities

### Issue description

Four submissions expressed concerns that pedestrians and cyclists using the shared user path bridge would experience increased emissions due to approved ventilation facilities being at a similar height and in close proximity.

## Response

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes removal the shared user path bridge.

Pedestrians and cyclists using the green link would be generally be in similar proximity to the ventilation outlet locations by comparison to the arrangement proposed in the EIS. In addition, the modification does not propose any increase in emissions from the ventilation outlets. As a result, users of these pedestrian and cyclist facilities would not be at additional risk as a result of the proposed modification.

It is noted that the top of the ventilation outlets are located at a height of between 39.2 – 43 metres Australian Height Datum in accordance with Condition E12. This height is significantly higher (around 30 metres higher) than the indicative level of the green link.

# C.10 Non-Aboriginal heritage

219 submissions raised concerns relating to non-Aboriginal heritage impacts of the proposed modification

# C.10.1 Listed heritage items

### Issue description

18 submissions expressed concerns that listed heritage items would potentially be directly and indirectly affected by the modification including:

- The railway bridge abutments over Johnston Street being damaged by construction
- The overpass obstructing the view of the railway line
- The heritage value of the Annandale Heritage Conservation Area and heritage houses on Johnston Street (The Abbey, and Kenilworth) being impacted by increased traffic and obstructed views
- Views to the former Goods Railway trestle bridges in Buruwan Park (Railway Parade) being obstructed.

### Response

There are a number of non-Aboriginal heritage items nearby the proposed modification. These items shown in **Figure C-12** and their significance is detailed below in **Table C-5**.

Table C-5: Non-Aboriginal heritage items near the proposed modification

Item name	Significance	Listing
Annandale (Johnston Street) Underbridge	Local	Sydney Regional Environmental Plan – City West REP No. 26 – Sch. 4, Part 3 (#9) RailCorp S170 (4803229)
Annandale (Railway Parade) Railway Bridge	Local	Sydney Regional Environmental Plan – City West REP No. 26 – Sch. 4, Part 3 (#7) RailCorp S170 (4803231)
Glebe Railway Viaduct	State	State Heritage Register Item no. 01034
Annandale Heritage Conservation Area	Local	Leichhardt LEP 2013 (Item no. C1)



Figure C-12: Non-Aboriginal heritage items

Section 6.8.3 of the Modification report provides further details about the heritage items that would be affected by the proposed modification.

### Railway bridge abutments over the intersection of Johnston Street and The Crescent

The Annandale (Johnston Street) Underbridge is listed as a local heritage item. The proposed modification works at the intersection of The Crescent, Johnston Street and Chapman Road, necessitate works to the road carriageway under the railway bridge, adjacent to the bridge piers. The works would be carried out within the existing road reservation and not impact the light rail bridge abutments. This would result in the grassed verge being reduced, changes to footpaths and kerb/guttering and traffic lights on Johnston Street being located in the vicinity of the bridge structure.

There is sufficient room to accommodate these works without physical impact to the bridge piers. While the visual setting of the railway bridge and viaduct would change, the changes would be limited and similar to the current context. Therefore, the works would not directly impact on either the railway bridge or its abutments and the visual setting of these structures would not change in any significant way.

### Elevated railway line

The elevated railway line north of Johnston Street and to the west of The Crescent is not listed as a heritage item.

The Glebe Railway Viaduct to the south of The Crescent/Johnston Street intersection is listed as a state heritage item. No direct or indirect impacts to this item are expected. The proposed overpass is located some distance to the north and would not obstruct views of this heritage item.

# The Annandale (Railway Parade) Railway Bridge

The Annandale (Railway Parade) Railway Bridge is listed as a heritage item of local significance. The alignment of The Crescent road reserve does not change in this area and the pedestrian and cycling path under the bridge would be retained.

The green link and the overpass will have some impact on views to the bridge from the north and north east, but this is not considered likely to impact on the heritage significance of the bridge. Removal of Buruwan Park will also impact on the visual setting of the bridge to its north, but this has been already assessed as part of the EIS.

# Annandale Heritage Conservation Area

The Annandale Heritage Conservation Area is listed as a heritage item of local significance. The conservation area is located to the west of Inner West Light Rail corridor and to the north of Johnston Street. It is physically separated from the key elements of the proposed modification, being the overpass and green link, by the light rail corridor and an intervening property (300 Johnston Street).

The heritage conservation area would not be directly impacted by the modification, however, some elements of the modification, including the green link and the overpass, would potentially be visible from some vantage points within the conservation area. For further discussion of visual impacts refer to **Section C.7.3**.

Additional traffic generation as a result of the overpass is not considered to be significant in the context of existing traffic volumes on City West Link, The Crescent and Johnston Street. As a result, the predicted limited increase in traffic volumes on Johnston Street (less than 10 per cent) would be unlikely to have any impact on the heritage significance of the conservation area.

# Management measures and CoA

Potential non-Aboriginal heritage impacts associated with the proposed modification would generally be managed through the implementation of the approved EMM for the project as summarised in Part E of the SPIR.

Vibration impacts would be assessed and managed in accordance with the CNVMP required by Condition C4 (b) as well as the requirements of Conditions E84 and E85 which require vibration testing to protect heritage items.

# C.10.2 Potential heritage items

# Issue description

210 submissions expressed concerns relating to impacts to The Crescent mural including indirect impacts as a result of views being obstructed and direct impacts through part of the mural being demolished.

# Response

The overpass and the shared user path ramp structures would impact on the visual setting of the mural and on views toward the northern section of the mural by obscuring or partly obscuring these views. However, views to the central and southern sections of the mural would not be impacted. In the EIS there was a pedestrian ramp proposed in this same location which would have a similar impact on views to the mural. The shared user path ramp would itself provide another location for viewing the mural although from a different vantage point.

It is proposed that there would be a separation distance of approximately one metre between the mural and the shared user path ramp. This will ensure that the mural structure (light rail retaining wall) would not be directly affected by the construction of the ramp and would also provide sufficient room for on-going inspection and maintenance of the existing retaining wall and the mural. It is not proposed that any sections of the mural would be demolished (refer to **Figure C-2**).

Widening and upgrading of the at grade signalised pedestrian crossing of The Crescent would have a minor impact on the visual setting of the Annandale (Johnston Street) underbridge but would not impact on the significance of this heritage item. Refer to Section 3.6 of the Design amendment report for assessment of heritage impacts associated with the revised design.

Existing CoA and EMMs are considered to be appropriate to manage the potential impacts of the proposed modification, with exception of minor changes proposed to Condition E163 and EMM NAH03 to allow for archival recording of The Crescent mural. The details of proposed amendments to these EMM and CoA are provided in **Part D**.

Potential development and delivery of public art opportunities by local artists within the Rozelle Rail Yards would be outlined in the UDLP as required by Condition E134(n).

# C.11 Cumulative impacts

Two submissions raised concerns relating to cumulative impacts from the proposed modification

# C.11.1 Assessment of cumulative impacts

### Issue description

Two submissions expressed concerns that the Modification report did not sufficiently consider cumulative impacts with other projects proposed in the area including:

- The Crescent and Federal Park at Johnstons Creek as part of the Johnstons Creek Masterplan
- Other WestConnex projects.

## Response

The M4-M5 Link EIS undertook a cumulative impact assessment which considered a range of other projects (refer to Section 26.2 of EIS). The cumulative impact assessment was based on information about other projects that was available at that time. The cumulative impact assessment was updated during preparation of the SPIR.

The following projects were included as part of the cumulative impact assessment for the modification (refer Section 6.13 of the Modification report):

- Western Harbour Tunnel project
- Beaches Link project
- Other WestConnex projects including the M4 Widening, M4 East, New M5, M4-M5 Link and King Georges Road Interchange Upgrade
- Sydney Gateway
- M6 Stage 1
- Glebe Island Concrete Batching Plant
- Glebe Island Multi-User Facility.

From a construction perspective the works which are part of the modification at the Rozelle Interchange do not overlap with other WestConnex projects either from a physical or program perspective. Cumulative impacts of the Western Harbour Tunnel project and works proposed at the Rozelle Interchange were assessed in the cumulative impact assessment provided in chapter 26 of the EIS. The cumulative construction traffic impacts of M4-M5 Link and other projects in the area, including the Western Harbour Tunnel project and a proposed concrete batching facility and multi-user facility in the White Bay/Glebe Island area, were assessed as part of the SPIR.

From an operational perspective all WestConnex projects, the Western Harbour Tunnel, Sydney Gateway, NorthConnex and M6 Stage 1 projects were included in the cumulative traffic, noise and air quality scenarios (2023 and 2033) which were assessed in both the EIS and the Modification report. The land use and employment assumptions for the traffic modelling in the EIS and Modification report conservatively assumed there would be significant development and growth occurring within the Bays Precinct area in 2023 and more particularly in 2033.

The proposed City of Sydney Park on The Crescent (outlined in the Johnstons Creek Masterplan) is located to the south east of the proposed intersection works at Johnston Street and The Crescent. Once complete these works will include:

• New recreational open space, west of the Glebe railway viaduct

- A skate plaza and adjacent mini skate ramp
- A new, larger playground
- Shared paths for people walking and riding bikes throughout the park
- Groves of native trees and large lawn areas
- Picnic areas with seating and barbecues
- Conservation works to the Glebe railway viaduct.

According to the City of Sydney website, these works are expected to be completed in early 2021. This is in advance of the indicative program of works for the proposed modification as detailed in Table 4-5 of the Modification report which shows that the works associated with the modification at the intersection of The Crescent and Johnston Street are not expected to commence until mid-2021. As a result, construction activities between the two projects are unlikely to overlap.

# C.12 Other environmental issues

259 submissions raised concerns relating to other potential impacts of the proposed modification

# C.12.1 Social and economic

### Issue description

256 submissions expressed concerns with the potential impacts of the proposed modification on the quality of life of the community:

- Loss of property values
- Changes in lifestyle, liveability, amenity and community atmosphere
- Division of the community
- Shorter construction times leading to a loss of employment
- Changed traffic arrangements affecting visitors to local businesses.

### Response

### Property values

There are a large number of factors that influence the value of a property. Impacts on property values prior to and during construction would be of a temporary nature. It is not anticipated that the value of properties will be depreciated as a result of construction impacts or operational impacts associated with the modification.

Any impacts that would be realised as part of this proposed modification will be managed through the implementation of EMM and in accordance with the CoA for the project which are discussed throughout this report.

### Community values and connectivity

The proposed modification would provide efficient connections between Rozelle and Annandale to surrounding active and passive recreational facilities including Bicentennial Park and future open space within the Rozelle Rail Yards. In addition, the modification would provide an improved connection between communities in Rozelle and Annandale through the realigned green link resulting in primarily landscaped connection between these two suburbs. No significant changes to lifestyle, liveability and community atmosphere are therefore anticipated.

Proposed design changes including the retention, widening and upgrade of the at-grade signalised crossing of The Crescent, widening of the shared user path ramp and removal of the shared user path bridge would minimise the potential for division between communities. This revised arrangement would improve connections between:

- The suburbs of Rozelle/Lilyfield and the Rozelle Bay light stop and Rozelle Bay foreshore
- The suburb of Annandale and the proposed Rozelle Rail Yards open space and Rozelle Bay foreshore.

This would represent a significant improvement in connectivity by comparison to the existing arrangement which is significantly constrained by physical barriers including the Rozelle Rail Yards, City West Link, The Crescent and the light rail corridor.

# Loss of employment

Overall construction duration of the wider Rozelle Interchange project remains unaffected by the proposed modification. The project is scheduled to be completed in 2023. The program for the proposed modification would have no impact on the level of employment associated with construction of the Rozelle Interchange project and therefore no impact on the construction workforce is anticipated.

## Impacts on businesses

Section 6.11.2 of the Modification report provided an assessment of the proposed modification on businesses. There are only a small number of businesses and educational uses located in the vicinity of the proposed modification.

These business and educational uses would potentially be temporarily impacted during construction by noise and vibration, dust, construction traffic, visual impact and changes to parking and access arrangements. Most of these land uses would already have been impacted by the works proposed as part of he approved project with the exception of the TAFE College on Johnston Street which is more directly impacted by the proposed upgrade works at The Crescent/Johnston Street/Chapman Road intersection.

There would be a temporary loss of four car parking spaces located on the north side of Chapman Road during construction. This is likely to have a temporary impact on users of open space and businesses (the marina and Timber and Hardware store) located in the vicinity. On completion of construction these spaces would be reinstated in the vicinity of their current location.

In addition, two parallel on-street parking spaces on the north side of Johnston Street would be permanently removed. Given the availability of alternate on-street parking in the vicinity, no impacts on business and educational uses are anticipated due to the removal of these spaces.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes the retention of the right-turn movement from Johnson Street to The Crescent southbound. As this traffic movement will be maintained, connectivity to the broader area would not be impacted as per the modification design. The traffic assessment associated with this design change is provided in Section 3.1 of the Design amendment report.

# C.12.2 Biodiversity

# Issue description

Six submissions expressed concerns that the modification would remove vegetation including additional trees along Johnston Street and The Crescent along with negatively affecting habitat in and around Whites Creek.

### Response

The approved project footprint is detailed in Chapter 3 of the Modification report. The modification includes only a minor increase in the project footprint, principally around the intersection of The Crescent and Johnston Street. The works proposed in this area are to occur within the existing road reservations and do not require the removal of additional trees.

The approved project included the removal of Buruwan Park and its associated vegetation to allow for the realignment and redevelopment of the City West Link/The Crescent intersection. It also included widening of The Crescent to the east and the removal of some vegetation in this area. The works associated with the modification in these areas are located entirely within the approved project footprint. As a result, no additional impacts to vegetation or habitat at Whites Creek or along the east side of The Crescent are proposed by the modification.

Condition E177 requires the project to be designed to retain as many trees as possible, and to provide a net increase in the number of replacement trees. In addition, the M4-M5 Link project would create up to an additional 10 hectares of public open space at the Rozelle Rail Yards. The UDLP, required under Condition E134 includes specific requirements relating to landscaping to be incorporated in the project.

# C.13 Suggested changes to Environmental Management Measures and Conditions of Approval

126 submissions raised concerns relating to EMM and the CoA for the proposed modification

# C.13.1 Environmental Management Measures

### Issue description

Four submissions requested additional EMM including:

- At property treatment for those noise affected during construction and operation including double glazing at 300 Johnston Street
- Provide noise mitigation for individual households and Annandale residents
- Temporary relocation or equivalent compensation be provided
- Provide further explanation about how heritage items would be managed.

### Response

### Noise mitigation

Noise impacts during construction and operation and required mitigation has been discussed in **Section C.8**.

As additional out-of-hours construction impacts are anticipated as a result of the proposed modification, it is proposed to amend Condition E87 and Appendix D to provide additional properties predicted to experience out of hours noise impacts with at-receiver noise mitigation in the form of at-property treatments. As a result of the proposed modification a total of 19 additional receivers are identified as being within the treatment zone and include properties on Kentville Avenue and the northern extent of Johnston Street. The property at 300 Johnston Street is identified within the Condition E87 at property treatment zone.

Out-of-hours works would be undertaken in accordance with Conditions E75 and E76 and which would manage scheduling of works and identify appropriate respite periods. Notification would be provided to residents and temporary relocation possible if criteria outlined in the out-of-hours works protocol required by Condition E77 are exceeded. No compensation is available for construction related amenity impacts as these impacts are temporary and are to be addressed by appropriate mitigation and management measures. These measures are outlined in the existing CoA and EMMs such as Condition E89 and Condition E90.

In relation to operational traffic noise, 300 Johnston Street and some other properties in Annandale within NCA21 and NCA 25 are identified as triggered receivers eligible for noise mitigation. This would be confirmed during detailed design in accordance with the ONVR required by Condition E92.

#### Temporary relocation or equivalent compensation be provided

It is acknowledged that even with feasible and reasonable mitigation measures it may not always be practicable to prevent exceedances of construction noise goals, particularly those associated with out-of-hours work which need to be undertaken at specific times to minimise impacts on the road network and ensure public and worker safety. Management measures to mitigate these impacts will include notifying the community of noise impacts anticipated at specific times. Additional mitigation measures for affected receivers may include offering individual briefings on potential impacts and mitigation measures, respite periods and alternate accommodation.

## Management of heritage items

For the proposed modification, the following CoA are designed to manage heritage impacts:

- Condition C4(g) preparation of a Non-Aboriginal Heritage CEMP sub-plan
- Condition E161 works on Whites Creek Stormwater Channel No.95 must be undertaken in consultation with Sydney Water and a suitably qualified and experienced heritage consultant
- Condition E163 the proponent must prepare a Heritage Archival Recording and Salvage Report including photographic archival recording of heritage items which have been identified for demolition and The Crescent mural
- Condition E165 following archival recording and prior to demolition the proponent must assess options for sympathetic reuse
- Condition E167 the proponent must prepare a Heritage Interpretation Plan.

Existing CoA and EMMs are considered to be appropriate to manage the potential impacts of the proposed modification, with the exception of minor changes to Condition E163 and EMM NAH03 to allow for archival recording of The Crescent mural. Details of proposed amendments to these CoA and EMM are provided in **Part D**.

# C.13.2 Conditions of Approval

### Issue description

123 submissions expressed concerns with the following:

- The proposed modification is not consistent with the CoA
- The CoA should have a long-term maintenance plan for the proposed infrastructure (including a maintenance plan for plantings on the structures to be used by pedestrians and cyclists)
- Condition E58 required a cycleway between Springside Street and Roberts Street on Victoria Road which is yet to be completed
- Condition E60 'Pedestrian and Bicycle Implementation Plan' has not been completed prior to pedestrian and cycling plans being made for the area
- Condition E120 should be amended to provide a direct link between existing and proposed parklands
- Condition E129 should be amended to include Inner West Council on the Design Review Panel
- The UDLP required under Condition E134 is not sufficient to protect the visual amenity and heritage values of the adjoining receivers.

### Response

The existing CoA for the project would apply to the proposed modification, as modified by the DPIE if applicable. The project approval includes a robust set of conditions to minimise potential construction impacts to local communities which apply to the approved project and would apply to the proposed modification.

The proposed modification is in response to a number of changes that cannot be accommodated within the existing project approval and would therefore require a modification to several CoA in accordance with Section 5.25 of the EP&A Act. These changes and justification for them are outlined in **Part D**.

The scope of the proposed modification is limited to the areas at and around the intersections of City West Link / The Crescent and The Crescent / Johnston Street / Chapman Road. The modification does not relate to the improved cycling and pedestrian connections between Robert Street and Springside Street in Rozelle which are required by Condition E58. This requirement is to be addressed in the Pedestrian and Cycling Implementation Strategy (refer Condition E60).

The detailed Pedestrian and Cycling Implementation Strategy required by Condition E60 must be included as a component of the UDLP required by Condition E133 and reviewed by the Design Review Panel. The
Strategy must be prepared in consultation with relevant councils and Bicycle NSW and is to be implemented prior to the project commencing operation.

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes a connection from the proposed Rozelle Rail Yards open space to existing and proposed open space areas along the Rozelle Bay foreshore. This connection is provided by:

- A 15 metre-wide green link which will connect from the Rozelle Rail Yards to the Rozelle Bay light rail stop
- A 4.5 metre-wide shared user path ramp which will connect from the Rozelle Bay light rail stop to the west side of The Crescent and
- The existing signalised pedestrian crossing of The Crescent adjacent to Johnston Street which is to be widened and upgraded including the installation of bicycle lanterns. This will connect from the west side of The Crescent to the Rozelle Bay foreshore.

Travel distance and travel times using this connection is slightly higher than in the EIS, however improved from the modification design and are therefore considered to be generally consistent with the intent of Condition E120. Pedestrian and cycling connectivity are discussed further in Section 3.1 of the Design amendment report.

Condition E129 requires the Design Review Panel to be nominated by the proponent and approved by the Secretary. In accordance with Condition E130, nominations and appointments to the Design Review Panel must comply with the Public Service Commission's Appointment Standards: Boards and Committees in the NSW Public Sector Guideline. The UDLP would be prepared in consultation with relevant councils, in accordance with Condition E134.

Responses to issues raised in relation to visual impacts and impacts to heritage values associated with the modification are discussed in **Section C.7** and **Section C.10**.

The Modification report and this Response to submissions report has been provided to DPIE for review and assessment. As part of the assessment, DPIE will prepare an Environmental Assessment Report and recommendations that will be provided to the NSW Minister for Planning and Public Spaces for determination of the modification.

# C.14 Other issues

432 submissions raised concerns relating to other issues not directly related to the proposed modification

### C.14.1 M4-M5 Link project

#### Issue description

411 submissions expressed concerns related to impacts relating from the construction of the approved components of the M4-M5 Link project including:

- The loss of vegetation and closure of Buruwan Park and removal of trees adjacent to the Rozelle Bay light rail station
- Alternate routes for the connection from The Crescent to Railway Parade through Buruwan Park via Kentville Avenue not being favourable due to steep inclines
- The installation of unfiltered ventilation stacks near schools, childcare facilities, and pedestrian and cycling paths including their visual impact
- The lack of planning to offset emissions from the ventilation outlets caused by additional vehicles
- The imposition of tolls
- Not easing transport difficulty in the inner west of Sydney
- The loss of active transport around the bay and to the city
- Construction taking place before plans are finalised
- Demolition of heritage-listed properties and streetscapes
- The pedestrian and cycling connection from Lilyfield and Annandale to the City toward Anzac Bridge
- Locations of the tunnel portals including entry and exit
- Removal of trees, reduction of green space and creating heat areas in the urban environment and contributor to climate change
- The government allowing major infrastructure development to occur in the inner-west (which would not be allowed to occur in the inner east)
- Uncertainty on construction timeframe and final cost for the project based on the delays and experience with other projects in Sydney
- Concerns regarding the lack of plans for cycling connections along Lilyfield Road and Railway Parade
- The project should be using sustainable materials and processes during construction.

#### Response

The proposed modification relates to Stage 2 of the approved project (Rozelle Interchange) and is limited to the elements described in Chapter 4 of the Modification report. The majority of the above concerns raised by submitters are not relevant to the modification and have already been addressed in the M4-M5 Link EIS and SPIR. These concerns are responded to under the headings below.

#### Components of the approved project

Issues relating to ventilation facilities, locations of tunnel portals and imposition of tolls were considered during the assessment and determination of the approved project and would not be further impacted by the proposed modification.

#### <u>Buruwan Park</u>

The removal of vegetation in Buruwan Park and loss of the park itself was authorised as part of the approved project and would not be further impacted by the proposed modification. No additional trees are to be removed as a result of the proposed modification.

The existing active transport link between the west side of The Crescent and Railway Parade, which runs under the light rail bridge will be maintained albeit in a revised configuration to reflect the realignment of The Crescent, which forms part of the approved project.

#### Heritage structures

No demolition of heritage listed buildings or structures are proposed as part of the modification. For discussion of indirect impacts to heritage items refer to **Section C.10**.

#### Construction works, timeframes and costs

Only construction works associated with the approved project have commenced. Construction works associated with the elements of the proposed modification would only be permitted to commence if and when the modification is approved.

Construction works for the Rozelle Interchange are estimated to be completed in late 2023. This project has an estimated construction cost of around \$3.9 Billion.

#### **Sustainability**

Sustainability would continue to be incorporated into construction activities in accordance with relevant CoA including:

- Condition E198 requiring the preparation of a Water Reuse Strategy
- Condition E199 requiring the preparation of a Sustainability Strategy to achieve a minimum "Excellent" 'Design' and 'As built' rating under the ISCA infrastructure rating tool
- Condition E202 applying the waste management hierarchy.

#### Other cycling connections

Other nominated cycling connections, such as along Railway Parade and Lilyfield Road, do not form part of the approved M4-M5 Link project or the proposed modification. If they are to be provided, these links will be the responsibility of other parties.

#### Active transport connectivity

Existing active transport connectivity in this area is constrained by significant physical barriers including the Rozelle Rail Yards, City West Link, The Crescent, Victoria Road and the Inner West light rail corridor. The proposed modification and approved M4-M5 Link project will significantly improve active transport connectivity in a north/south and east/west direction linking the suburbs of Rozelle and Annandale and connecting existing and proposed open space areas and improving connections to public transport services.

The pedestrian and cycling connection from Lilyfield and Annandale to the City towards Anzac Bridge would continue to be provided via the proposed green link to the Rozelle Rail Yards open space area and then through the open space area and under Victoria Road to the Anzac Bridge.

#### Location of transport infrastructure projects

The NSW Government's plans for delivery of transport infrastructure projects in Sydney (road and public transport) is outlined in *Future Transport Strategy 2056* and includes projects in all regions of Sydney.

#### Conditions of Approval

The CoA for M4-M5 Link project have been prepared having regard to the potential environmental impacts of the project and based on the experience from earlier WestConnex stages including the King Georges Road interchange upgrade, M4 Widening, M4 East and New M5.

## C.14.2 Matters related to the WestConnex program of works

#### Issue description

35 submissions expressed concerns with the WestConnex projects. In particular:

- Impacts on local residents, local heritage, public spaces and local amenity. There is concern that WestConnex is not focused on the interest of pedestrians, cyclists and local residents
- Traffic congestion as a result of other WestConnex projects
- Previously unacceptable social and environmental impacts which are a result of previous poor project delivery.

#### Response

All WestConnex projects have now been approved by the NSW Government and a number of these projects are already completed or nearing completion. Concerns about the projects, including their social and environmental impacts, have been assessed in the relevant EIS and SPIR for each project and in subsequent Modification reports where relevant.

CoA and EMM have been implemented for each project in an attempt to reduce impacts as far as practicable. The M4-M5 Link project approval includes a robust set of conditions to minimise potential construction and operational impacts to local communities. The conditions have been prepared having regard to the experience from earlier WestConnex stages, including the King Georges Road interchange upgrade, M4 Widening, M4 East and New M5.

### C.14.3 Matters not related to the modification

#### Issue description

27 submissions raised concerns and suggestions not related to the proposed modification or the M4-M5 Link project including:

- Free light rail services
- Tunnelling in regional locations or upgrading alternative roadways such as the inland and coastal highways
- A wildlife play area be included in Centennial Park
- More public transport in the form of ferries be provided
- Increased degradation of roads generally from heavy transport
- The condition of the landscapes modified by WestConnex
- Additional funding for Inner West Council to make improvements on local and regional roads
- Compulsory acquisition of properties
- Safety concerns about existing active transport links.

#### Response

The proposed modification relates to Stage 2 of the approved M4-M5 Link project (Rozelle Interchange) and is limited to the elements described in Chapter 4 of the Modification report. The above concerns raised by submitters are not relevant to the modification or to the approved M4-M5-Link project.

The proposed modification does not require the compulsory acquisition of additional properties to those acquired as part of the approved M4-M5 Link project.

It is noted that the overall NSW Government's plan for delivery of transport projects in Sydney (road and public transport) is outlined in *Future Transport Strategy 2056*.

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# Part D

Environmental Management Measures, Conditions of Approval and Conclusion

# D Part D – Environmental Management Measures, Conditions of Approval and Conclusion

Transport for NSW has revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes changes to the modification to achieve improved connectivity, environmental, visual amenity and urban design outcomes.

As a result of the revised design, some of the Environmental Management Measures (EMM) and Conditions of Approval (CoA) which were proposed in the Modification report are to be updated.

The proposed updates are detailed below.

# D.1 Proposed changes to Environmental Management Measures

Chapter 29 of the Environmental Impact Statement (EIS) for the project summarised the identified EMM that would be adopted to avoid or reduce potential environmental impacts. These measures were revised in Part E of the Submissions and Preferred Infrastructure Report (SPIR) after consideration of the issues raised during the EIS public exhibition period.

Chapter 8 of the Modification report lists the EMM to be amended as part of the modification. No further amendments or changes are proposed to the M4-M5 Link project EMM other than those outlined in in the Modification report, besides a minor grammatical update. The updated proposed EMM are presented in **Table D-1**.

Proposed amendments are shown in **bold** text and deletions shown as strikethrough text.

Table D-1: EMM to be amended as part of the modification

Impact	REF #	Environmental Management Measure	Timing	Comment
Non-Abori	ginal Her	itage		
General heritage impacts	NAH03	<ul> <li>Photographic archival recording will be undertaken of:</li> <li>Infrastructure associated with the White Bay Power Station site that could be affected by the project</li> <li>Whites Creek Stormwater Channel (in the area to be impacted)</li> <li>Stormwater Canal off Lilyfield Road</li> <li>'Cadden Le Messurier' at 84 Lilyfield Road</li> <li>Former Hotel at 78 Lilyfield Road</li> <li>Victoria Road overbridge</li> <li>Each house at 260-266 Victoria Road</li> <li>Former Bank of NSW (164 Parramatta Road)</li> <li>The Crescent mural.</li> </ul>	Construction	Update to include archival recording of The Crescent mural <u>Additional minor</u> <u>update to correct</u> <u>casing of The</u> <u>Crescent mural.</u>

Impact	REF #	Environmental Management Measure	Timing	Comment
		It will be undertaken in accordance with the NSW Heritage Office guidelines <i>Photographic</i> <i>Recording of Heritage Items Using Film or</i> <i>Digital Capture</i> (2006). The photographic archival recording will occur prior to any works that have the potential to impact upon the items and will include the identification of appropriate stakeholders, to receive copies of the documentation.		

# D.2 Proposed changes to Conditions of Approval

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The CoA are presented in Schedule 2 (Conditions of Approval) of the Infrastructure approval. Chapter 7 of the Modification report presents a number of proposed changes to the CoA for the M4-M5 Link project.

As a result of submissions received, additional consultation and the revised design, further amendments to the CoA for the M4-M5 Link project are now proposed. The proposed amendments to the CoA are provided in **Table D-2** would ensure that the CoA are consistent with the revised design.

Proposed amendments are shown in **bold** text and deletions shown as strikethrough text.

Table D-2: CoA to be amended as part of the modification

No.	Description of CSSI or CoA	Action and reason
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); the WestConnex M4-M5 Link Submissions and Preferred Infrastructure Report (dated January 2018) (the SPIR);-and 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 the WestConnex M4-M5 Link Rozelle Interchange The Crescent overpass and active transport links Modification report (dated August 2019) as amended by the WestConnex M5-M5 Link Rozelle Interchange Modification The Crescent overpass and active transport links Design amendment report (dated April 2020) and associated WestConnex M5-M5 Link Rozelle Interchange Modification The Crescent overpass and active transport links Response to submissions report (dated April 2020).	Update to include the Modification report associated Design amendment report and this Response to submissions report.
A2	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in <u>Condition A1</u> , the EIS, SPIR, Modification 1 report, and Modification 1 RtS Response to submissions report, unless otherwise specified in, or required under, this approval.	Update to refer to Condition A1 for approved project documents.

No.	Description of CSSI or CoA	Action and reason
E120	A pedestrian and cycling green link, as described in the EIS Modification 2 Design amendment report and Response to submissions report, to be provided from the Rozelle Rail Yards and spanning City West Link to the park adjacent Chapman Road, to the Rozelle Bay light rail stop, must have adequate soil depth to facilitate planting across along-the majority of the bridge for 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.	Update to reflect new alignment of the pedestrian and cycling green link (green link) as per the Modification report, the Design amendment report and this Response to submissions report.
E121	The connection between the pedestrian and cycling green link, <b>shared</b> <b>user path ramp and at-grade signalised crossing of The Crescent</b> , <b>adjacent to Johnston Street</b> , <b>as described in the Modification 2</b> <b>Design amendment report and Response to submissions report</b> , <del>and</del> the park adjacent to Chapman Road-must be designed to integrate with the <b>adjacent</b> open space, <del>and</del> active transport infrastructure <del>within the</del> <del>park</del> <b>and Rozelle Bay light rail stop</b> in a manner that maximises the safe movement of pedestrians and cyclists and provides a <del>contiguous</del> path between the Rozelle Rail Yards open space and the park adjoining Chapman Road.	Update to reflect pedestrian and cycling connectivity from Rozelle Rail Yards to Bicentennial Park as per the Modification report, the Design amendment report and this Response to submissions report.
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), Infrastructure UrbanGrowth NSW, the community and affected landowners and businesses. The UDLP(s) must include, but not necessarily be limited to:         Design       (j) the design of the project landform and earthworks;         (k) the design of the CSSI elements including their form, materials and broad detail (including the City West Link pedestrian and cycling green link identified in Condition E120 and shared user path ramp	<ul> <li>Update design sub-section to</li> <li>Focus the Urban Design and Landscape Plan (UDLP) on guiding the relevant parts of the design by identifying design objectives rather than being specific regarding the detailed design of the project</li> <li>Reflect requirements for the green link, shared user path ramp and at grade signalised crossing of The Crescent.</li> </ul>

No.	Description of CSSI or CoA	Action and reason
	<ul> <li>and at grade signalised crossing of The Crescent_identified in Condition E121);</li> <li>(I) a description of the CSSI design features, including graphics such as sections, perspective views and sketches of key elements of the CSSI;</li> <li>(m) visual screening requirements;</li> <li>(n) development and delivery of public art opportunities throughout the Rozelle Rail Yards using local artists;</li> <li>(o) demonstrated integration of Crime Prevention Through Environmental Design principles into the detailed design process;</li> </ul>	
E163	The Proponent must prepare a Heritage Archival Recording and Salvage Report, including photographic recording of heritage items which have been identified for demolition in the documents referred to in Condition A1 and outline how any salvage or recovery of material will be undertaken from these items.	The Crescent mural would not be demolished, however The Crescent overpass (the overpass) would visually impact on the northern section of this potential heritage item. Archival recording in line with Condition E163 is required due to the extent of the potential heritage item that would be visually impacted.
	Archival recording must also be undertaken of The Crescent mural at Annandale.	
	Archival recording must be undertaken by a suitably qualified heritage specialist and prepared in accordance with NSW Heritage Office's <i>How to Prepare Archival Records of Heritage Items</i> (1998) and <i>Photographic Recording of Heritage Items Using Film or Digital Capture</i> (2006).	
	Within 12 months of completing the archival recording, the Proponent must submit the Heritage Archival Recording and Salvage Report to the Secretary, relevant council(s), relevant local libraries and local historical societies in the respective local government area(s).	

No.	Description of CSSI or CoA	Action and reason
Appendix D	This appendix includes a figure relating to CoA E87 for out-of-hours mitigation.	The Condition E87 'treatment zone' shown in Appendix D of the CoA is extended to include the receivers adjacent to the proposed modification. The extended area is shown in Figure 5-14 of Appendix C (Noise and vibration assessment) of the Modification report.

# D.3 Conclusion and next steps

### D.3.1 Proposed modification

Since planning approval was granted, John Holland CPB Contractors (the contractor) was appointed to construct Stage 2 of the M4-M5 Link approved project on behalf of Transport for NSW. The contractor reviewed the concept design for the approved project and together in discussions with Transport for NSW identified a number of potential design and constructability improvements.

As a result, a modification to the M4-M5 Link approval was proposed. The proposed modification included the following key components:

- A new elevated vehicular overpass at The Crescent (the overpass) that 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
- 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 (including lane reconfiguration and marking, signal phasing, adjusting positions of traffic signals kerb works etc.)
- Realignment of the green link to the west of The Crescent, providing a connection between the Rozelle Rail Yards and the Rozelle Bay light rail stop
- A new horseshoe sharped shared user path bridge (shared user path bridge) spanning The Crescent to the east of The Crescent/City West Link intersection. The shared user path bridge provides a connection between the Rozelle Rail Yards and the at grade surface connection the shared user path to Bicentennial Park along the east side of The Crescent and adjacent to Rozelle Bay. The shared user path bridge would provide the pedestrian and cyclist connectivity required by Conditions E120 and E121 for the project albeit in a different arrangement to that shown in the EIS
- 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
- Use of a minor construction ancillary facility, established in accordance with Condition C24, as a
  construction ancillary facility. The proposed C6a construction ancillary facility site is located on the
  south side of The Crescent to the west of James Craig Road and adjacent to Rozelle Bay. The
  proposed modification would allow use of the site for a limited number of additional purposes which are
  not permitted by Condition C24 including:
  - Light vehicle parking for workers (around 9 spaces) and
  - Material laydown areas and a limited number of associated vehicle movements (small delivery vans and rigid trucks).

These additional purposes would support the various construction activities at the C6 civil site.

### D.3.2 Community and stakeholder feedback

During the public exhibition of the Modification report between 21 August and 25 September 2019, a total of 1278 submissions were received by the NSW Department of Planning, Industry and Environment (DPIE).

Following the public exhibition period for the proposed modification Transport for NSW considered the issues raised in the submissions and reviewed a number of elements of the proposed design. The design review process involved meetings with DPIE and the NSW Government Architect's Office and consultation with local community groups and other stakeholders.

As part of this process, Transport for NSW revised the approach to consultation for this Response to submissions report to be more extensive and inclusive, working with stakeholders, including the community prior to re-exhibition of the modification, to ensure improved communication and consultation.

Transport for NSW considered the issues raised in the submissions and further consultation following public exhibition of the Modification report carefully and prepared responses (refer **Part B** and **Part C**).

### D.3.3 Revised design

Transport for NSW revised the design to address the feedback received in submissions and stakeholder workshops. The revised design includes improved active transport connectivity, visual amenity and urban design outcomes. The revised design includes:

- Lowering the height of the proposed overpass by around two metres at its apex so it is a similar height to the green link. This will improve visual amenity and urban design outcomes, resulting in an improved space and outlook toward Rozelle Bay, Anzac Bridge and the city skyline
- Improving the design of the southern section of the green link to improve its amenity and interface with the Rozelle Bay light rail stop
- Increasing the width of the proposed pedestrian ramp from the Rozelle Bay light rail stop to the west side of The Crescent to 4.5 metres to allow for shared use by pedestrian and cyclists
- Retaining, widening and upgrading the existing at-grade signalised pedestrian crossing of The Crescent at its intersection with Johnston Street, including the introduction of paving treatments and bicycle lanterns. As a result of this change, the other multiple crossings of The Crescent and Chapman Road detailed in the Modification report are no longer proposed
- Retaining the right-hand turn movement from Johnston Street to The Crescent (southbound)
- Removing the proposed shared user path bridge between the proposed Rozelle Rail Yards open space and the eastern side of The Crescent.

A full description of the revised design and an assessment of the revised design is provided in Design amendment report.

The Design amendment report will be placed on exhibition from the 29 April 2020 through to the 13 May 2020. During this 14-day public exhibition period, stakeholders and the community will have to opportunity to provide feedback on the revised design presented in the report. The submissions will be forwarded to Transport for NSW who will prepare a response to the submissions. The submissions and Transport for NSW response will be made publicly available on the DPIE major projects website.

### D.3.4 Next steps

This Response to submissions report will be made publicly available on the DPIE major projects website.

On behalf of the NSW Minister for Planning and Public Spaces, DPIE will review the Modification report, this Response to submissions report, the Design amendment report, submissions received on the Design amendment report and the Transport for NSW response.

DPIE will prepare an environmental assessment report and prepare recommended CoA should it recommend that the modification be approved. The environmental assessment report and recommendation will be provided to the NSW Minister for Planning and Public Spaces, who will then either approve the modification (with the addition, amendment or removal of any CoA considered appropriate) or refuse to give approval to the modification.

Following the NSW Minister for Planning and Public Spaces determination and the Secretary's Environmental Assessment Report will be published on the DPIE major projects website provided below.

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

## **D.4 References**

AECOM Australia Pty Ltd, WestConnex M4-M5 Link: Environmental Impact Statement, prepared for NSW Roads and Maritime Services, August 2017

AECOM Australia Pty Ltd, WestConnex M4-M5 Link: Submissions and preferred infrastructure report, prepared for NSW Roads and Maritime Services, January 2018

AECOM Australia Pty Ltd, WestConnex M4-M5 Link: Mainline tunnel – Modification report, prepared for Roads and Maritime Services, September 2018

Australian and New Zealand Standard 1158: Lighting for roads and public places

Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC/ARMCANZ 2000)

Australian Standard 4282-1997: Control of the obtrusive effects of outdoor lighting

City of Sydney, Improving The Crescent and Federal Park <u>https://www.cityofsydney.nsw.gov.au/</u> vision/better-infrastructure/parks-and-playgrounds/current-works/improving-crescent-federal-park

Department of Environment and Climate Change, Interim Construction Noise Guideline, 2009

Department of Environment and Climate Change, Road Noise Policy, 2011

Ethos Urban, Environmental Impact Statement for the Glebe Island Concrete Batching Plant, prepared for Hanson Construction Materials Pty Ltd, March 2018

Greater Sydney Regional Commission, Greater Sydney Regional Plan: A Metropolis of Three Cities, 2018

Institute of Air Quality Management (IAQM) London UK, Guidance on the assessment of dust from demolition and construction, 2014

Infrastructure Australia, Australian Infrastructure Plan: The Infrastructure Priority List, 2016

Infrastructure NSW, State Infrastructure Strategy 2018-2038, 2018

Inner West Council, Going Places - Integrated Transport Strategy (draft), 2019

Leichardt Local Environment Plan 2013

NSW Government, Future Transport Strategy 2056, 2018

NSW Government Architect, Better Placed, 2017

NSW Government Architect, Better Placed; Aligning Movement and Place, 2019

NSW Roads and Maritime Services, NSW Roads and Maritime Services Corporate Plan 2018-2021

NSW Roads and Maritime Services, Construction Noise and Vibration Guideline, 2016

NSW Roads and Maritime Services, Noise Criteria Guideline, 2015

NSW Roads and Maritime Services, Noise Mitigation Guideline, 2015

Railcorp Section 170 Heritage and Conservation Register (under the NSW Heritage Act 1997)

Sydney Regional Environment Plan – City West REP No.26

UrbanGrowth NSW, The Bays Precinct Transformation Plan, 2015

# **Appendix A**

Submitter Identification Reference Table

# Submitter identification number reference table

Issues raised in submissions from individual community members and organisations and other stakeholders have been grouped into common issues, which are described in this appendix.

Submitters can locate the issues raised in their submission and the relevant section of the report where these have been addressed.

Each submission author has been assigned a submitter identification number based on their submission form number assigned by the Department of Planning, Industry and Environment (DPIE) on receipt of the submission. A submitter can access their submitter identification number by locating their submission on the NSW Major Projects website (https://www.planningportal.nsw.gov.au/major-projects/project/16516).

Where a submitter has provided additional comments within a form letter, those additional comments are represented by the submitter identification number and cross referenced against the relevant responses in this appendix.

Report section	Submitter identification numbers	Count			
C.1 General	.1 General				
C.1.1 General support	S-102695, S-94382, S-92545, S-93911, S-94517, S-94534, S-94610, S-94843, S-95091, S-96303	10			
C.1.2 General objection	S-102594, S-102596, S-102597, S-102600, S-102604, S-102607, S-102608, S-102612, S-102615, S-102619, S-102620, S- 102622, S-102623, S-102625, S-102626, S-102627, S-102628, S-102635, S-102636, S-102638, S-102684, S- 102643, S-102663, S-102664, S-102670, S-102671, S-102678, S-102679, S-102680, S-102681, S-102683, S-102704, S-102713, S-102685, S-102686, S-102688, S-102690, S-102699, S-94692, S-94697, S-93975, S-93982, S-102703, S-102704, S-102713, S-94975, S-102715, S-102716, S-95089, S-102729, S-102731, S-102735, S-102743, S-102754, S-102757, S-102761, S- 93881, S-93915, S-93927, S-93936, S-93941, S-94095, S-94155, S-94166, S-94194, S-94195, S-94223, S-94238, S-94249, S- 94272, S-93851, S-94276, S-94282, S-94298, S-94344, S-94351, S-94363, S-94374, S-94377, S-94390, S-94391, S-94403, S- 94408, S-94414, S-94418, S-94433, S-94436, S-94438, S-94444, S-94473, S-94476, S-94484, S-94491, S-94497, S-94514, S- 94524, S-94530, S-94536, S-94537, S-94564, S-94574, S-94601, S-94615, S-94621, S-94627, S-94631, S-94633, S-94634, S- 94637, S-94640, S-94642, S-94649, S-94651, S-94685, S-94696, S-94730, S-94782, S-94789, S-94821, S-94827, S- 94829, S-93973, S-94853, S-94859, S-94867, S-94887, S-94911, S-94992, S-95000, S-95011, S-95038, S-95102, S- 95130, S-95135, S-95142, S-95250, S-95278, S-95288, S-95305, S-95306, S-95321, S-95323, S-95329, S-95387, S-95462, S- 95469, S-95501, S-95507, S-95608, S-95527, S-95666, S-95706, S-95711, S-95757, S-96175, S-96182, S-96185, S-96189, S- 95469, S-95501, S-95507, S-95608, S-95652, S-95666, S-95706, S-95711, S-95757, S-96175, S-96182, S-96185, S-96189, S- 95469, S-96266, S-96275, S-96299, S-96313, S-96338, S-96364, S-96392, S-96408, S-96422, S-96430, S-96430, S-96437, S- 96439, S-96441, S-96442, S-96451, S-96453, S-96456, S-96458, S-96471	182			
C.2 Strategic co	ontext and justification				
C.2.1 Justification of the proposed modification	S-102606, S-102640, S-102673, S-102683, S-102687, S-102690, S-94443, S-95248, S-95239, S-95151, S-94463, S-93975, S- 94975, S-95300, S-102726, S-102727, S-94239, S-96372, S-96187, S-102735, S-95516, S-94382, S-102745, S-102749, S- 95403, S-96188, S-94088, S-102760, S-91178, S-93382, S-93463, S-93674, S-93817, S-93826, S-93898, S-93899, S-93902, S-93909, S-93913, S-93916, S-93919, S-93932, S-93933, S-93934, S-93937, S-93952, S-93970, S-93984, S-94094, S-94140, S-94142, S-94144, S-94173, S-94185, S-94197, S-94223, S-94225, S-94237, S-94249, S-94259, S-94266, S-94270, S-93851, S-94298, S-94314, S-94316, S-94321, S-94326, S-94341, S-94355, S-94359, S-94362, S-94363, S-94366, S-94372, S-94383, S-94391, S-94393, S-94394, S-94395, S-94396, S-94403, S-94405, S-94414, S-94417, S-94419, S-94421, S-94431, S-94441, S-94447, S-94448, S-94456, S-94461, S-94465, S-94470, S-94509, S-94513, S-94518, S-94532, S-94537, S-94557, S-94564,	214			

Report section	Submitter identification numbers	Count
	S-94570, S-94576, S-94580, S-94605, S-94613, S-94614, S-94621, S-94633, S-94637, S-94640, S-94642, S-94645, S-94651,         S-94685, S-94703, S-94712, S-94725, S-94729, S-94741, S-94749, S-94755, S-94756, S-94758, S-94762, S-94764, S-94776,         S-94779, S-94780, S-94782, S-94788, S-94789, S-94792, S-94793, S-94795, S-94802, S-94803, S-94810, S-94815, S-94822,         S-93973, S-94861, S-94865, S-94892, S-94895, S-94907, S-94910, S-94917, S-94923, S-94928, S-94935, S-94948, S-94968,         S-94985, S-94992, S-95006, S-95026, S-95033, S-95038, S-95061, S-95074, S-95096, S-95110, S-95119, S-95134, S-95160,         S-95214, S-95250, S-95253, S-95264, S-95273, S-95293, S-95305, S-94328, S-95321, S-95384, S-95387, S-95441, S-95466,         S-95619, S-95622, S-95623, S-95642, S-95647, S-95661, S-95675, S-95679, S-95680, S-95686, S-95688, S-96179,         S-96180, S-96181, S-96190, S-96199, S-96272, S-94235, S-96360, S-96362, S-96363, S-96364, S-96370, S-96375,         S-96378, S-96383, S-96388, S-96389, S-96391, S-96402, S-96403, S-96444	
C.2.2 Consistency with strategic plans and policy	S-102587, S-102588, S-102589, S-102590, S-102591, S-102592, S-102593, S-102594, S-102596, S-102597, S-102598, S- 102599, S-102600, S-102601, S-102602, S-102603, S-102604, S-102605, S-102606, S-102607, S-102608, S-102609, S- 102610, S-102611, S-102612, S-102613, S-94863, S-102614, S-102615, S-102616, S-102617, S-102618, S-102619, S- 102620, S-102621, S-102622, S-102623, S-102624, S-102625, S-102626, S-102627, S-102628, S-102629, S-102630, S- 102631, S-102632, S-102633, S-102634, S-102635, S-102661, S-102663, S-102663, S-102664, S-102665, S-102665, S- 102667, S-102668, S-102669, S-102670, S-102671, S-102672, S-102663, S-102663, S-102665, S-102665, S- 102667, S-102668, S-102680, S-102670, S-102671, S-102672, S-102668, S-102668, S-102665, S-102667, S- 102678, S-102679, S-102680, S-102670, S-102671, S-102674, S-102674, S-102675, S-102676, S-102677, S- 102678, S-102741, S-102742, S-95428, S-95303, S-93821, S-102730, S-102731, S-102733, S-94102, S-102737, S-102738, S- 102740, S-102741, S-102742, S-102743, S-102744, S-102746, S-102754, S-94711, S-102755, S-102675, S-94904, S-94581, S-102765, S-102778, S-91178, S-93463, S-93550, S-93826, S-93834, S-93905, S-93914, S-93931, S-93931, S-93932, S-94336, S- 93937, S-93939, S-93941, S-93252, S-93851, S-94276, S-94280, S-94282, S-94291, S-94207, S-94217, S-94221, S-94237, S- 94257, S-94258, S-94272, S-94275, S-93851, S-94276, S-94280, S-94334, S-93316, S-94337, S-94338, S-94340, S- 94341, S-94344, S-94345, S-94347, S-94353, S-94357, S-94363, S-94336, S-94337, S-94336, S-94337, S-94338, S-94400, S-94440, S-94448, S-94448, S-94435, S-94425, S-94425, S-94425, S-94433, S- 94387, S-94389, S-94400, S-94440, S-94448, S-94448, S-944452, S-94458, S-94445, S-944427, S-94438, S-94433, S- 94346, S-94438, S-94439, S-94440, S-94448, S-94448, S-944452, S-94458, S-94466, S-94447, S-94433, S- 94346, S-94438, S-94349, S-94440, S-94448, S-944482, S-944485, S-94485, S-94465, S-94470, S-94477, S-94433, S-94433, S-94550, S-94550, S-94550, S-94555, S-945557, S-945557, S-945557, S-945557, S-945557, S	546

Report section	Submitter identification numbers	Count
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Report section	Submitter identification numbers	Count			
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C.3.2 Transparency of assessment	S-95151, S-94463, S-93975, S-102716, S-95089, S-94549, S-93463, S-93807, S-93937, S-94351, S-94391, S-94421, S- 94530, S-94537, S-94563, S-94632, S-94715, S-94719, S-94780, S-94928, S-95293, S-95441, S-95696, S-95703, S-96384, S- 96444	26			
C.3.3 Quality of documentation	S-102605, S-102628, S-102669, S-102695, S-95300, S-95089, S-94549, S-102732, S-102734, S-94382, S-102745, S-102758, S-102760, S-93382, S-93674, S-93817, S-93845, S-93899, S-93903, S-93922, S-93940, S-93975, S-94235, S-94316, S- 94322, S-94337, S-94345, S-94360, S-94362, S-94366, S-94391, S-94395, S-94401, S-94403, S-94411, S-94417, S-94421, S- 94423, S-94424, S-94429, S-94431, S-94434, S-94458, S-94464, S-94466, S-94477, S-94492, S-94493, S-94497, S-94502, S- 94505, S-94508, S-94513, S-94518, S-94530, S-94537, S-94543, S-94545, S-94551, S-94570, S-94572, S-94573, S-94592, S- 94596, S-94614, S-94616, S-94715, S-94729, S-94731, S-94732, S-94741, S-94747, S-94755, S-94758, S-94761, S-94762, S- 94763, S-94780, S-94781, S-94789, S-94792, S-94795, S-94802, S-94803, S-94805, S-94810, S-94836, S-94850, S-94855, S- 94865, S-94868, S-94871, S-94872, S-94875, S-94881, S-94885, S-94888, S-94893, S-94895, S-94897, S-94907, S-94914, S- 94917, S-94923, S-94928, S-94932, S-94933, S-94948, S-94954, S-94984, S-94985, S-94895, S-94897, S-9407, S-94914, S- 95021, S-95031, S-95047, S-95048, S-95051, S-95061, S-95074, S-95096, S-95109, S-95133, S-95253, S-95258, S-95293, S- 95304, S-95330, S-95337, S-95389, S-95399, S-95466, S-95471, S-95497, S-95710, S-95713, S-95722, S-95740, S-95751, S-9642, S-95681, S- 95688, S-95696, S-95697, S-95699, S-95703, S-95710, S-95713, S-95722, S-95726, S-95732, S-95740, S-95751, S-96170, S- 96174, S-96179, S-96199, S-96203, S-96206, S-96263, S-96289, S-96290, S-96293, S-96317, S-96321, S-96328, S-96384, S-96384, S-96388, S-96390, S-96397, S-96403, S-96410, S-96434, S- 96444, S-96447, S-96458, S-96459, S-96469, S-96470	186			
C.4 Modificatio	C.4 Modification design				
C.4.1 The Crescent overpass	S-102587, S-102588, S-102589, S-102590, S-102591, S-102592, S-102593, S-102598, S-102599, S-102601, S-102602, S- 102603, S-102605, S-102606, S-102609, S-102610, S-102611, S-102613, S-94863, S-102614, S-102616, S-102617, S- 102618, S-102621, S-102624, S-102628, S-102629, S-102630, S-102631, S-102632, S-102633, S-102634, S-102637, S-	665			

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C.4.4 The Crescent construction ancillary facility (C6a)	S-93523, S-94968	2
C.4.5 Suggested design changes	S-102587, S-102591, S-102598, S-102599, S-94863, S-102617, S-102624, S-102639, S-102640, S-102661, S-102667, S- 102668, S-102669, S-102675, S-102676, S-102684, S-102687, S-102689, S-102695, S-102696, S-94193, S-95239, S- 102685, S-95151, S-95301, S-102724, S-102726, S-94549, S-96372, S-93821, S-102730, S-96187, S-94382, S-102744, S- 102746, S-95403, S-94708, S-94711, S-102756, S-94581, S-93463, S-93550, S-93786, S-93809, S-93881, S-93914, S-93917, S-93924, S-93941, S-93984, S-94105, S-94140, S-94155, S-94173, S-94178, S-94197, S-94225, S-94295, S-94297, S-94313, S-94344, S-94355, S-94357, S-94360, S-94363, S-94371, S-94377, S-94381, S-94384, S-94387, S-94401, S-94406, S-94407, S-94408, S-94414, S-94416, S-94419, S-94424, S-94441, S-94452, S-94467, S-94490, S-94495, S-94518, S-94525, S-94543, S-94557, S-94574, S-94583, S-94620, S-94625, S-94626, S-94629, S-94632, S-94641, S-94695, S-94707, S-94710, S-94713, S-94720, S-94721, S-94743, S-94746, S-94752, S-94760, S-94762, S-94782, S-94787, S-94789, S-94809, S-94810, S-94815, S-94834, S-94841, S-94854, S-94889, S-94904, S-94920, S-94907, S-95000, S-95026, S-95042, S-95640, S-95642, S-95105, S-95107, S-95117, S-95248, S-95273, S-95293, S-95314, S-95395, S-95462, S-95619, S-95622, S-95640, S-95642, S-95645,	164

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C.5 Community	/ and stakeholder engagement	
C.5.1 Prior to exhibition	S-102593, S-102610, S-102614, S-102662, S-102665, S-102669, S-102675, S-102676, S-102695, S-94463, S-95300, S- 102732, S-96187, S-102740, S-95403, S-93914, S-93933, S-94178, S-94245, S-94252, S-94253, S-94297, S-94316, S-94345, S-94357, S-94359, S-94366, S-94378, S-94393, S-94394, S-94411, S-94417, S-94464, S-94465, S-94482, S-94492, S-94497, S-94505, S-94513, S-94532, S-94533, S-94543, S-94551, S-94555, S-94570, S-94579, S-94605, S-94614, S-94616, S-94623, S-94729, S-94741, S-94745, S-94747, S-94748, S-94754, S-94756, S-94762, S-94763, S-94776, S-94780, S-94789, S-94792, S-94802, S-94803, S-94805, S-94822, S-94848, S-94861, S-94883, S-94894, S-94895, S-94896, S-94897, S-94907, S-94923, S-94928, S-94948, S-94985, S-94992, S-95016, S-95017, S-95022, S-95043, S-95056, S-95096, S-95119, S-95264, S-95293, S-95294, S-95304, S-95462, S-95466, S-95623, S-95647, S-95688, S-95732, S-96174, S-96180, S-96269, S-96276, S-96292, S-96370, S-96390, S-96396, S-96419, S-96422, S-96425, S-96434, S-96435, S-96440, S-96444, S-96447, S-96463, S-96474	115
C.5.2 During exhibition	S-102603, S-102606, S-102618, S-102640, S-102662, S-102672, S-102675, S-102676, S-102690, S-94692, S-95151, S- 94697, S-94542, S-94932, S-102737, S-94708, S-93901, S-102760, S-93463, S-93809, S-93821, S-93937, S-93970, S-94174, S-94244, S-94267, S-94292, S-94297, S-94320, S-94345, S-94357, S-94363, S-94366, S-94375, S-94386, S-94387, S-94393, S-94394, S-94403, S-94404, S-94407, S-94413, S-94415, S-94417, S-94441, S-94449, S-94463, S-94465, S-94471, S-94480, S-94513, S-94532, S-94537, S-94543, S-94570, S-94580, S-94590, S-94597, S-94605, S-94614, S-94714, S-94716, S-94729, S-94745, S-93523, S-94776, S-94780, S-94789, S-94792, S-94803, S-94822, S-94895, S-94907, S-94923, S-94928, S-94948, S-94976, S-94985, S-95006, S-95023, S-95096, S-95112, S-95293, S-95304, S-95321, S-95332, S-95438, S-95619, S-95622, S-95668, S-95678, S-95688, S-95693, S-96169, S-96179, S-96180, S-96289, S-96291, S-96297, S-96360, S-96391, S-96408, S-96444, S-96447, S-96452, S-96463	106
C.5.3 Other engagement	S-102587, S-102588, S-102589, S-102590, S-102591, S-102592, S-102593, S-102594, S-102596, S-102597, S-102598, S- 102599, S-102600, S-102601, S-102602, S-102603, S-102604, S-102605, S-102606, S-102607, S-102608, S-102609, S- 102610, S-102611, S-102612, S-102613, S-94863, S-102614, S-102615, S-102616, S-102617, S-102618, S-102619, S- 102620, S-102621, S-102622, S-102623, S-102624, S-102625, S-102626, S-102627, S-102628, S-102629, S-102630, S- 102631, S-102632, S-102633, S-102634, S-102635, S-102636, S-102637, S-102638, S-102639, S-102640, S-102641, S- 94488, S-102642, S-102643, S-102644, S-102645, S-102661, S-102662, S-102663, S-102664, S-102665, S-102666, S-	559

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C.6.1 Assessment methodology	S-95642	1
C.6.2 Disruptions to commuters, residents, pedestrians and cyclists	S-102695, S-95301, S-94540, S-94632, S-94907	5
C.6.3 Operation – health and safety	S-102587, S-102588, S-102589, S-102590, S-102591, S-102592, S-102593, S-102594, S-102596, S-102597, S-102598, S- 102599, S-102600, S-102601, S-102602, S-102603, S-102604, S-102605, S-102606, S-102607, S-102608, S-102609, S- 102610, S-102611, S-102612, S-102613, S-94863, S-102614, S-102615, S-102616, S-102617, S-102618, S-102619, S- 102620, S-102621, S-102622, S-102623, S-102624, S-102625, S-102626, S-102627, S-102628, S-102629, S-102630, S- 102631, S-102632, S-102633, S-102634, S-102635, S-102636, S-102637, S-102638, S-102639, S-102640, S-102641, S- 94488, S-102642, S-102643, S-102644, S-102645, S-102661, S-102662, S-102663, S-102664, S-102665, S-102666, S- 102667, S-102668, S-102669, S-102670, S-102671, S-102672, S-102673, S-102674, S-102675, S-102676, S-102677, S- 102678, S-102679, S-102680, S-102681, S-102682, S-102684, S-102686, S-102688, S-102690, S-102691, S-102696, S- 93973, S-102701, S-102703, S-95300, S-102723, S-95428, S-94930, S-95303, S-93821, S-102731, S-102735, S-94382, S-	750

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C.6.5 Wider network performance and induced	S-102587, S-102588, S-102589, S-102590, S-102591, S-102592, S-102593, S-102594, S-102596, S-102597, S-102598, S- 102599, S-102600, S-102601, S-102602, S-102603, S-102604, S-102605, S-102606, S-102607, S-102608, S-102609, S- 102610, S-102611, S-102612, S-102613, S-94863, S-102614, S-102615, S-102616, S-102617, S-102618, S-102619, S- 102620, S-102621, S-102622, S-102623, S-102624, S-102625, S-102626, S-102627, S-102628, S-102629, S-102630, S-	670

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Report section	Submitter identification numbers	Count
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C.8 Noise and	vibration	•
C.8.1 Assessment methodology	S-95089, S-94382, S-93914, S-94809	4
C.8.2 Noise impacts during construction	S-102695, S-95089, S-93917, S-94434, S-94441	5
C.8.3 Noise impacts during operation	S-102590, S-102598, S-102605, S-102683, S-102694, S-94193, S-95248, S-95239, S-94697, S-96183, S-102703, S-102715, S-102716, S-94932, S-95301, S-102723, S-95089, S-102726, S-94239, S-96372, S-96187, S-102735, S-94382, S-102749, S-95403, S-95137, S-102761, S-93485, S-93502, S-93725, S-93786, S-93807, S-93809, S-93821, S-93848, S-93904, S-93907, S-93913, S-93914, S-93919, S-93924, S-93937, S-93940, S-93944, S-93960, S-93963, S-94105, S-94123, S-94136, S-94155, S-94173, S-94194, S-94197, S-94223, S-94224, S-94249, S-94257, S-94260, S-93851, S-94297, S-94298, S-94327, S-94330,	176

Report section	Submitter identification numbers	Count
	S-94341, S-94348, S-94349, S-94384, S-94387, S-94401, S-94403, S-94406, S-94414, S-94416, S-94420, S-94429, S-94434, S-94467, S-94471, S-94473, S-94489, S-94493, S-94494, S-94502, S-94512, S-94540, S-94543, S-94546, S-94564, S-94572, S-94573, S-94574, S-94600, S-94618, S-94621, S-94626, S-94633, S-94637, S-94640, S-94642, S-94645, S-94649, S-94651, S-94685, S-94694, S-94714, S-94716, S-94733, S-94746, S-94756, S-94762, S-94780, S-94781, S-94782, S-94785, S-94789, S-94809, S-94837, S-94851, S-94854, S-94865, S-94875, S-94889, S-94713, S-94704, S-94705, S-94906, S-94911, S-94907, S-94928, S-94935, S-94939, S-95000, S-95035, S-95080, S-95111, S-95119, S-95124, S-95160, S-95250, S-95253, S-95273, S-95304, S-95305, S-95307, S-95332, S-95399, S-95452, S-95462, S-95623, S-95642, S-95647, S-95688, S-95681, S-95688, S-95694, S-95698, S-95722, S-95751, S-96190, S-96251, S-96276, S-96364, S-96367, S-96379, S-96389, S-96390, S-96396, S-96399, S-96407, S-96409, S-96413, S-96423, S-96431, S-96435, S-96444, S-96460	
C.9 Air quality		
C.9.1 Assessment methodology	S-95089	1
C.9.2 Air quality impacts during construction	S-102682, S-94434, S-94441, S-94913	4
C.9.3 Air quality impacts during operation	S-102591, S-102599, S-102609, S-102613, S-94863, S-102624, S-102677, S-102683, S-102690, S-102694, S-94193, S- 95248, S-95239, S-102685, S-94697, S-96183, S-102703, S-95089, S-102726, S-94120, S-96372, S-96187, S-102735, S- 102737, S-94382, S-102742, S-102749, S-95403, S-95137, S-96188, S-94711, S-102757, S-102762, S-93523, S-93725, S- 93786, S-93807, S-93809, S-93914, S-93917, S-93924, S-93940, S-93954, S-94082, S-94111, S-94123, S-94127, S-94173, S- 94188, S-94195, S-94197, S-94199, S-94223, S-94249, S-94257, S-94260, S-93851, S-94298, S-94313, S-94324, S-94384, S- 94389, S-94401, S-94403, S-94404, S-94406, S-94414, S-94416, S-94421, S-94429, S-94434, S-94461, S-94463, S-94467, S- 94468, S-94471, S-94473, S-94489, S-94502, S-94509, S-94512, S-94540, S-94543, S-94546, S-94564, S-94572, S-94573, S- 94621, S-94626, S-94633, S-94637, S-94640, S-94642, S-94645, S-94651, S-94685, S-94705, S-94743, S-94746, S-94757, S- 94758, S-94780, S-94781, S-94782, S-94785, S-94809, S-94846, S-94854, S-94865, S-94875, S-94877, S-94889, S-94713, S- 94904, S-94905, S-94906, S-94911, S-94916, S-94917, S-94907, S-94930, S-94935, S-94939, S-94967, S-94993, S-94997, S-	187

Report section	Submitter identification numbers	Count
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C.10 Non-Abor	iginal heritage	l
C.10.1 Listed heritage items	S-102661, S-102723, S-102757, S-93809, S-93937, S-94328, S-94387, S-94490, S-94540, S-94573, S-94574, S-94575, S- 94907, S-94935, S-95264, S-96181, S-96419, S-96467	18
C.10.2 Potential heritage items	S-102587, S-102630, S-102662, S-102669, S-102675, S-102676, S-102677, S-102684, S-102687, S-102689, S-102694, S- 94692, S-94193, S-95248, S-95239, S-102700, S-102703, S-102715, S-95301, S-102723, S-102724, S-102726, S-102727, S- 94930, S-96372, S-96187, S-102736, S-95516, S-102737, S-102749, S-95403, S-95137, S-94468, S-94708, S-94088, S- 93901, S-102757, S-102762, S-93523, S-93786, S-93807, S-93884, S-93902, S-93903, S-93909, S-93914, S-93916, S-93924, S-93933, S-93934, S-93937, S-93952, S-93955, S-93984, S-94079, S-94094, S-94112, S-94136, S-94137, S-94197, S-94199, S-94209, S-94237, S-94239, S-94254, S-94266, S-94296, S-94302, S-94304, S-94313, S-94352, S-94366, S-94393, S-94394, S-94395, S-94401, S-94404, S-94405, S-94406, S-94416, S-94417, S-94419, S-94422, S-94434, S-94461, S-94465, S-94490, S-94492, S-94505, S-94509, S-94512, S-94513, S-94530, S-94532, S-94543, S-94540, S-94543, S-94551, S-94570, S-94574, S-94605, S-94614, S-94645, S-94703, S-94707, S-94711, S-94726, S-94729, S-94745, S-94746, S-94747, S-94748, S-94752, S-94760, S-94776, S-94780, S-94778, S-94792, S-94800, S-94803, S-94809, S-94815, S-94822, S-94854, S-94889, S-94897, S-94980, S-94977, S-94723, S-94928, S-94928, S-94935, S-94533, S-94809, S-94815, S-94822, S-94854, S-95032, S-95035, S-95038, S-95096, S-95111, S-95119, S-95120, S-95125, S-95134, S-95160, S-95161, S-95189, S-95242, S-95264, S-9573, S-95038, S-95096, S-95111, S-95134, S-95322, S-95389, S-95389, S-95462, S-95466, S-95619, S-95622, S-95623, S-95038, S-95096, S-95111, S-95134, S-95322, S-95387, S-95389, S-95462, S-95466, S-95619, S-95622, S-95623, S-95642, S-95647, S-96402, S-96403, S-96409, S-96410, S-96411, S-96412, S-96440, S-96444	194

Report section	Submitter identification numbers	Count
C.11 Cumulativ	re impacts	
C.11.1 Assessment of cumulative impacts	S-94235, S-95688	2
C.12 Other env	ironmental issues	
C.12.1 Social and economic	S-102602, S-94863, S-102628, S-102662, S-102673, S-102690, S-95248, S-94697, S-102703, S-102724, S-102726, S-94120, S-102727, S-94930, S-102732, S-102734, S-102735, S-102736, S-96188, S-94708, S-94711, S-102763, S-102765, S-102779, S-93658, S-93826, S-93913, S-93914, S-93925, S-93933, S-93934, S-93937, S-93944, S-93952, S-94081, S-94088, S-94112, S-94142, S-94144, S-94194, S-94217, S-94223, S-94225, S-94237, S-94249, S-94267, S-93851, S-94279, S-94291, S-94296, S-94298, S-94314, S-94316, S-94351, S-94354, S-94360, S-94363, S-94387, S-94390, S-94391, S-94395, S-94396, S-94401, S-94403, S-94404, S-94405, S-94411, S-94414, S-94418, S-94421, S-94423, S-94424, S-94425, S-94431, S-94432, S-94434, S-94441, S-94447, S-94448, S-94458, S-94464, S-94470, S-94473, S-94489, S-94493, S-94494, S-94502, S-94528, S-94530, S-94537, S-94543, S-94563, S-94564, S-94567, S-94572, S-94573, S-94575, S-94592, S-94596, S-94618, S-94620, S-94621, S-94624, S-94625, S-94626, S-94629, S-94633, S-94634, S-94607, S-94541, S-94745, S-9474642, S-94558, S-94704, S-94705, S-94712, S-94721, S-94724, S-94726, S-94729, S-94741, S-94745, S-94746, S-94747, S-94748, S-94749, S-94756, S-94758, S-94759, S-94762, S-94764, S-93523, S-94768, S-94781, S-94782, S-94802, S-94883, S-94888, S-94889, S-94891, S-94713, S-94311, S-94912, S-94171, S-94724, S-94268, S-94866, S-94872, S-94866, S-94872, S-94888, S-94889, S-94891, S-94713, S-94511, S-94912, S-9417, S-9426, S-94288, S-94866, S-94872, S-94883, S-94888, S-94889, S-94891, S-94713, S-95002, S-95009, S-95010, S-95010, S-95013, S-95075, S-95096, S-95114, S-95118, S-95112, S-95214, S-95250, S-95258, S-95264, S-95273, S-95290, S-95292, S-95293, S-95304, S-95305, S-95315, S-95318, S-95318, S-95321, S-95337, S-95387, S-95392, S-95399, S-95429, S-95693, S-95602, S-95603, S-95642, S-95647, S-95651, S-95659, S-95662, S-95669, S-95688, S-95690, S-95692, S-95693, S-95695, S-95710, S-95715, S-94508, S-95388, S-95642, S-95669, S-95688, S-95690, S-95692, S-95693, S-95695, S-95710, S-95715, S-94508, S-95388, S-95619, S-956	251
C.12.2 Biodiversity	S-94725, S-94403, S-94435, S-94854, S-94935, S-95387	6

Report section	Submitter identification numbers	Count
C.13 Suggestee	d changes to environmental management measures and Conditions of Approval	
C.13.1 Environmental Management Measures	S-94429, S-94704, S-94841, S-94928	4
C.13.2 Conditions of Approval	S-102628, S-102687, S-102689, S-102695, S-94692, S-94193, S-95248, S-95239, S-95151, S-94975, S-102715, S-102724, S- 102726, S-102727, S-94930, S-96372, S-96187, S-102735, S-95516, S-102737, S-95403, S-94468, S-94708, S-94088, S- 93913, S-93914, S-93924, S-93932, S-93934, S-93937, S-93952, S-93984, S-94105, S-94140, S-94173, S-94174, S-94197, S- 94199, S-94209, S-94223, S-94235, S-94237, S-94238, S-94244, S-94245, S-94249, S-94252, S-93851, S-94297, S-94298, S- 94314, S-94323, S-94360, S-94387, S-94395, S-94401, S-94405, S-94406, S-94414, S-94416, S-94419, S-94422, S-94435, S- 94512, S-94517, S-94564, S-94613, S-94621, S-94632, S-94633, S-94637, S-94640, S-94642, S-94645, S-94651, S-94685, S- 94695, S-94703, S-94707, S-94724, S-94733, S-94746, S-94749, S-94759, S-94760, S-94761, S-94762, S-94782, S-94809, S- 94816, S-94889, S-94926, S-94928, S-94932, S-94933, S-94939, S-94954, S-94968, S-94993, S-95035, S-95250, S-95305, S- 95389, S-95441, S-95622, S-95656, S-95672, S-95675, S-96180, S-96364, S-96444	111
C.14 Other issu	les	
C.14.1 M4- M5 Link project	S-102587, S-102588, S-102589, S-102599, S-102601, S-102602, S-94863, S-102614, S-102618, S-102624, S-102631, S- 102632, S-102640, S-102662, S-102666, S-102667, S-102675, S-102676, S-102682, S-102685, S-102687, S-102689, S- 102690, S-102694, S-102696, S-102697, S-102699, S-94692, S-94193, S-94443, S-95248, S-95239, S-102700, S-95151, S- 94463, S-94697, S-93973, S-102702, S-95395, S-96183, S-96184, S-93982, S-94975, S-102715, S-102716, S-94932, S- 95301, S-102723, S-95089, S-102726, S-94120, S-102727, S-94930, S-94239, S-96372, S-96187, S-102733, S-102735, S- 102737, S-94382, S-102742, S-102744, S-102749, S-95403, S-102750, S-95137, S-94468, S-96188, S-94708, S-102755, S- 94088, S-102757, S-102758, S-102760, S-94528, S-102761, S-93523, S-93674, S-93786, S-93873, S-93898, S-93902, S- 93904, S-93906, S-93909, S-93913, S-93914, S-93916, S-93919, S-93922, S-93924, S-93932, S-93933, S-93934, S-93937, S- 93939, S-93940, S-93941, S-93952, S-93954, S-93955, S-93956, S-93957, S-93961, S-93970, S-93971, S-93975, S-93984, S- 94093, S-94094, S-94104, S-94112, S-94123, S-94140, S-94173, S-94174, S-94188, S-94194, S-94197, S-94199, S-94217, S- 94223, S-94235, S-94237, S-94249, S-94266, S-94270, S-94271, S-93851, S-94296, S-94297, S-94298, S-94299, S-94302, S- 94304, S-94314, S-94321, S-94323, S-94326, S-94328, S-94336, S-94340, S-94351, S-94352, S-94361, S-94366, S-94376, S-	378

Report section	Submitter identification numbers	Count
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C.14.2 Matters related to the WestConnex program of works	S-102690, S-102695, S-94542, S-95301, S-102723, S-94930, S-94239, S-102737, S-94382, S-102740, S-102749, S-102750, S-102757, S-93674, S-93807, S-93809, S-93835, S-93922, S-93943, S-94331, S-94390, S-94616, S-94904, S-94939, S- 95092, S-95321, S-95688, S-96180, S-96358, S-96363, S-96382, S-96444	32
C.14.3 Matters not related to the modification	S-102599, S-102695, S-95395, S-96184, S-95301, S-102757, S-93914, S-94093, S-94093, S-94390, S-94396, S-94479, S-94525, S-94645, S-94809, S-94854, S-94875, S-94884, S-94931, S-95293, S-95299, S-95399, S-95696, S-96367, S-96426	25

WestConnex M4-M5 Link Rozelle Interchange – Modification: The Crescent overpass and active transport links Response to submissions report



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Customer feedback Roads and Maritime Locked Bag 928, North Sydney NSW 2059