Staging Report

M4-M5 Link Project

Transport for New South Wales | March 2025

NSW GOVERNMENT

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Review register

Review version	Issued by	Issued for	Date of issue
Rev 00		Final for submission to DPE	12/09/2018
Rev 01		Final for submission to DPE following Modification to Planning Approval	20/03/2019
Rev 02		Revised following change to E60	28/11/2019
Rev03		Revised following Modifications to Planning Approval	07/10/2020
Rev 04		Revised following Mod 5 determination	1/02/2021
Rev 05		Revised following Mod 7 determination	7/11/2022
Rev 06		Revised to include new stage for pedestrian and cyclist improvements (CoA E58)	26/04/2023
Rev 07		Update to Stage 3	12/07/2023
Rev 08		Stage 3 updated in response to DPE comments Also revised following Mod 8 determination	17/08/2023
Rev 09		Revised to detail Western Harbour Tunnel connections	24/10/2023
Rev 10		Revised to include Stage 4 (Parklands Enhancement)	5/02/2024
Rev 11		Update to Stage 4 (Parklands Enhancement)	25/03/2025

Contents

Glossary of terms and abbreviations

Term	Meaning
ASBJV	Acciona Samsung Bouygues Joint Venture (formerly Lendlease Samsung Bouygues Joint Venture (LSBJV))
AA	Acoustics Advisor
ANZECC	Australian and New Zealand Environment and Conservation Council
AQCCC	Air Quality Community Consultative Committee
ARI	Average recurrence interval
CASA	Civil Aviation Safety Authority
CEMP	Construction Environmental Management Pan
CoA	Condition of Approval
CSSI	Critical State significant infrastructure
DIRD / DIRDC	Commonwealth Department of Infrastructure, Regional Development and Cities
DPE	NSW Department of Planning and Environment
DPI Water	NSW Department of Primary Industries – Water, now NSW Office of Water (NOW)
EIS	Environmental impact statement
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
ER	The Environmental Representative for the CSSI
FRNSW	Fire and Rescue NSW
HAMU	Heritage Archaeological Management Unit
JHCPB	John Holland CPB Joint Venture
MOC	Motorway operations complex
NATA	National Association of Testing Authorities
NEPM	National Environment Protection Measures
NOW	NSW Office of Water, previously DPI Water
NSW	New South Wales
OEM	NSW Office of Environment and Heritage
OEMP	Operational Environmental Management Plan

ONVR	Operational Noise and Vibration Review
RLMP	Residual Land Management Plan
RMS	Roads and Maritime Services
SES	State Emergency Service
SPIR	Submissions and Preferred Infrastructure Report
SSI	State significant infrastructure
Stage 1	M4-M5 Link Mainline tunnels
Stage 2	M4-M5 Link Rozelle interchange
TfNSW	Transport for New South Wales, formerly Roads and Maritime Services
UDLP	Urban Design and Landscape Plan
WestConnex	WestConnex Transurban, formerly Sydney Motorway Corporation

1 Introduction

1.1 Overview of WestConnex

WestConnex is one of the NSW Government's key infrastructure projects, which aims to ease congestion, create employment opportunities and connect communities. The WestConnex program of works, together with the proposed Sydney Gateway project, would facilitate improved connections between western Sydney, Sydney Airport, Port Botany and south and south-western Sydney, as well as better connectivity between the important economic centres along Sydney's Global Economic Corridor and local communities.

Separate planning applications and assessments have been completed for each of the WestConnex projects. Transport for New South Wales (TfNSW) commissioned WestConnex to deliver the WestConnex project, on behalf of the NSW Government. TfNSW is the proponent for the program of works and is responsible for construction of the Rozelle interchange stage of works for the M4-M5 Link project (refer to section 2.1 below for more information).

The WestConnex program of works includes:

- New M4 consisting of:
    - M4 Widening – widening of the existing M4 Motorway from Parramatta to Homebush (open to traffic)
    - M4 East – extension of the M4 Motorway in tunnels between Homebush and Haberfield via Concord (open to traffic)
- King Georges Road Interchange Upgrade – upgrade of the King Georges Road interchange between the M5 West and M5 East at Beverly Hills (open to traffic)
- New M5 (now known as the M8) – duplication of the M5 East from King Georges Road at Beverly Hills with tunnels from Kingsgrove to a new interchange at St Peters (open to traffic)
- M4-M5 Link – tunnels connecting the M4 East at Haberfield and the New M5 at St Peters, an interchange at Rozelle and a link at Iron Cove (approved and under construction).

1.2 The M4-M5 Link

TfNSW has received approval from the NSW Minister for Planning to construct and operate the M4-M5 Link (the project), which will comprise a new multi-lane road link between the M4 Motorway at Haberfield and the M8 Motorway at St Peters (refer to Figure 1). The project will also include 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) (refer to Figure 2). In addition, construction of tunnels, ramps and associated infrastructure to provide connections to the future Western Harbour Tunnel project will be carried out at the Rozelle interchange. Pedestrian and cyclist connectivity improvements will be delivered on Victoria Road and within the Rozelle local road network (refer to Figure 3). The project will also provide enhanced park facilities as part of the final transformation of Rozelle Rail Yards into new open space (refer to Figure 4).

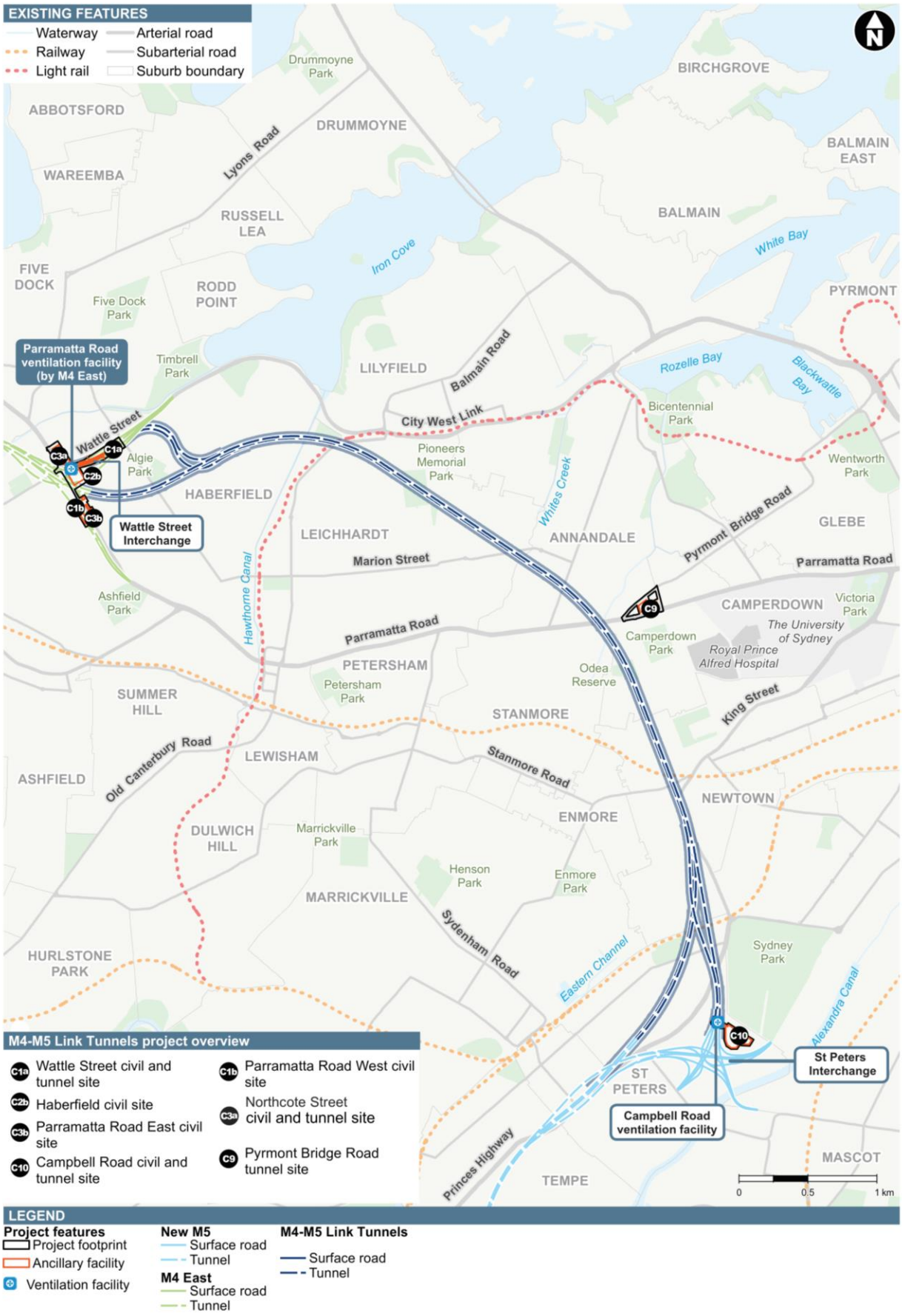

Figure 1 Overview of the M4-M5 Link Tunnels project (Stage 1)

Figure 2 Overview of the Rozelle interchange project (Stage 2)

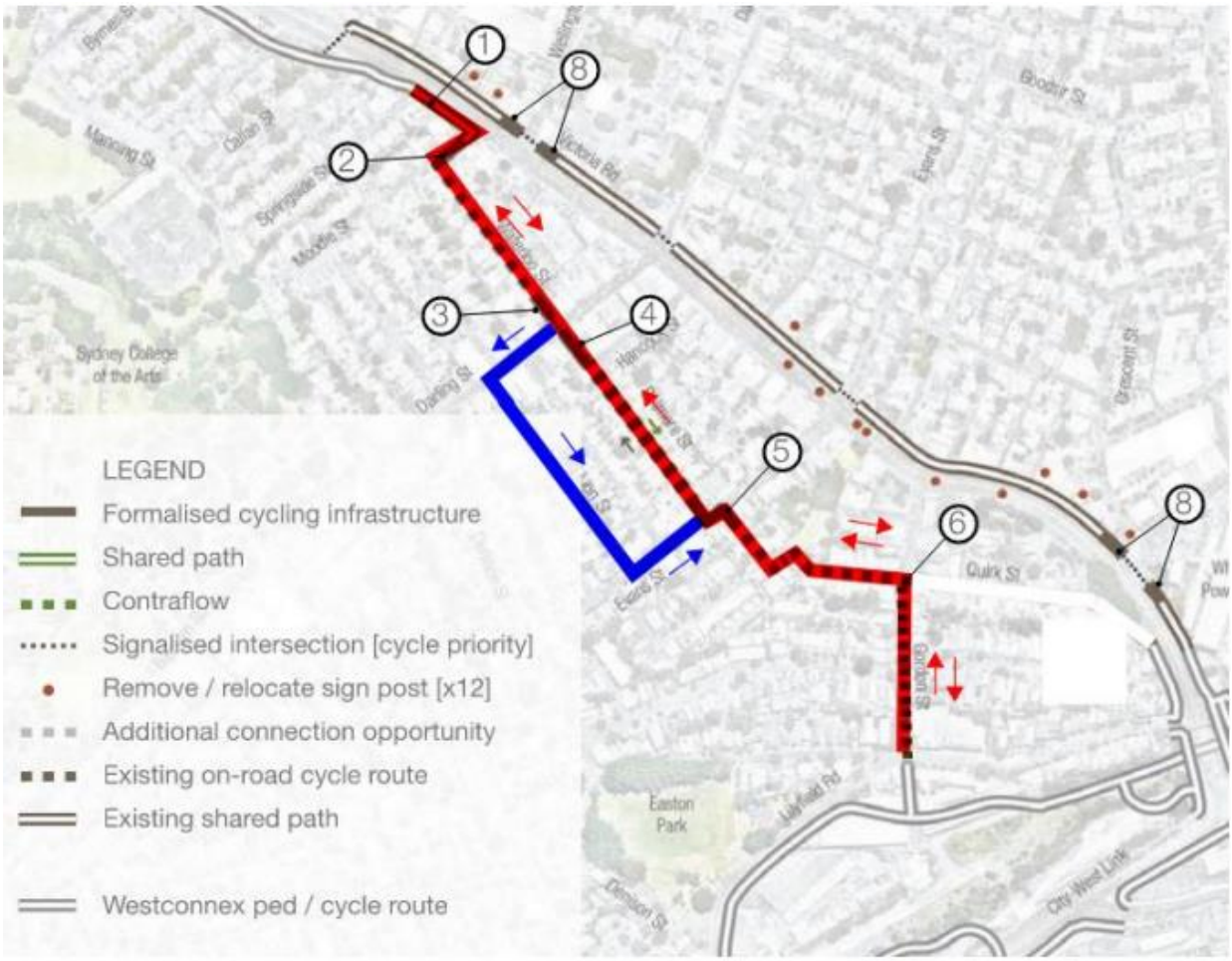

Figure 3: Overview of the Rozelle pedestrian and cyclist improvements (Stage 3)

Figure 4: Rozelle Parklands Enhancement (Stage 4)

1.3 Statutory context

The project has been declared State significant infrastructure (SSI) and critical State significant infrastructure (CSSI) by the NSW Minister for Planning. TfNSW prepared an environmental impact statement (EIS), dated August 2017. The EIS identified a range of environmental, social and planning issues associated with the construction and operation of the project and proposed measures to mitigate and manage those potential impacts.

The EIS was publicly exhibited between 18 August and 16 October 2017. Following public exhibition, submissions from stakeholders were received and addressed by TfNSW in a submissions and preferred infrastructure report dated January 2018, which was lodged with the now NSW Department of Planning and Environment (DPE).

The project has been assessed by DPE in accordance with the *Environmental Planning and Assessment Act 1979* (NSW) (EP&A Act). The project was approved by the NSW Minister for Planning on 17 April 2018, subject to Conditions of Approval (CoAs). The planning approval applies to both stages of construction and operation.

TfNSW sought to modify the approval for the project, relating to Stage 1 – Mainline tunnels, which principally involved the removal of the Darley Road civil and tunnel site and changes to the arrangement of construction sites at Haberfield and Ashfield. In addition, the modification also sought to relocate the operational water treatment plant from the Darley Road motorway operations complex to the Campbell Road motorway operations complex at the St Peters interchange.

A Modification Report for MOD 1 was prepared by TfNSW and placed on public exhibition by DPE for 14 days between 12 and 26 September 2018. The modification related to civil sites and ancillary facilities associated with Stage 1 of the project. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period. This report was lodged with DPE in November 2018. The Modification was determined by the NSW Minister for Planning on 25 February 2019, subject to CoAs.

A Modification Report for MOD 2 was prepared by TfNSW and placed on public exhibition by DPE between 21 August 2019 to 25 September 2019. The modification related to The Crescent overpass and active transport links associated with Stage 2 of the project. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period. This report and a Design Amendment Report were lodged with DPE in April 2020. The Modification was determined by the NSW Minister for Planning on 30 September 2020, subject to CoAs.

A Modification Report for MOD 3 was prepared by TfNSW and placed on public exhibition by DPE between 20 November and 18 December 2019. The modification related to the Iron Cove centilation facility associated with Stage 2 of the project. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period. This report was lodged with DPE in March 2020. The Modification was determined by the NSW Minister for Planning and Public Space on 28 July 2020, subject to CoAs.

A Modification Report for MOD 4 was prepared by TfNSW and lodged with DPE in June 2020. The modification related to the Glebe Island construction ancillary facility associated with Stage 2 of the project. The Modification was determined by DPE on 28 July 2020, subject to CoAs.

A letter dated 26 October 2020 was prepared by TfNSW and lodged with DPE. This formed MOD 5 to the Planning Approval. The administrative modification sought to allow the establishment of additional minor ancillary facilities that are likely to have minimal impacts to provide consistency with other major infrastructure projects The Modification was determined by DPE on 18 November 2020, subject to a CoA.

A proposed modification (MOD 6) was prepared by TfNSW and lodged with DPE. The modification related to haul road relocation at the Rozelle interchange associated with Stage 2 of the project. This was subsequently withdrawn.

A Modification Report for MOD 7 was prepared by TfNSW and lodged with DPE. The modification related to the permanent closure of Northcote Street at Haberfield. The modification report was placed on public exhibition by DPE between 18 May and 31 May 2022. A Response to Submissions Report was prepared to respond to submissions received during the public exhibition period and lodged with DPE in August 2022. The Modification was determined by DPE on 14 October 2022, subject to CoAs.

A letter dated 14 July 2023 was prepared by TfNSW and lodged with DPE. This formed MOD 8 to the Planning Approval. The administrative modification sought amendments to condition E26 to provide the Secretary the discretion to apply flexibility in the ambient air quality monitoring timeframe. The Modification was determined by DPE on 23 August 2023.

1.4 Purpose of this document

This report has been prepared to address the Staging Report requirements of CoA A12 and A13. The Staging Report requirements, and where they are addressed in this report, are listed in Table 1.

Table 1: Staging Report requirements as per the CoAs

CoA	Requirement	Where/how addressed
A12	The CSSI may be constructed and operated in stages. Where staged construction or operation is proposed, a Staging Report (for either or both construction and operation as the case requires) must be prepared, then endorsed by the ER and then submitted to the Secretary for information. The Staging Report must be submitted to the Secretary no later than one (1) month prior to the commencement of construction of the first of the proposed stages of construction (or if only staged operation is proposed, one (1) month prior to the commencement of operation of the first of the proposed stages of operation).	This report
A13	The Staging Report must:	
	a) if staged construction is proposed, set out how the construction of the whole of the CSSI will be staged, including details of work and other activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish;	Chapter 2, Appendix A

	b) if staged operation is proposed, set out how the operation of the whole of the CSSI will be staged, including general details of work and other activities to be carried out in each stage and the general timing of when operation of each stage will commence and finish (if relevant);	Chapter 2, Appendix A
	c) specify the relevant conditions of approval that apply to each stage and how compliance with those conditions will be achieved across and between each of the stages of the CSSI; and	Section 2.1.6 and Appendix A Section 3.2 and Appendix C
	d) set out mechanisms for managing any cumulative impacts arising from the proposed staging.	Section 2.1.5

DPE has been advised of the status of the project prior to the commencement of construction and operation of each stage. This Staging Report has been revised to address the CoAs issued by the NSW Minister following determination of MOD 1, MOD 2, MOD 3, MOD 4, MOD 5, MOD 7 and MOD 8.

Where amendments to the proposed staging or timing occur, a revised Staging Report will be prepared, endorsed by the ER and submitted in accordance with CoA A16.

2 Proposed staging

2.1 Staging strategy

The construction and operation of the M4-M5 Link project will be staged as follows:

- Stage 1 - Mainline tunnels – WestConnex has engaged a design and construction contractor, Acciona Samsung Bouygues Joint Venture (ASBJV, formerly LSBJV), to construct and operate Stage 1 of the project:
    - This stage involves construction of the Mainline tunnels between the M4 at Haberfield and the M8 at St Peters, stub tunnels to the Rozelle interchange (at the Inner West subsurface interchange), ancillary infrastructure at the Campbell Road motorway operations complex (MOC5) and fitout of the Parramatta Road ventilation facility.

- Stage 2 - Rozelle interchange – TfNSW has engaged a design and construction contractor, John Holland CPB (JHCPB), to construct Stage 2 of the project. WestConnex will operate Stage 2 of the project:
    - This stage involves construction of the Rozelle interchange and Iron Cove Link including connections to the stub tunnels at the Inner West subsurface interchange (built during Stage 1), ancillary infrastructure at the Rozelle West motorway operations complex (MOC2), Rozelle East motorway operations complex (MOC3) and Iron Cove Link motorway operations complex (MOC4) and connections to the surface road network at Lilyfield and Rozelle.
    - This stage will also include the construction of tunnels, ramps and associated infrastructure for the Rozelle interchange to provide connections to the proposed Western Harbour Tunnel and Beaches Link project. The construction of these connections will continue after the opening of Rozelle Interchange and Iron Cove Link to traffic.

- Stage 3 - Rozelle pedestrian and cycleway improvements – TfNSW will engage a contractor to improve pedestrian and cyclist connectivity between Roberts Street and Springside Street in accordance with CoA E58, which forms part of the Pedestrian and Cycle Implementation Strategy (CoA E60). Procurement for a contractor will be undertaken in Q3 2023.
    - This stage involves construction of improved pedestrian and cyclist connectivity south of Victoria Road, within the local road network between Springside Street and Roberts Street via the Rozelle Parklands. Pedestrian and cyclist connectivity will be improved with a range of initiatives including re-surfaced footpaths, traffic calming zones, cycle separators, improved signage and improved line-marking. These initiatives (or part thereof) will be implemented along Victoria Road, Springside Street, Moodie Street, Waterloo Street, Darling Street, Red Lion Street, Evans Street, Kenniff Street, Quirk Street, Gordon Street and Lilyfield Road. The remainder of the pedestrian and cyclist connectivity improvements delivered in accordance with CoA E60 will be delivered as part of the Stage 2 scope unless otherwise stated in this Staging Report.

- Stage 4 – Rozelle Parklands Enhancement – TfNSW will engage a contractor to enhance facilities in the parklands.
    - This stage involves construction of a second facilities building; two multi-purpose courts, installation of lighting towers over the AFL/cricket oval and soccer oval, and an additional toilet. The remainder of the transformation of Rozelle Rail Yards into parklands will be delivered as part of the Stage 2 scope unless otherwise stated in this Staging Report.

Further information on the works comprising each stage is contained in Sections 2.1.1, 2.1.2 and 2.1.3 below.

The rationale for the staged construction and operation of the project was based on the following considerations:

- Making the scope of the project more manageable by dividing the works into separate construction contracts
- Easing current congestion issues along Parramatta Road and providing connectivity with the other WestConnex tunnels, via the Mainline tunnels, early, ahead of the Rozelle interchange being operational
- Allowing more time to resolve the complex design and construction issues associated with the Rozelle interchange.
- Delivering the Stage 3 improved pedestrian and cyclist connectivity in the demobilisation, commissioning, completion and operational phase of Stage 2 to minimise cumulative impacts of works in Rozelle.
- Utilising a risk management-based approach to address the inherent risks associated with the large scale construction activities undertaken in Stage 1 and Stage 2 comparable to the smaller scale construction activities undertaken in Stage 3.
- Delivering the Stage 4 Rozelle Parklands Enhancement in Consultation with Council and in line with the Rozelle Parklands Working Group Final Recommendation Report to improve the recreational experience of the community by creating a diverse range of uses and interests.

The staging strategy for the project focuses on balancing the need for construction to occur in a safe and efficient manner, while managing constructability constraints and minimising impacts on local communities, the environment, and users of the surrounding road and other transport networks.

The duration of construction is significantly influenced by the complexity and magnitude of the interfaces between tunnelling activities and the construction of the surface civil structures. The staging strategy will seek to minimise the risk to delivery timing and impacts on nearby communities, including cumulative impacts from construction at Haberfield and St Peters (refer to Section 2.1.2).

The project will be operated in multiple stages, with the operation of the project commencing in accordance with the staged construction strategy. WestConnex will be responsible for the operation of Stage 1 and 2 of the project, as part of the overall WestConnex program of works. Stage 3 of the project will be delivered within the Inner West Council local road network and on state classified Victoria Road. TfNSW will be delivering Stage 4 of the project, as part of the final transformation of Rozelle Rail Yards into parklands.

2.1.1 Stage 1 - Mainline tunnels

The key elements of the project that would be constructed during Stage 1 include:

- Twin, Mainline tunnels connecting the M4/Wattle Street interchange at Haberfield and the M8/St Peters interchange at St Peters
- Temporary access tunnels to provide construction access to the Mainline tunnels from the construction ancillary facilities
- Finishing works, including pavement and line marking, at the Wattle Street interchange and the St Peters interchange (to integrate the M4–M5 Link entry and exit ramps into these interchanges

- Underground stub tunnels at the Inner West subsurface interchange that would enable future connections between the Mainline tunnels and the Rozelle interchange
- Mechanical and electrical fitout of a section of the Parramatta Road ventilation facility (being built as part of M4 project) to enable use of this facility by the M4-M5 Link project
- Construction of the Campbell Road motorway operations complex (MOC5) at St Peters including the Campbell Road ventilation facility and an intake substation for the Mainline tunnels
- Utility works including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities
- Earthworks and landscaping works adjacent to permanent operational infrastructure such as the Campbell Road ventilation facility and electrical substations.

The Mainline Tunnels became operational on 20 January 2023.

2.1.2 Stage 2 - Rozelle interchange

The key elements of the project that would be constructed during Stage 2 include:

- Tunnel connections between the stub tunnels at the Inner West subsurface interchange (constructed as part of Stage 1), the Rozelle interchange, the Iron Cove Link and the surface road network
- Tunnel portals, dive structures and cut-and-cover tunnels to connect the Rozelle interchange and the Iron Cove Link with the surface road network
- Upgrades and modifications to the surface road network at Lilyfield and Rozelle including City-West Link Road, The Crescent and Victoria Road/Anzac Bridge approach
- Widening and realignment of Victoria Road at the eastern abutment of Iron Cove Bridge to allow for the tunnel portals, dive structures and cut-and-cover tunnels associated with the Iron Cove Link to be built between the Victoria Road eastbound (northern) and westbound (southern) carriageways
- Civil construction to provide connections to the future Western Harbour Tunnel, including:
    - Tunnels that would allow for underground connections between the M4 and M8 motorways and the future Western Harbour Tunnel (via the M4-M5 Link Mainline tunnels). The construction of these tunnel connections will continue after the opening of Rozelle Interchange and Iron Cove Link to traffic in accordance with the Stage 2 Construction Environment Management Plan
    - A dive structure, portals and entry and exit ramps (below ground) extending from the Rozelle Rail Yards to the Western Harbour Tunnel connection tunnels. This would enable future surface connections between the City West Link/The Crescent intersection and the future Western Harbour tunnels
- Minor surface works to local roads
- A constructed wetland, a bioretention basin, bioretention swales and drainage channels at the Rozelle interchange within the Rozelle Rail Yards
- Naturalisation of a section of Whites Creek between The Crescent and Rozelle Bay
- Upgrade and widening of the culvert between the Rozelle Rail Yards and Rozelle Bay, including construction of a new headwall and outlet into Rozelle Bay northeast of the City West Link/The Crescent intersection
- A Gross Pollutant Trap (GPT) and hydrodynamic separator within King George Park
- Construction of the Rozelle West motorway operations complex (MOC2) within the Rozelle Rail Yards including a ventilation supply building and a substation
- Construction of the Rozelle East motorway operations complex (MOC3) within Rozelle Rail Yards including a ventilation exhaust facility and three ventilation outlets. Two of these ventilation outlets would be used for the M4-M5 Link project. The third outlet would be constructed for use by the future Western Harbour Tunnel project.

- Construction of the Iron Cove Link motorway operation complex (MOC4) including the Iron Cove Link ventilation facility. This facility would be split with the ventilation outlet located between the eastbound and westbound Victoria Road carriageways and the ventilation exhaust facility and associated infrastructure located south of Victoria Road between Springside Street and Toelle Street
- Utility works including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities
- New and upgraded pedestrian and cyclist facilities at Rozelle and Lilyfield (separate to the Stage 3 Rozelle pedestrian and cycleway improvements)
- Earthworks and landscaping works, including:
  - Adjacent to permanent operational infrastructure such as ventilation facilities, water treatment facilities and substations
  - Adjacent to disturbed areas, such as surface roads that are being upgraded and improved as part of the project
  - Within the Rozelle Rail Yards, associated with the provision of new open space at this location
  - Around the Iron Cove Link tunnel portals, and south of Victoria Road at Rozelle between around Springside Street and Byrnes Street.

It is noted that the Rozelle interchange works are subject to ongoing detailed design and construction planning and the key elements may be subject to refinement and/or modification. It is envisaged the Rozelle Interchange will become operational in Q4 2023.

2.1.3 Stage 3 - Rozelle pedestrian and cycleway improvements

The key low impact work elements of the project that would be constructed during Stage 3 include:

- A raised threshold at the intersection of Moodie Street and Victoria Road and a single direction cycle lane with a cycle separator along both sides of Moodie Street between Victoria Road and Waterloo Street with on-road cycle markings
- Reinstate cycle line markings along Waterloo Street
- Reinstate cycle line markings along Darling Street between Waterloo Street and Red Lion Street
- Mill and re-sheet of Red Lion Street to improve motorist and cyclist ride quality. Reinstatement of bicycle lane markings along Belmore Street and Red Lion Street with additional signage also instated.
- A raised threshold at the end of Red Lion Street prior to the intersection with Evans Street
- Addition of two raised thresholds within Evans Street one near Red Lions Street and the other near Belmore Street
- A raised threshold in Kenniff Street near Evans Street
- Cycle lane markings along Kenniff Street, Elizabeth Street and Quirk Street as far as Gordon Street
- Traffic calming measures along Gordon Street between Quirk Street and Lilyfield Road including raised thresholds at the intersection of Quirk Street and Gordon Street.

For Victoria Road, the following sign relocations are required:

- The Red-light speed camera sign is proposed to be relocated further away from the kerb north of Crystal Street. This removes an obstacle from the southbound cycleway and allows for a smoother shared path which improves safety for pedestrians and cyclists.

- Relocation of the Children Crossing sign between Crystal and Wellington Streets to enhance safety for pedestrians and cyclists in proximity to petrol station. Children Crossing sign is proposed to move 1m from power pole in proximity to bus stop north of Wellington Street.
- Relocate bus lane and clearway sign to kerb south of Wellington Street, Cantilevered post height of 2.5m to bottom of clearway sign
- The mixed traffic sign pole south of Darling Street is proposed to be removed and replaced with new post to 2.5m above path level
- Relocation of clearway sign parking sign onto one post closer to kerb north of Ellen Street
- Proposed removal and re-installation of the red-light speed camera sign on a single post with cantilever arrangement
- Adjust height of clearway and bus lane sign to above 2.5m path level.
- Relocate pedestrian/cyclist sign closer to fence north of Evans Street.
- Relocate bus lane and clearway sign to kerb north of Mackenzie Street, height of 2.5m to bottom of clearway sign
- Relocate bus lane and clearway sign to kerb north of Loughlin Street, height of 2.5m to bottom of clearway sign
- Remove White Cruise Bay terminal posts north of Robert Street. Design and install on single post cantilever.

For Victoria Road, the following civil works are required:

- Existing footpath pavement between Crystal Street and Wellington Street is proposed to be re-surfaced with the existing pavement treatment
- Asphalt surfacing, concrete footpath and vehicle cross over for 121 Victoria Road are all proposed to be re-surfaced.

The Rozelle Stage 3 pedestrian and cycleway improvements required by CoA E58 form an inherent part of the project as described in Schedule 1 of the CoA. The Pedestrian and Cycle Implementation Strategy required by CoA E60 contemplates staging of works and requires all works arising from the Pedestrian and Cyclist Implementation Strategy (including the CoA E58 Rozelle pedestrian and cycleway improvements), to be implemented prior to the commencement of project operations, except as permitted by the CoA. As contemplated by the definition of Operation in Schedule 1 of the CoA, there may be overlap between the carrying out of construction and operation and as permitted by CoA A13, the project will be staged, with Stage 1 and Stage 2 becoming operational whilst construction of Stage 3 is undertaken.

2.1.4 Stage 4 – Rozelle parklands enhancement

The key elements of the project that would be constructed during Stage 4 include:

- A second facilities building intended to be used as change rooms, toilets, storage and with provisions for a canteen facility (any use of the building as a canteen would be subject to separate approvals (if required)).
- Two multi-purpose courts to accommodate a range of sports including netball, basketball and tennis
- Installation and commissioning of lighting towers over the AFL/cricket oval and soccer oval (piling works and conduits have been undertaken during Stage 2 of the project)

- Additional toilet block adjacent to the playground area
- Utility works including protection and/or adjustment of existing utilities and installation of new utilities.

The Rozelle Parklands is a main design element of the project as described in the Urban Design and Landscape Plan. As per CoA 134, staging of the parklands is anticipated in the plan to maximise progressive public access and use of the park, with Stage 2 and 3 becoming operational whilst construction of Stage 4 is undertaken. Completion of Stage 4 is independent of the opening of the motorway.

2.1.5 Works outside construction staging

Some low impact works will be undertaken outside of the stages identified in this Staging Report, subject to the process outlined in Section 3.2.1

Pedestrian cyclist improvements between Elizabeth and Quirk Streets will be completed once the Air Quality Monitoring Station (AQMS), required under conditions E25 and E26 of the M4-M5 Link CSSI – 7485 is removed. This location on eastern end of Quirk Street is currently blocked off to vehicle traffic and in turn, has opened up a dedicated cyclist and pedestrian accessway. This enables improvements to include introduction of two 1.0m landscaping areas on each side of the road and dedicated 1.5m cycle lanes. Pedestrians will also be able to utilise existing footpath located on the western edge of Quirk Street, separated from cyclists via the landscaping strip. Existing bollards on the north and south edge are proposed to be relocated to align between cycleway lanes and prevent vehicles from entering this zone. These works will be managed as restoration works when the AQMS site is decommissioned.

With condition E58 requiring improved connectivity for cyclist and pedestrians between Roberts Street and Springside Street, coordination with the Western Harbour Tunnel Project has identified the requirement for permanent power supply installation through Belmore Street and Evans Street. TfNSW has coordinated the scopes for Stage 3 of the Rozelle Interchange Project and the Western Harbour Tunnel to avoid cumulative and additional impacts on the local community. To fulfill the requirements of condition E58, Stage 3 will install permanent signage, temporary traffic calming measures (plastic speed humps bolted to asphalt) and temporary line markings in Belmore Street and Evans Street.

The permanent cyclist improvements on Belmore Street and Evans Street will be completed once permanent power supply for the Western Harbour Tunnel is completed in late 2024. TfNSW will deliver the following scope as their road restoration works:

- Addition of two permanent raised thresholds within Evans Street one near Red Lions Street and the other near Belmore Street
- Mill and re-sheet Belmore Street to improve motorist and cyclist ride quality
- Reinstatement of bicycle lane markings along Belmore Street.

2.1.6 Operation

The operation of each stage of the project is the operation of the identified elements for that stage, excluding the future Western Harbour Tunnel element. In accordance with CoA A29 a post Compliance Tracking Report will be prepared for submission to DPE.

2.1.7 Construction and operation timing

The total construction period for the project is expected to be around five years, which includes commissioning that would occur concurrently with the final phase of construction of the Mainline tunnels and Rozelle interchange stages.

An indicative construction and operational program is shown in Table 2. The timing specific to each Stage 3 will be subject to review as the procurement process for delivery of works evolve.

Table 2: Indicative construction and operation timeframe

Stage	Indicative construction and operation timeframe																													
	2018				2019				2020				2021				2022				2023				2024				2025			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Stage 1: Mainline tunnels																					★											
Stage 2: Rozelle interchange (including Iron Cove Link)																									WHT connection excavation ★						
Stage 3: Rozelle pedestrian and cycleway improvements																																
Stage 4: Rozelle Parklands Enhancement																																

★ Expected date for open to traffic

2.1.8 Cumulative impacts

Cumulative impacts may occur as a result of the project being constructed concurrently, or consecutively, with other approved CSSI or SSI projects in the area, the Western Harbour Tunnel at Rozelle and Sydney Metro – CBD to the Bays. Cumulative impacts during construction of the project will be managed through compliance with the relevant CoAs and environmental management measures related to key environmental impacts including traffic and access, noise and vibration and construction fatigue.

Key CoAs established to manage cumulative impacts during construction of the project include but are not limited to:

- E67 (cumulative noise impacts of approved CSSI and SSI projects to be considered in all noise and vibration assessments)
- E72 to E78 (coordination and respite of out-of-hours works, utility works and highly noise intensive works)
- E81 to E82 and E87 to E90 (construction fatigue, amenity and noise insulation program)
- E49, E52, E54 (managing traffic and parking impacts during construction).

Further details of how compliance with these requirements will be achieved, monitored and reported during construction are provided in Section 3.2.

3 Addressing Conditions of Approval

3.1 Applicability of Conditions of Approval

An assessment has been made to identify which CoAs apply to each stage and is provided in Appendix A. Where a CoA is deemed to be relevant to a stage, it is defined as Applicable to that stage. Where a CoA does not relate to the stage, it is defined as Not Applicable. Where only part of a CoA or REMM relates to the stage, it is defined as Partially applicable. This indicates that the CoA or REMM will be at least partially complied with during the stage.

In the event where there is a refinement in design or construction methodology, the change will be considered in the context of consistency with the Minster's approval for the Project. The applicability to the CoA and REMMs to that stage shall also be reviewed as part of the consistency assessment process.

The CoAs require a number of deliverables to be produced at various times throughout construction and operation of the project. As required by the CoAs, these reports and notifications will be submitted to the Secretary as follows:

- Prior to the commencement of works or construction of each stage
- During construction of each stage
- Prior to the commencement of operation of each stage
- During operation of each stage.

An assessment has also been made to identify which Revised Environmental Management Measures (REMMs) apply to Stage 3 as provided in Appendix B.

3.2 Environmental management approach

The project contractors are required to adhere to and implement the requirements of the CoA and REMMs to a degree that is appropriate to the applicable stage of construction / operation. Consideration of the applicability of the CoA and REMMs to each stage allows for effective and efficient management of environmental issues that is commensurate to the impacts of each project stage on each environmental management category. This assessment was based on each project stage's scope of work, relevant CoA and REMMs requirements.

Appendix D indicates the applicability of the requirements relating to each environmental management category to Stage 3 of the project. This Stage 3 Impact Register includes for each environmental management category:

- Whether the category risks will be addressed in the main EMP document;
- Whether a procedure will be prepared to support the EMP; or,
- Whether the risk is not relevant to the scope of work and is not addressed within the EMP (Not Applicable).

Additional plans and programs identified in the CoA have also been included.

Appendix D also outlines the risk assessment tool (i.e. EMP for low impact works), which would be used to manage environmental requirements during Stage 3 of the project.

Appendix E indicates the applicability of the requirements relating to each environmental management category to Stage 4 of the project.

3.2.1 Low Impact Works

In accordance with the definition of 'Construction' provided in the CSSI planning approval, there is provision for some activities, such as Stage 3, to be considered low impact works.

These 'Low Impact (Minor) Works' will not be defined as 'Construction' in accordance with the definition of 'Construction' provided in the CSSI planning approval.

Low Impact (Minor) Works will only occur after the following activities have been undertaken:

- consideration of relevant regulatory requirements;
- identification of relevant CoA and REMMs; and,
- preparation of a Low Impact (Minor) Works Approval Form by the relevant contractor and approval by Transport for NSW to confirm that the works do not represent 'Construction' in accordance with the applicable planning approval. This application must include (as a minimum):
    - a detailed description of the proposed works,
    - an environmental risk assessment (including identification of actual and potential environmental impacts), identification of mitigation measures to be implemented to address any actual or potential environmental risks and/or impacts (including details on community consultation relevant to the works),
    - an Environmental Control Map, and
    - endorsement by the Environmental Representative as necessary in accordance with the nature of the Low Impact (Minor) Works and/or the definition of 'Construction' in the CSSI planning approval.

3.3 Consistency across stages

Appendix C outlines the key CoAs that will be implemented across the construction stages, to ensure consistency in managing and reporting on the progress of the project, ensure impacts are managed consistently and the community communications for the project are undertaken consistently across both stages.

A Community Complaints Mediator (required under CoA B13) has been engaged by TfNSW to mediate the community complaints for all stages of M4-M5 Link construction, to ensure consistency when resolving community complaints or disputes.

In addition, a single Environmental Representative (ER) (required under CoA A17) and an Acoustics Advisor (required under CoA A24) have been engaged across the M4-M5 Link construction, to ensure consistency in management, reporting and interfacing between the project and DPE.

3.4 Compliance tracking

The Compliance Tracking Program required under Condition A27 is intended to monitor compliance with the terms of the Instrument of Approval, taking into consideration the proposed staging of the project.

In accordance with CoA A27, a Compliance Tracking Program has been prepared for each stage to assess how the conditions relevant to that stage will be applied and the status of compliance. The Compliance Tracking Program for the Mainline tunnels (Stage 1) has been endorsed by the ER and submitted to the Secretary of DPE for information. A separate Compliance Tracking Program for the Rozelle interchange (Stage 2) has been endorsed by the ER and submitted to the Secretary of DPE for information on 13 March 2019 at least one (1) month prior to the commencement of works. In accordance with CoA A29, the relevant Compliance Tracking Program will be implemented during operation of Stage 1 and for at least one year following the commencement of operation of Stage 2.

Given the small scope and duration of works for Stage 3, Compliance Tracking and Auditing will be combined into the deliverable of a Pre-Operation Compliance Report in accordance with CoA A34. Regular compliance activities, such as inspections, observations and monitoring, will be undertaken in accordance with the EMP.

Given the small scope and duration of works for Stage 4, Compliance Tracking will be undertaken as part of the deliverable of a Pre-Operation Compliance Report in accordance with CoA A34. Regular compliance activities, such as inspections, observations and monitoring, will be undertaken in accordance with the CEMP. Auditing will be undertaken to assess the effectiveness of controls in accordance with the schedule contained within the CEMP, which will include internal and ER audits.

Appendix A Conditions of Approval applicability for each stage

CoA	Description	Mainline tunnels (Stage 1)	Rozelle interchange (Stage 2)	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)	Rozelle Parklands Enhancement (Stage 4)

A1	The CSSI must be carried out in accordance with the terms of this approval and generally in accordance with the description of the CSSI in the *WestConnex M4-M5 Link Environmental Impact Statement – Volumes 1A-C and 2A-J* (dated August 2017) (the EIS) as amended by: a) the *WestConnex M4-M5 Link Submissions and Preferred Infrastructure Report* (dated January 2018) (the SPIR); b) *the WestConnex M4-M5 Link Mainline Tunnel Modification Report* (dated September 2018) (Modification 1 Report) as amended by the *WestConnex M4-M5 Link Mainline Tunnel Modification Response to Submissions* (dated November 2018) (Modification 1 RtS); and c) the *WestConnex M4-M5 Link Rozelle Interchange Iron Cove Ventilation Underground Modification Report* (dated November 2019) as amended by the *WestConnex M4-M5 Link Rozelle Interchange Iron Cove Ventilation Underground Modification Response to Submissions Report* (dated March 2020); and d) the *WestConnex M4-M5 Link Rozelle Interchange Glebe Island Construction Ancillary Facility Modification Report* (dated June 2020). e) the *WestConnex M4-M5 Link Rozelle Interchange The Crescent overpass and active transport links Modification report* (dated August 2019) (Modification 2 Report) as amended by the (i) *WestConnex M4-M5 Link Rozelle Interchange Modification The Crescent overpass and active transport links Design amendment report* (dated April 2020) (Modification 2 Amendment Report), (ii) *WestConnex M4-M5 Link Rozelle Interchange Modification The Crescent overpass and active transport links Response to Submissions Report* (dated April 2020) (Modification 2 RtS), and (iii) *WestConnex M4-M5 Link Rozelle Interchange Modification The Crescent overpass and active transport links Response to Submissions on the Design amendment report* (dated June 2020) (Modification 2 Amendment RtS); f) the *WestConnex M4-M5 Link Rozelle Interchange Modification Request Letter* (dated October 2020); and g) The WestConnex M4-M5 Link Mainline Tunnels – Modification 7: Northcote Street Cul-de-sac Northcote Street Modification Report (dated April 2022) as amended by the WestConnex M4-M5 Link Mainline Tunnels Modification 7 – Northcote Street Cul-de-sac Response to Submissions Report (dated August 2022).	Applicable	Applicable	Applicable	Applicable
A2	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the documents listed in Condition A1 unless otherwise specified in, or required under, this approval.	Applicable	Applicable	Applicable	Applicable

A3	In the event of an inconsistency between the documents listed in Condition A1 or any other document required under this approval, and a term of this approval, the term of this approval prevails to the extent of the inconsistency. *Note: For the purpose of this condition, there will be an inconsistency between a term of this approval and any document if it is not possible to comply with both the term and the document.*	Applicable	Applicable	Applicable	Applicable
A4	The Proponent must comply with all requirements of the Secretary in relation to: a) the environmental performance of the CSSI; b) any document or correspondence under the terms of this approval in relation to the CSSI; c) any notification given to the Secretary under the terms of this approval; d) any audit of the construction or operation of the CSSI; e) compliance with the terms of this approval (including anything required to be done under this approval); f) the carrying out of any additional monitoring or mitigation measures; and g) in respect of ongoing monitoring and management obligations, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under this approval.	Applicable	Applicable	Applicable	Applicable
A5	In the event that there are differing interpretations of the terms of this approval, including in relation to a condition of this approval, the Secretary's interpretation is final.	Applicable	Applicable	Applicable	Applicable
A6	Where the terms of this approval require a document or monitoring program to be prepared or a review to be undertaken in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Secretary with the document. The evidence must include: a) documentation of the engagement with the party(s) identified in the condition of approval that has occurred prior to submitting the document for approval; b) log of the points of engagement or attempted engagement with the identified party(s) and a summary of the issues raised by them;	Applicable	Applicable	Applicable	Applicable

	c) documentation of the follow-up with the identified party(s) where feedback has not been provided to confirm that they have none or have failed to provide feedback after repeated requests; d) outline of the issues raised by the identified party(s) and how they have been addressed; and e) a description of the outstanding issues raised by the identified party(s) and the reasons why they have not been addressed.				
A7	Where the terms of approval provide for Secretarial discretion (for example in relation to the timing of an action), the Proponent must provide supporting evidence so that the Secretary can consider the need, environmental impacts and consistency of any request. *Note: Inaction and/or expedience will not be supported as justifications for need unless it can be demonstrated that there is beneficial environmental impacts associated with the request.*	Applicable	Applicable	Applicable	Applicable
A8	Where a condition of this approval requires the Proponent to submit a document or notification to the Secretary or obtain an approval from the Secretary within a specified time period, the Proponent may make a written request to the Secretary seeking an alternative timeframe. Any request must be made at least one (1) month prior to the submission timeframe stipulated in the condition of approval relating to the variation request.	Applicable	Applicable	Applicable	Applicable
A9	Without limitation, all strategies, plans, programs, reviews, audits, report recommendations, protocols and the like required by the terms of this approval must be implemented by the Proponent in accordance with all requirements issued by the Secretary from time to time in respect of them.	Applicable	Applicable	Applicable	Applicable
A10	This approval lapses five (5) years after the date on which it is granted, unless works for the purpose of the CSSI are physically commenced on or before that date.	Applicable	Applicable	Applicable	Applicable
A11	The Proponent is responsible for any breaches of the conditions of this approval resulting from the actions of all persons that it invites onto any site, including contractors, sub-contractors and visitors.	Applicable	Applicable	Applicable	Applicable
A12	The CSSI may be constructed and operated in stages. Where staged construction or operation is proposed, a Staging Report (for either or both construction and operation as the case requires) must be prepared, then endorsed by the ER and then submitted to the Secretary for information. The Staging Report must be submitted to the Secretary no later than one (1) month prior to the commencement of construction of the first of the proposed stages of construction (or if only staged	Applicable		Applicable	Applicable

	operation is proposed, one (1) month prior to the commencement of operation of the first of the proposed stages of operation).				
A13	The Staging Report must: a) if staged construction is proposed, set out how the construction of the whole of the CSSI will be staged, including details of work and other activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish; b) if staged operation is proposed, set out how the operation of the whole of the CSSI will be staged, including general details of work and other activities to be carried out in each stage and the general timing of when operation of each stage will commence and finish (if relevant); c) specify the relevant conditions of approval that apply to each stage and how compliance with those conditions will be achieved across and between each of the stages of the CSSI; and d) set out mechanisms for managing any cumulative impacts arising from the proposed staging.	Applicable		Applicable	Applicable
A14	The CSSI must be staged in accordance with the Staging Report, as submitted to the Secretary.	Applicable	Applicable	Applicable	Applicable
A15	Where staging is proposed, the terms of this approval that apply or are relevant to the works or activities to be carried out in a specific stage must be complied with at the relevant time for that stage.	Applicable	Applicable	Applicable	Applicable
A16	Where changes are proposed to the staging of construction or operation, a revised Staging Report must be prepared and submitted to the Secretary for information no later than one (1) month prior to the proposed change in the staging.	Applicable	Applicable	Applicable	Applicable
A17	Works must not commence until an Environmental Representative (ER) has been approved by the Secretary and engaged by the Proponent.	Applicable	Applicable	Applicable	Applicable
A18	The Secretary's approval of an ER must be sought no later than one (1) month prior to the commencement of works.	Applicable	Applicable	Applicable	Applicable

A19	The proposed ER must be a suitably qualified and experienced person who was not involved in the preparation of the EIS or SPIR, and is independent from the design and construction personnel for the CSSI.	Applicable	Applicable	Applicable	Applicable
A20	The Proponent may engage more than one ER for the CSSI, in which case the functions to be exercised by an ER under the terms of this approval may be carried out by any ER that is approved by the Secretary for the purposes of the CSSI.	Applicable	Applicable	Applicable	Applicable
A21	For the duration of the works until the completion of construction, the approved ER must: a) receive and respond to communication from the Secretary in relation to the environmental performance of the CSSI; b) consider and inform the Secretary on matters specified in the terms of this approval; c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community; d) review documents identified in Conditions C1, C4 and C9 and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under this approval and if so: i) make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary), or ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary / Department for information or are not required to be submitted to the Secretary / Department); e) regularly monitor the implementation of the documents listed in Conditions C1, C4 and C9 to ensure implementation is being carried out in accordance with the document and the terms of this approval; f) as may be requested by the Secretary, help plan, attend or undertake audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36 of this approval;	Applicable	Applicable	Applicable	Applicable

	g) as may be requested by the Secretary, assist the Department in the resolution of community complaints; h) assess the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities as required by Condition C24 of this approval; i) consider any minor amendments to be made to the CEMP, CEMP Sub-plans, Site Establishment Management Plan(s) and monitoring programs that comprise updating or are of an administrative nature, and are consistent with the terms of this approval and the CEMP, CEMP Sub-plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval; and j) prepare and submit to the Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading "Environmental Representative Monthly Reports." The Environmental Representative Monthly Report must be submitted within seven (7) calendar days following the end of each month for the duration of the ER's engagement for the CSSI, or as otherwise agreed with the Secretary.				
A22	The Proponent must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition A21 (including preparation of the Environmental Representative Monthly Report), as well as: a) the complaints register (to be provided on a daily basis); and b) a copy of any assessment carried out by the Proponent of whether proposed work is consistent with the approval (which must be provided to the ER before the commencement of the subject work).	Applicable	Applicable	Applicable	Applicable
A23	The Secretary may at any time commission an audit of an ER's exercise of its functions under Condition A21. The Proponent must: a) facilitate and assist the Secretary in any such audit; and b) make it a term of their engagement of an ER, that the ER facilitate and assist the Secretary in any such audit.	Applicable	Applicable	Applicable	Applicable

A24	A suitably qualified and experienced Acoustics Advisor (AA), who is independent of the design and construction personnel, must be nominated by the Proponent and engaged for the duration of works and for no less than six (6) months following completion of construction of the CSSI. The details of the nominated AA must be submitted to the Secretary for approval no later than one (1) month before commencement of works. The Proponent must cooperate with the AA by: a) providing access to noise and vibration monitoring activities as they take place; b) providing for review of noise and vibration plans, assessments, monitoring reports, data and analyses undertaken; and c) considering any recommendations to improve practices and demonstrating, to the satisfaction of the AA, why any recommendation is not adopted.	Applicable	Applicable	Applicable	Applicable
A25	Any activities generating noise in excess of the 'Noise affected' Noise Management Levels derived from the Interim Construction Noise Guideline must not commence until an AA, nominated under Condition A24 of this approval, has been approved by the Secretary.	Applicable	Applicable	Applicable	Applicable
A26	The approved AA must: a) receive and respond to communication from the Secretary in relation to the performance of the CSSI in relation to noise and vibration; b) consider and inform the Secretary on matters specified in the terms of this approval relating to noise and vibration; c) consider and recommend, to the Proponent, improvements that may be made to avoid or minimise adverse noise and vibration impacts; d) review all noise and vibration documents required to be prepared under the terms of this approval and, should they be consistent with the terms of this approval, endorse them before submission to the Secretary (if required to be submitted to the Secretary) or before implementation (if not required to be submitted to the Secretary); e) regularly monitor the implementation of all noise and vibration documents required to be prepared under the terms of this approval to ensure implementation is in accordance with what is stated in the document and the terms of this approval;	Applicable	Applicable		Applicable

	f) notify the Secretary of noise and vibration incidents in accordance with Condition A40 of this approval; g) in conjunction with the ER, the AA must: i) as may be requested by the Secretary or Community Complaints Mediator (required by Condition B13), help plan, attend or undertake audits of noise and vibration management of the CSSI including briefings, and site visits, ii) in the event that conflict arises between the Proponent and the community in relation to the noise and vibration performance of the CSSI, follow the procedure in the Communication Strategy approved under Condition B2 to attempt to resolve the conflict, and if it cannot be resolved, notify the Secretary, iii) consider relevant minor amendments made to the CEMP, relevant sub-plans and noise and vibration monitoring programs that require updating or are of an administrative nature, and are consistent with the terms of this approval and the management plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, endorse the amendment. This does not include any modifications to the terms of this approval, iv) review the noise impacts of minor construction ancillary facilities, and v) prepare and submit to the Secretary and other relevant regulatory agencies, for information, a Monthly Noise and Vibration Report detailing the AAs actions and decisions on matters for which the AA was responsible in the preceding month. The Monthly Noise and Vibration Report must be submitted within seven (7) days following the end of each month for the duration of the AA's engagement for the CSSI, or as otherwise agreed by the Secretary.				
A27	A Compliance Tracking Program to monitor compliance with the terms of this approval must be prepared, taking into consideration any staging of the CSSI that is proposed in a Staging Report submitted in accordance with Conditions A12 and A13 of this approval.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A28	The Compliance Tracking Program must be endorsed by the ER and then submitted to the Secretary for information at least one (1) month prior to the commencement of works.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4

A29	The Compliance Tracking Program in the form required under Condition A28 of this approval must be implemented for the duration of works and for a minimum of one (1) year following commencement of operation, or for a longer period as determined by the Secretary based on the outcomes of independent environmental audits, Environmental Representative Monthly Reports and regular compliance reviews submitted through Compliance Reports. If staged operation is proposed, or operation is commenced of part of the CSSI, the Compliance Tracking Program must be implemented for the relevant period for each stage or part of the CSSI.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A30	A Pre-Construction Compliance Report must be prepared and submitted to the Secretary for information no later than one (1) month prior to the commencement of construction (or each stage of construction identified in the Staging Report).	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A31	The Pre-Construction Compliance Report must include: a) details of how the terms of this approval that must be addressed before the commencement of construction have been complied with; and b) the proposed commencement date for construction.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A32	Construction must not commence until the Pre-Construction Compliance Report has been submitted to the Secretary.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A33	Construction Compliance Reports must be prepared and submitted to the Secretary for information every six (6) months from the date of the commencement of construction for the duration of construction. The Construction Compliance Reports must include: a) a results summary and analysis of environmental monitoring; b) the number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints; c) details of any review of, and minor amendments made to, the CEMP as a result of construction carried out during the reporting period; d) a register of any consistency assessments undertaken and their status;	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4

	e) results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit; f) a summary of all incidents notified in accordance with Conditions A40 and A42 of this approval; and g) any other matter relating to compliance with the terms of this approval or as requested by the Secretary.				
A34	A Pre-Operation Compliance Report must be prepared and submitted to the Secretary for information no later than one (1) month prior to the commencement of operation. The Pre- Operation Compliance Report must include: a) details of how the terms of this approval that must be addressed before the commencement of operation have been complied with; and b) the commencement date for operation.	Applicable	Applicable	Not Applicable, See section 3.4	Applicable, See section 3.4
A35	Operation must not commence until the Pre-Operation Compliance Report has been submitted for information to the Secretary.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A36	An Environmental Audit Program for annual independent environmental auditing against the terms of this approval must be prepared in accordance with AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems and submitted to the Secretary for information no later than one (1) month prior to the commencement of construction.	Applicable	Applicable	Not Applicable for Audit Program See section 3.4 re Audits	Not Applicable for Audit Program See section 3.4 re Audits
A37	The Environmental Audit Program, as submitted to the Secretary, must be implemented and complied with for the duration of construction and operation.	Applicable	Applicable	Not Applicable, See section 3.4	Not Applicable, See section 3.4
A38	All independent environmental audits of the CSSI must be conducted by a suitably qualified, experienced and independent team of experts in auditing and be documented in an Environmental Audit Report which:	Applicable	Applicable	Not Applicable,	Not Applicable, See section 3.4

	a) assesses the environmental performance of the CSSI, and its effects on the surrounding environment; b) assesses whether the project is complying with the terms of this approval; and c) recommends measures or actions to improve the environmental performance of the CSSI.			see section 3.4	
A39	The Proponent must submit a copy of the Environmental Audit Report to the Secretary for information, with a response to any recommendations contained in the audit report within six (6) weeks of completing the audit.	Applicable	Applicable	Not Applicable, see section 3.4	Not Applicable, See section 3.4
A40	The Secretary must be notified as soon as possible and in any event within 24 hours of any incident.	Applicable	Applicable	Applicable	Applicable
A41	Notification of an incident under Condition A40 of this approval must include the time and date of the incident, details of the incident and must identify any consequent non-compliance with this approval.	Applicable	Applicable	Applicable	Applicable
A42	All written requirements of the Secretary or relevant public authority, which may be given at any point in time, to address the cause or impact of an incident must be complied with, within any timeframe specified by the Secretary or relevant public authority.	Applicable	Applicable	Applicable	Applicable
A43	If statutory notification is given to the EPA as required under the POEO Act in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.	Applicable	Applicable	Applicable	Applicable
A44	All construction spoil haulage vehicles must be clearly marked as being for WestConnex M4-M5 Link (including CSSI application number) in such a manner to enable immediate identification within at least 50 metres of the vehicles.	Applicable	Applicable	Not Applicable – spoil is generated during excavation of the tunnel and large bulk earthworks. This stage does not include tunnel excavation or	Not Applicable This stage does not include tunnel excavation or large bulk earthworks

				large bulk earthworks.	
A45	Signage on hoardings surrounding construction ancillary facilities must include the CSSI name and application number.	Applicable	Applicable	Not Applicable (There are no construction ancillary facilities for this Stage)	Applicable
B1	A Communication Strategy must be prepared to facilitate communication between the Proponent, and the community (including relevant councils, government authorities, adjoining affected landowners and businesses, and others directly impacted by the CSSI).	Applicable	Applicable	Applicable	Applicable
B2	The Communication Strategy must: a) identify people and organisations to be consulted during the design and work phases; b) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the CSSI; c) identify opportunities to provide accessible information regarding regularly updated site construction activities, schedules and milestones at each construction site including use of construction hoardings to provide information regarding construction specific to the location; d) identify opportunities for the community to visit construction sites (taking into consideration on-site activities and workplace, health and safety requirements); e) detail the measures for advising the community in advance of upcoming utility works; f) provide for the formation of issue or location-based community forums that focus on key environmental management issues of concern to the relevant community(s) for the CSSI; g) set out procedures and mechanisms for consulting with relevant council(s) and government authorities/agencies, as required under the terms of this approval, including procedures for repeated requests and nil responses; h) detail the roles and responsibilities of the Public Liaison Officer(s) engaged under Condition B6;	Applicable	Applicable	Applicable	Applicable

	i) set out procedures and mechanisms: i) through which the community can discuss or provide feedback to the Proponent, ii) through which the Proponent will respond to enquiries or feedback from the community, and iii) to resolve any issues and mediate any disputes that may arise in relation to environmental management and delivery of the CSSI.				
B3	The Communication Strategy must be submitted to the Secretary for approval no later than one (1) month prior to the commencement of any work.	Applicable	Applicable	Applicable	Applicable
B4	Work for the purposes of the CSSI must not commence until the Communication Strategy has been approved by the Secretary.	Applicable	Applicable	Applicable	Applicable
B5	The Communication Strategy, as approved by the Secretary, must be implemented for the duration of the works and for 12 months following the completion of construction.	Applicable	Applicable	Applicable	Applicable
B6	A Public Liaison Officer(s) must be appointed for construction ancillary facility(s) and for utility works to assist the public with questions and complaints they may have at any time during construction. The Public Liaison Officer(s) must be available at all times that works are occurring.	Applicable	Applicable	Applicable	Applicable
B7	Prior to the commencement of works, the Proponent must maintain and operate a toll-free WestConnex Acquisition Assistance Line for a period of up to six (6) months following completion of the final acquisition required for the CSSI, unless otherwise agreed by the Secretary. The WestConnex Acquisition Assistance Line must provide an ongoing dispute resolution, counselling program and contact information to relevant services for all relocated persons. The WestConnex Acquisition Assistance Line must also provide first language support for relocated persons with English as a second language. The management of the assistance line is to be outlined within the Communication Strategy as required by Condition B1 and is to be maintained and operated separately from the standard complaints and enquiries procedure. The Proponent must provide all relevant contact details for the WestConnex Acquisition Assistance Line to relocated persons prior to the commencement of works.	Applicable	Applicable	Applicable	Not applicable, no acquisition for Stage 4

	Nothing in this condition prevents the Proponent from utilising the existing toll-free WestConnex Acquisition Assistance Line established for the WestConnex M4 East and New M5 projects.				
B8	A Complaints Management System must be prepared prior to the commencement of any works in respect of the CSSI and be implemented and maintained for the duration of construction and for a minimum for 12 months following completion of construction of the CSSI.	Applicable	Applicable	Applicable	Applicable
B9	The Complaints Management System must include a Complaints Register to be maintained recording information on all complaints received about the CSSI during the carrying out of any works associated with the CSSI and for a minimum of 12 months following the completion of construction of the CSSI. The Complaints Register must record the: a) number of complaints received; b) number of people affected in relation to a complaint; and c) nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation.	Applicable	Applicable		Applicable
B10	The Complaints Register must be provided to the Secretary upon request, within the timeframe stated in the request.	Applicable	Applicable	Applicable	Applicable
B11	The following must be available within one (1) month prior to the commencement of works and for 12 months following the completion of construction of the CSSI and appropriately broadcast to manage community enquiries and complaints: a) a 24 hour toll-free telephone number for the registration of complaints and enquiries about the CSSI; b) a postal address to which written complaints and enquires may be sent; c) an email address to which electronic complaints and enquiries may be transmitted; d) a mediation system for complaints unable to be resolved; and e) a mechanism for community members to make enquiries in common community languages of the area.	Applicable	Applicable	Applicable	Applicable

B12	The telephone number, postal address and email address required under Condition B11 of this approval must be published in a newspaper circulating in the local area and on-site hoarding at each construction site before commencement of works and published in the same way again prior to the commencement of operation. This information must also be provided on the website required under Condition B17 of this approval.	Applicable	Applicable	Applicable	Applicable
B13	A Community Complaints Mediator that is independent of the design and construction personnel must be nominated by the Proponent, approved by the Secretary and engaged during all works associated with the CSSI. The request nominating the Community Complaints Mediator must be submitted to the Secretary for approval within one (1) month of the date of this approval.	Applicable	Applicable	Applicable	Applicable
B14	The role of the Community Complaints Mediator is to address any complaint where a member of the public is not satisfied by the Proponent's response. Any member of the public that has lodged a complaint which is registered in the Complaints Management System identified in Condition B8 may ask the Community Complaints Mediator to review the Proponent's response. The application must be submitted in writing and the Community Complaints Mediator must respond within 28 days of the request being made or other specified timeframe agreed between the Community Complaints Mediator and the member of the public.	Applicable	Applicable	Applicable	Applicable
B15	The Community Complaints Mediator will: a) review the Proponent's unresolved disputes between the project and members of the public if the procedures and mechanisms under Condition B2(i)(iii) do not satisfactorily address complaints; and b) make recommendations to the Proponent to satisfactorily address complaints, resolve disputes or mitigate against the occurrence of future complaints or disputes.	Applicable	Applicable	Applicable	Applicable
B16	The Community Complaints Mediator will not act before the Proponent has provided an initial response to a complaint and will not consider issues such as property acquisition where other dispute processes are provided for in this approval, or clear government policy and resolution processes are available, or matters which are not within the scope of the CSSI.	Applicable	Applicable	Applicable	Applicable
B17	A website providing information in relation to the CSSI must be established before commencement of works and maintained for the duration of works, and for a minimum of 24 months following the completion of construction of the CSSI. The following up-to-date information (excluding confidential,	Applicable	Applicable	Applicable	Applicable

	private and commercial information) must be published prior to works commencing and maintained on the website or dedicated pages: a) information on the current implementation status of the CSSI; b) a copy of the documents listed in Condition A1 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval; c) a copy of this approval in its original form, a current consolidated copy of this approval (that is, including any approved modifications to its terms), and copies of any approval granted by the Minister to a modification of the terms of this approval; and d) a copy of each licence or permit required and obtained in relation to the CSSI. Where a condition(s) of this approval requires a document(s) be prepared prior to a work or construction or operational activity being undertaken, a current copy of the relevant document(s) must also be published on the website before the work / activity is undertaken.				
C1	A Construction Environmental Management Plan (CEMP) must be prepared in accordance with the Department's Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004) to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 will be implemented and achieved during all stages of construction.	Applicable	Applicable	Not Applicable, refer Appendix D.	Applicable
C2	The CEMP must provide: a) a description of activities to be undertaken during construction (including the scheduling of construction and figures depicting the site layouts of the construction ancillary facilities); b) details of environmental policies, guidelines and principles to be followed in the construction of the CSSI; c) a schedule for compliance auditing; d) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of construction of the CSSI; e) details of how the activities described in subsection (a) of this condition will be carried out to:	Applicable	Applicable	Not Applicable, refer Appendix D.	Applicable

	i) meet the performance outcomes stated in the documents listed in Condition A1, and ii) manage the risks identified in the risk analysis undertaken in subsection (d) of this condition; f) an inspection program detailing the activities to be inspected and frequency of inspections; g) a protocol for managing and reporting any: i) incidents, and ii) non-compliances with this approval and with statutory requirements; h) procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction; i) a list of all the CEMP Sub-plans required in respect of construction, as set out in Condition C4. Where staged construction of the CSSI is proposed, the CEMP must also identify which CEMP Sub-plan applies to each of the proposed stages of construction; j) a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER; k) an outline of the training and induction for employees, including contractors and sub-contractors, in relation to environmental and compliance obligations under the terms of this approval; and l) the process for periodic review and update of the CEMP and all associated plans and programs.				
C3	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of construction, or where construction is staged no later than one (1) month prior to the commencement of that stage.	Applicable	Applicable	Not Applicable, refer Appendix D.	Applicable

<table>
<tr>
<td>C4</td>
<td>The following CEMP Sub-plans must be prepared in consultation with the relevant authorities identified for each CEMP Sub-plan and be consistent with the CEMP referred to in the EIS.

<table>
<tr><th></th><th>Required CEMP Sub-plan</th><th>Relevant authority(s) and council(s) to be consulted for each CEMP Sub-plan</th></tr>
<tr><td>(a)</td><td>Traffic and transport and access</td><td>Port Authority of NSW*, Sydney Coordination Office and relevant council(s)</td></tr>
<tr><td>(b)</td><td>Noise and vibration</td><td>EPA and relevant council(s)</td></tr>
<tr><td>(c)</td><td>Flora and fauna</td><td>OEH and relevant council(s)</td></tr>
<tr><td>(d)</td><td>Air quality</td><td>EPA and relevant council(s)</td></tr>
<tr><td>(e)</td><td>Soil and surface water</td><td>DPI Water; OEH; EPA; Sydney Water; and relevant council(s)</td></tr>
<tr><td>(f)</td><td>Groundwater</td><td>DPI Water</td></tr>
<tr><td>(g)</td><td>Non-Aboriginal heritage</td><td>Heritage Council of NSW; Heritage Division; and relevant council(s)</td></tr>
<tr><td>(h)</td><td>Aboriginal cultural heritage</td><td>OEH</td></tr>
<tr><td>(i)</td><td>Waste management</td><td>N/A</td></tr>
</table>

* Port Authority of NSW to be consulted when considering impacts on port land.</td>
<td>Applicable</td>
<td>Applicable</td>
<td>Not Applicable, refer Appendix D. The Soil Surface Water, Flora and Fauna, Non-Aboriginal Heritage, Aboriginal Heritage and Groundwater sub-plans will cease at the opening of Rozelle Interchange to traffic at which time the Rozelle Interchange Operational Environment Management Plan comes into effect.</td>
<td>Not Applicable, refer Appendix E</td>
</tr>
<tr>
<td>C5</td>
<td>The CEMP Sub-plans must state how:

a) the environmental performance outcomes identified in the documents listed in Condition A1as modified by these conditions will be achieved;

b) the mitigation measures identified in the documents listed in Condition A1as modified by these conditions will be implemented;

c) the relevant terms of this approval will be complied with; and</td>
<td>Applicable</td>
<td>Applicable</td>
<td>Not Applicable, refer Appendix D.</td>
<td>Not Applicable, refer Appendix E</td>
</tr>
</table>

<table>
<tr><td></td><td>d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>C6</td><td>The CEMP Sub-plans must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of the construction activities to which they apply.</td><td>Applicable</td><td>Applicable</td><td>Not Applicable, refer Appendix D.</td><td>Not Applicable, refer Appendix E</td></tr>
<tr><td>C7</td><td>Any of the CEMP Sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP.</td><td>Applicable</td><td>Applicable</td><td>Not Applicable, refer Appendix D.</td><td>Not Applicable, refer Appendix E</td></tr>
<tr><td>C8</td><td>Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP and CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and CEMP sub-plans have been endorsed by the ER and approved by the Secretary.</td><td>Applicable</td><td>Applicable</td><td>Not Applicable, refer Appendix D.</td><td>Partially Applicable (no sub plans)</td></tr>
<tr><td>C9</td><td>The following Construction Monitoring Programs must be prepared in consultation with the relevant authorities identified for each Construction Monitoring Program to compare actual performance of construction of the CSSI against predicted performance.
<table>
<tr><th></th><th>Required Construction Monitoring Programs</th><th>Relevant authority(s) and council(s) to be consulted for Construction Monitoring Program</th></tr>
<tr><td>(a)</td><td>Surface Water Quality Monitoring Program</td><td>DPI Water, Sydney Water and relevant council(s)</td></tr>
<tr><td>(b)</td><td>Groundwater Monitoring Program</td><td>DPI Water, Sydney Water and relevant council(s)</td></tr>
<tr><td>(c)</td><td>Noise and Vibration Monitoring Program</td><td>Relevant council(s), NSW Health</td></tr>
<tr><td>(d)</td><td>Blast Monitoring Program</td><td>EPA</td></tr>
</table></td><td>Applicable</td><td>Applicable The construction Surface Water Quality and Groundwater Monitoring Program will cease at the opening of Rozelle Interchange to traffic at</td><td>Not Applicable, refer Appendix D.</td><td>Not Applicable, refer Appendix E</td></tr>
</table>

	(e) Dust Deposition Monitoring Program — EPA			which time the Rozelle Interchange Operational Water Management Plan comes into effect.		
C10	Each Construction Monitoring Program must provide: a) details of baseline data available; b) details of baseline data to be obtained and when; c) details of all monitoring of the project to be undertaken; d) the parameters of the project to be monitored; e) the frequency of monitoring to be undertaken; f) the location of monitoring; g) the reporting of monitoring and analysis results against relevant criteria; h) details of the methods that will be used to analyse the monitoring data; i) procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory; and j) any consultation to be undertaken in relation to the monitoring programs.	Applicable	Applicable	Partially Applicable, refer Appendix D.	Not Applicable, refer Appendix E
C11	The **Noise and Vibration Monitoring Program** must include: a) noise monitoring at agreed representative sensitive receiver locations adjacent to the Parramatta Road East and West construction ancillary facilities in Bland and Alt Streets to confirm that construction noise levels do not exceed the 'Noise affected' Noise Management Levels as identified in the ICNG;	Applicable	Applicable (Partial - the Noise and Vibration Monitoring Program for Rozelle interchange	Partially Applicable, refer Appendix D. Part (a), (b) and (c) are Not Applicable.	Partially Applicable, refer Appendix E. Part (a), (b) and (c) are Not Applicable

	b) noise monitoring associated with **Condition E88** and Appendix E at agreed representative sensitive residential receiver locations alongside those properties bordering the Northcote Street construction ancillary facility that have been identified as eligible for construction noise treatment in Appendix E and in Paige Avenue and/or Earle Avenue located immediately outside, and to the east and west of the nominated boundary in Appendix E; c) for the purposes of (a) and (b), noise monitoring during the day, evening and night-time periods must be undertaken within the first month of operation of the construction ancillary facilities and must cover the range of activities (excluding activities associated with site establishment) being undertaken at the sites; and d) provision of real time noise and vibration monitoring data. The data must be readily available to the construction team, Proponent, **ER** and **AA**. The Department and EPA must be provided with access to the real-time monitoring data, on request.		will not address Part (a), (b) or (c))		
C12	The Groundwater Monitoring Program must include: a) daily measurement of the amount of water discharged from the water treatment plants; b) water quality testing of the water discharged from the water treatment plants; c) monitoring of groundwater pore pressures in the Hawkesbury Sandstone aquifers adjacent to the tunnel alignment, in consultation with DPI Water; d) monitoring of groundwater electrical conductivity in key locations between saline water bodies and the tunnel as identified by the project groundwater model including: i) in the Haberfield / Lilyfield area to the south of Iron Cove, ii) in the Rozelle area to the north of Rozelle Bay, iii) in the Annandale area to the west of Rozelle Bay, iv) in the Rozelle area to the south east of Iron Cove, and v) in the St Peters area to the north west of Alexandra Canal, with a minimum of two (2) groundwater monitoring wells to be provided in each key location in consultation with DPI Water;	Applicable (Partial - the Groundwater Monitoring Program for Mainline tunnels will not address Part (d)(ii), (iii) or (iv) and Part (h))	Applicable (Partial - the Groundwater Monitoring Program for Rozelle interchange will not address Part (d)(i) or (v)) and will cease at the opening of Rozelle Interchange to traffic at which time the Rozelle Interchange Operational	Not Applicable	Not Applicable

	e) measures to record or otherwise estimate and report groundwater inflows into the tunnels during their construction; f) a method for providing the data collected in (a) and (b) to Sydney Water every three (3) months to demonstrate the project's compliance with the discharge criteria and, if applicable, the Proponent's trade waste licence; g) a method for providing the groundwater monitoring data to DPI Water every three (3) months during construction; and h) the installation of a minimum of two (2) groundwater open hole monitoring wells in the north Rozelle / Lilyfield area to the west of the ventilation tunnel at Iron Cove to monitor groundwater quality and groundwater levels, in consultation with DPI Water.		Water Management Plan comes into effect.		
C13	The Construction Monitoring Programs must be developed in consultation with the relevant authorities as identified in Condition C9.	Applicable	Applicable	Not Applicable	Not Applicable
C14	The Construction Monitoring Programs must be endorsed by the ER and then submitted to the Secretary for approval at least one (1) month prior to commencement of construction.	Applicable	Applicable	Not Applicable	Not Applicable
C15	Construction must not commence until the Secretary has approved all of the required Construction Monitoring Programs relevant to that activity and all the necessary baseline data for the required monitoring programs has been collected, to which the CEMP relates.	Applicable	Applicable	Not Applicable	Not Applicable
C16	The Construction Monitoring Programs, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Secretary, whichever is the greater.	Applicable	Applicable	Not Applicable	Not Applicable
C17	The results of the Construction Monitoring Programs must be submitted to the Secretary, and relevant regulatory authorities, for information in the form of a Construction Monitoring Report at the frequency identified in the relevant Construction Monitoring Program.	Applicable	Applicable	Not Applicable	Not Applicable
C18	Where a relevant CEMP Sub-plan exists, the relevant Construction Monitoring Program may be incorporated into that CEMP Sub-plan.	Applicable	Applicable	Not Applicable, refer Appendix D.	Not Applicable, refer Appendix E

C19	The Parramatta Road East and Parramatta Road West civil sites are to be used for parking and other works that do not exceed the 'Noise affected' Noise Management Levels as identified in the ICNG.	Applicable	Not Applicable	Not Applicable	Not Applicable
C20	The Parramatta Road East and Parramatta Road West civil sites must not be used for spoil truck marshalling.	Applicable	Not Applicable	Not Applicable	Not Applicable
C21	Deleted.				
C21A	Ancillary facilities that are not identified by description and location in Condition A1 can only be established and used in each case if: a) they are located within or immediately adjacent to the construction boundary; and b) they are not located next to sensitive receiver(s) (including where an access road is between the facility and the receiver), unless the sensitive receiver(s) (both the landowner(s) and occupier(s)) have given written acceptance to the carrying out of the relevant facility in the proposed location; and c) they have no impacts on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and d) the establishment and use of the facility can be carried out and managed within the outcomes set out in the terms of this approval, including in relation to environmental, social and economic impacts.	Applicable	Applicable	Applicable	Applicable, CEMP to be prepared
C22	Before establishment of any construction ancillary facility as identified in the documents listed in Condition A1 (and excluding minor construction ancillary facilities established under Condition C24), the Proponent must prepare a Site Establishment Management Plan which outlines the environmental management practices and procedures to be implemented for the establishment of the construction ancillary facilities. The Site Establishment Management Plan must be prepared in consultation with the relevant council(s) and government authorities. The Plan must be submitted to the Secretary for approval one (1) month prior to establishment of any construction ancillary facilities. The Site Establishment Management Plan must detail the management of the construction ancillary facilities and include: e) a description of activities to be undertaken during establishment of the construction ancillary facility (including scheduling and duration of works to be undertaken at the site); f) figures illustrating the proposed operational site layout(s);	Applicable	Applicable	Not Applicable	Not Applicable

	g) a program for ongoing analysis of the key environmental risks arising from the site establishment activities described in subsection (a) of this condition, including an initial risk assessment undertaken prior to the commencement of site establishment works; h) details of how the site establishment activities described in subsection (a) of this condition will be carried out to: i) meet the performance outcomes stated in the documents listed in the EIS and SPIR, ii) to address the traffic and pedestrian impact assessment required by Condition E51, and iii) manage the risks identified in the risk analysis undertaken in subsection (c) of this condition; and i) a program for monitoring the performance outcomes, including a program for construction noise monitoring consistent with the requirements of Conditions C9 and C10. Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each construction ancillary facility.				
C23	The operation of a construction ancillary facility must not commence until the CEMP required by Condition C1, relevant CEMP Sub-plans required by Condition C4 and relevant Construction Monitoring Programs required by Condition C9 have been approved by the Secretary.	Applicable	Applicable	Not Applicable	Partially Applicable (no sub plans)
C24	Lunch sheds, office sheds, and portable toilet facilities, that are not identified as a construction ancillary facility in the documents listed in Condition A1 can be established, where they satisfy the following criteria: a) have no greater environmental and amenity impacts than those that can be managed through the implementation of environmental measures detailed in the Site Establishment Management Plan required under Condition C22 of this approval; and b) are located within the project boundary; and c) have been assessed by the ER to have - i) minimal amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise	Applicable	Applicable	Applicable	Applicable

	Guideline (DECC, 2009), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts, ii) minimal environmental impact with respect to waste management and flooding, and iii) no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.				
C25	Boundary fencing that incorporates screening must be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of site establishment and construction unless otherwise agreed with relevant council(s), and affected residents, business operators or landowners.	Applicable	Applicable	Not Applicable	Applicable
C26	Boundary fencing required under Condition C25 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.	Applicable	Applicable	Not Applicable	Applicable
D1	An Operational Environmental Management Plan (OEMP) must be prepared in accordance with the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004) to detail how the performance outcomes, commitments and mitigation measures made and identified in the documents listed in Condition A1will be implemented and achieved during operation. This condition (Condition D1) does not apply if Condition D2 of this approval applies.	Applicable	Applicable	Not Applicable	Not Applicable
D2	An OEMP is not required for the CSSI if the Proponent has an Environmental Management System (EMS) or equivalent as agreed with the Secretary, and can demonstrate, to the written satisfaction of the Secretary, that through the EMS: a) the performance outcomes, commitments and mitigation measures, detailed in the documents listed in Condition A1, and specified relevant terms of this approval, can be achieved; b) issues identified through ongoing risk analysis can be managed; and c) procedures are in place for rectifying any non-compliance with this approval identified during compliance auditing, incident management or any other time during operation.	Applicable	Applicable	Not Applicable	Not Applicable
D3	Where an OEMP is required, the Proponent must include the following OEMP Sub-plans in the OEMP:	Applicable	Applicable	Not Applicable	Not Applicable

	<table><tr><th></th><th>Required OEMP Sub-plan</th><th>Relevant authority(s) to be consulted for each OEMP Sub-plan</th></tr><tr><td>(a)</td><td>Groundwater management</td><td>DPI Water and Sydney Water</td></tr></table>				
D4	Each of the OEMP Sub-plans must include the information set out in Condition D2 (a), (b) and (c). The OEMP Sub-plans must be developed in consultation with relevant authorities as identified in Condition D3.	Applicable	Applicable	Not Applicable	Not Applicable
D5	The OEMP Sub-plans must be submitted to the Secretary as part of the OEMP.	Applicable	Applicable	Not Applicable	Not Applicable
D6	The OEMP or EMS or equivalent as agreed with the Secretary, must be submitted to the Secretary for information no later than one (1) month prior the commencement of operation.	Applicable	Applicable	Not Applicable	Not Applicable
D7	The OEMP or EMS or equivalent as agreed with the Secretary, as submitted to the Secretary and amended from time to time, must be implemented for the duration of operation and the OEMP or EMS must be made publicly available prior to the commencement of operation.	Applicable	Applicable	Not Applicable	Not Applicable
D8	The following Operational Monitoring Programs must be prepared in consultation with the relevant authorities identified for each Operational Monitoring Program to compare actual operational performance against predicted performance. <table><tr><th></th><th>Required Operational Monitoring Programs</th><th>Relevant authority(s) and council(s) to be consulted for each Operational Monitoring Program</th></tr><tr><td>(a)</td><td>Surface Water Quality Plan & Monitoring Program</td><td>EPA; DPI Water; OEH; Sydney Water; and relevant council(s)</td></tr><tr><td>(b)</td><td>Groundwater Monitoring Program</td><td>DPI Water, relevant council(s), EPA and Sydney Water</td></tr></table>	Applicable	Applicable	Not Applicable	Not Applicable
D9	Each operational monitoring program must include: a) details of baseline data; b) details of all monitoring of the project to be undertaken; c) the parameters of the project to be monitored;	Applicable	Applicable	Not Applicable	Not Applicable

	d) the frequency of monitoring to be undertaken; e) the location of monitoring; f) the reporting of monitoring and analysis results against relevant criteria; g) details of the methods that will be employed to analyse the monitoring data; h) procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory; and i) any consultation to be undertaken in relation to the monitoring programs.				
D10	The Operational Surface Water Quality Plan and Monitoring Program must address wetland and mosquito management.	Applicable	Applicable	Not Applicable	Not Applicable
D11	The Operational Groundwater Monitoring Program must include: a) daily measurement of the amount of water discharged from all water treatment plants; b) water quality testing results of the water discharged from all water treatment plants; c) monitoring of groundwater pore pressures in the Hawkesbury Sandstone aquifers adjacent to the tunnel alignment, in consultation with DPI Water; d) monitoring of groundwater electrical conductivity in key locations between saline water bodies and the tunnel as identified by the project groundwater model including: i) in the Haberfield / Lilyfield area to the south of Iron Cove, ii) in the Rozelle area to the north of Rozelle Bay, iii) in the Annandale area to the west of Rozelle Bay, iv) in the Rozelle area to the south east of Iron Cove, and v) in the St Peters area to the north west of Alexandra Canal, with a minimum of two (2) groundwater monitoring wells provided in each key location in consultation with DPI Water; e) measures to record or otherwise estimate and report groundwater inflows into the tunnels;	Applicable (Partial - the Operational Groundwater Monitoring Program for Mainline tunnels will not address Part (d)(ii), (iii) or (iv) and Part (h))	Applicable (Partial - the Operational Groundwater Monitoring Program for Rozelle interchange will not address Part (d)(i) or (v))	Not Applicable	Not Applicable

	f) a method for providing the data collected in (a) and (b) to Sydney Water every three (3) months to demonstrate the project's compliance with the discharge criteria and, if applicable, the Proponent's trade waste licence; g) a process for annually forwarding data on the monthly volume of groundwater discharged from each water treatment plant to DPI Water for a minimum period of five (5) years, consistent with Condition D12; and h) the installation of a minimum of two (2) groundwater open hole monitoring wells in the north Rozelle / Lilyfield area to the west of the ventilation tunnel at Iron Cove to monitor groundwater quality and groundwater levels, in consultation with DPI Water.				
D12	Groundwater monitoring must continue for a period of at least five (5) years following the completion of construction of the Rozelle Interchange (and commence once the mainline tunnels are operational). At least one (1) month prior to the end of the five (5) year monitoring period, the Proponent must undertake a review of future monitoring requirements in consultation with DPI Water. The review must determine if additional monitoring is required, and the time period for continued monitoring. The Proponent must notify the Secretary within two (2) weeks of the review as to the outcomes of the review and any requirements for future monitoring.	Applicable	Applicable	Not Applicable	Not Applicable
D13	The Operational Monitoring Programs must be developed in consultation with relevant authorities as identified in Condition D8 of this approval.	Applicable	Applicable	Not Applicable	Not Applicable
D14	The Operational Monitoring Programs must be submitted to the Secretary for approval at least one (1) month prior to the commencement of operation.	Applicable	Applicable	Not Applicable	Not Applicable
D15	Operation must not commence until the Secretary has approved all of the required Operational Monitoring Programs, and all relevant baseline data has been collected.	Applicable	Applicable	Not Applicable	Not Applicable
D16	The Operational Monitoring Programs, as approved by the Secretary, must be implemented for the duration identified in the relevant Operational Monitoring Program or specified by the Secretary, whichever is the greater.	Applicable	Applicable	Not Applicable	Not Applicable
D17	The results of the Operational Monitoring Programs must be submitted to the Secretary, and relevant regulatory authorities, for information in the form of an Operational Monitoring Report at the frequency identified in the relevant Operational Monitoring Program.	Applicable	Applicable	Not Applicable	Not Applicable

D18	Where a relevant OEMP Sub-plan exists, the relevant Operational Monitoring Program may be incorporated into that OEMP Sub-plan.	Applicable	Applicable	Not Applicable	Not Applicable
E1	In addition to the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1, all reasonably practicable measures must be implemented to minimise the emission of dust and other air pollutants during the construction and operation of the CSSI.	Applicable	Applicable	Applicable	Applicable
E2	Prior to finalising the detailed design of the CSSI and establishing the ambient air quality monitoring stations required under Condition E24, the Proponent must establish an Air Quality Community Consultative Committee (AQCCC) to provide advice prior to and during the operation of the CSSI. The AQCCC must: a) be comprised of - i) two representatives from the Proponent and tunnel operator, ii) one representative from each of the relevant councils, whose attendance is only required when considering matters relevant to their respective local government area, iii) three representatives from each local community adjacent to each ventilation facility whose attendance is only required when considering matters relevant to their respective local area, and whose appointment has been approved by an expression of interest process conducted by the Proponent in consultation with the Secretary, and iv) a Chair who is an independent from the design and construction of the CSSI put forward by the Proponent and approved by the Secretary; b) meet at least four (4) times a year, or as otherwise agreed by the Chair and the Secretary; c) review and provide advice on the location of the air quality monitoring stations required under Condition E24, operation environmental management plans and other operation stage documents, compliance tracking reporting, audit reports, or complaints as they relate to air quality; and d) provide advice on the dissemination of monitoring results and other information on air quality issues.	Applicable	Applicable	Not Applicable	Not Applicable

<table>
<tr><td></td><td>The AQCCC may comprise the same members of the AQCCC established under CSSI approvals for the WestConnex M4 East and New M5 projects (SSI 6307 and SSI 6788) in relation to the ventilation outlets located in Haberfield and St Peters.

The AQCCC must operate for up to two (2) years after commencement of operation, or as otherwise approved or directed by the Secretary, in consultation with the Chair.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>E2A</td><td>The concentration of a pollutant discharged from the ventilation outlets must not exceed the respective limits specified for that pollutant in Table 3A.

Table 3A: Ventilation Outlet Mass Pollutant Concentrations

<table><tr><th>Pollutant</th><th>100 percentile limit</th><th>Units of measurements</th><th>Averaging period</th><th>Reference conditions</th></tr><tr><td>Solid particles</td><td>1.1</td><td>mg/m^3</td><td>1 hour, or the minimum sampling period specified in the relevant test method, whichever is the greater</td><td>Dry, 273K, 101.3kPa</td></tr><tr><td>NO_2 or NO or both, as NO_2 equivalent</td><td>20</td><td>mg/m^3</td><td>1 hour block</td><td>Dry, 273K, 101.3kPa</td></tr><tr><td>NO_2</td><td>2.0</td><td>mg/m^3</td><td>1 hour block</td><td>Dry, 273K, 101.3kPa</td></tr><tr><td>CO</td><td>40</td><td>mg/m^3</td><td>1 hour rolling</td><td>Dry, 273K, 101.3kPa</td></tr><tr><td>VOC (as propane)</td><td>4.0</td><td>mg/m^3</td><td>1 hour rolling</td><td>Dry, 273K, 101.3kPa</td></tr></table></td><td>Applicable</td><td>Applicable</td><td>Not Applicable</td><td>Not Applicable</td></tr>
<tr><td>E3</td><td>The tunnel ventilation system must be designed and operated so that the average concentrations of CO and NO2, calculated along the length of the tunnel, do not exceed the concentration limit specified for that pollutant in Table 4.</td><td>Applicable</td><td>Applicable</td><td></td><td>Not Applicable</td></tr>
</table>

	Table 4: In-tunnel average limits along length of tunnel **Pollutant** | **Concentration Limit** | **Units of measurement** | **Averaging period** CO | 87 | ppm | Rolling 15-minute CO | 50 | ppm | Rolling 30-minute NO_2 | 0.5 | ppm | Rolling 15-minute				
E4	The concentration of CO as measured at any single point in the tunnel must not exceed the concentration limit specified for that pollutant in Table 5 under all traffic scenarios. **Table 5: In-tunnel single point exposure limits** **Pollutant** | **Concentration Limit** | **Units of measurement** | **Averaging period** CO | 200 | ppm | Rolling 3–minute	Applicable	Applicable	Not Applicable	Not Applicable
E5	The tunnel ventilation system must be designed and operated so that the visibility in the tunnel does not exceed the level specified in Table 6. **Table 6: In-tunnel visibility limits along length of tunnel** **Parameter** | **Average extinction co-efficient Limit** | **Units of measurement** | **Averaging period** Visibility | 0.005 | m^{-1} | Rolling 15–minute	Applicable	Applicable	Not Applicable	Not Applicable
E6	Should ambient monitoring of air pollutants exceed the following goals, the provisions of Conditions E32, E33 and E34 will apply: a) CO – 8 hour rolling average of 9.0 ppm (NEPM); b) NO2 – One hour average of 0.12 ppm (245 µg/m3) (NEPM); c) PM10 – 24 hour average of 50 µg/m3 (NEPM); d) PM2.5 – 24 hour average of 25 µg/m3 (NEPM);	Applicable	Applicable	Not Applicable	Not Applicable

	e) PM10 – annual average of 25 µg/m3 (NEPM); and f) PM2.5 – annual average of 8 µg/m3 (NEPM). *Note: The notification and reporting obligations under conditions E32, E33 and E34 relating to ambient monitoring will begin at the commencement of operation of the CSSI. The first annual average concentrations for PM10 and PM2.5 must be calculated on the first day the project has been in operation for 12 months and on a rolling basis thereafter.*				
E7	Conditions E2A, E3, E4, E5, and E6 do not apply in an emergency, as defined in the OEMP required by Condition D1.	Applicable	Applicable	Not Applicable	Not Applicable
E8	The Proponent must, as soon as reasonably practicable, notify the Secretary and the EPA of any discharge during an emergency.	Applicable	Applicable	Not Applicable	Not Applicable
E9	The tunnel ventilation systems must be designed, constructed and operated so as to only release emissions from ventilation outlets and not from the portals or the tunnel support facilities as identified in the documents listed in Condition A1, except for emergency smoke management purposes in the event of a fire in a tunnel or periodic testing of the system as defined in the OEMP required by Condition D1.	Applicable	Applicable	Not Applicable	Not Applicable
E10	All tunnels must be designed and constructed so as to allow for future modification of the ventilation system if required. The Proponent must submit a report to the Secretary demonstrating how this will be allowed for prior to finalising detailed design.	Applicable	Applicable	Not Applicable	Not Applicable
E11	The tunnel ventilation outlets must be constructed at the locations specified in Appendices A, B and C.	Applicable	Applicable	Not Applicable	Not Applicable
E12	The ventilation outlets must be constructed to tip heights within the following ranges:	Applicable	Applicable	Not Applicable	Not Applicable

	<table><tr><th>Location</th><th>Outlet Reference</th><th>Outlet Elevation (m AHD)</th></tr><tr><td rowspan="3">City West Link, Rozelle</td><td>H – Western Harbour Tunnel</td><td>39.2 – 42.2</td></tr><tr><td>I – M4-M5 Link/Iron Cove Link</td><td>40 - 43</td></tr><tr><td>J – M4-M5 Link/ Iron Cove Link</td><td>39.5 – 42.5</td></tr><tr><td rowspan="4">Campbell Road, St Peters (K – M4-M5 Link)</td><td>SPI-5</td><td>32.9 – 35.9</td></tr><tr><td>SPI-6</td><td>32.9 – 35.9</td></tr><tr><td>SPI-7</td><td>32.8 – 35.8</td></tr><tr><td>SPI-8</td><td>32.6 – 35.6</td></tr><tr><td>Victoria Road, Rozelle</td><td>L – Iron Cove Link</td><td>43.2 – 46.2</td></tr></table>				
E13	A Tunnel Ventilation, Traffic Incident Response and Traffic Management Systems Integration Protocol (Protocol) must be prepared in consultation with the TMC. The Protocol must be reviewed and endorsed by a suitably qualified and experienced independent ventilation specialist. The Protocol must demonstrate that the ventilation and traffic management systems would operate together to ensure conditions of this approval are met.	Applicable	Applicable	Not Applicable	Not Applicable
E14	The Tunnel Ventilation, Traffic Incident Response and Traffic Management Systems Integration Protocol must include a commissioning procedure that is to be carried out before a tunnel (or any part of it) is opened to traffic.	Applicable	Applicable	Not Applicable	Not Applicable
E15	The Tunnel Ventilation, Traffic Incident Response and Traffic Management Systems Integration Protocol must be submitted to the Secretary for information no later than one (1) month prior to commencement of operation of a tunnel (whether in full or in part).	Applicable	Applicable	Not Applicable	Not Applicable
E16	The Tunnel Ventilation, Traffic Incident Response and Traffic Management Systems Integration Protocol, must be implemented for the duration of operation.	Applicable	Applicable	Not Applicable	Not Applicable
E17	Prior to commencing operation, a person or organisation, who is independent from the design and construction of the CSSI, whose appointment has been approved by the Secretary, must review the in-tunnel ventilation and ventilation outlet design of the project and the Tunnel Ventilation, Traffic Incident Response and Traffic Management Systems Integration Protocol prepared in accordance with Condition E13 to verify that:	Applicable	Applicable	Not Applicable	Not Applicable

	a) the final design achieves the in-tunnel and ventilation outlet limits for all traffic conditions including congestion (as described by the regulatory worst-case scenario in Chapter 9 of the EIS); b) the predicted impacts of the final design are no greater than predicted in the documents listed in Condition A1 for the equivalent operating conditions; and c) the ventilation system has been optimised to achieve effective and responsive treatment of in-tunnel air quality and efficient energy consumption. The operating scenarios used to model the final design should be the same as those used in the documents listed in Condition A1. Should the design review adopt a modelling program different to that used in the EIS, the EIS predictions shall be re-modelled using the model adopted for the design review, to establish the predicted outcomes under part (b). The information required in this condition must be made available to the Secretary on request.				
E18	Prior to operation, permanent signage must be installed at each surface tunnel entrance and variable messaging signage provided at regular intervals throughout the tunnel to instruct tunnel users to close windows and turn on recirculated air. Relevant information about this instruction is to be provided on a website, operated by the Proponent, which is maintained throughout operation of the CSSI.	Applicable	Applicable	Not Applicable	Not Applicable
E19	Prior to operation, the Proponent must investigate, in consultation with the EPA, the measures for smoky vehicle enforcement in the tunnels. The effectiveness of the smoky vehicle enforcement measures must be documented in the Independent Environmental Audit required under Condition A36.	Applicable	Applicable	Not Applicable	Not Applicable
E19A	The Proponent must install monitoring equipment to monitor pollutants from the ventilation outlets. Pollutant monitoring from the ventilation outlets (by sampling and obtaining results by analysis) must be in accordance with the methods and frequencies for the pollutant parameters specified in Table 6A and be undertaken at commencement of and throughout operation. The monitoring equipment must be verified by an independent auditor who is expert in tunnel ventilation outlet design prior to the commencement of monitoring for compliance with the requirements set out in Table 6A. **Table 6A: Ventilation Outlet Emission Monitoring Methodologies**	Applicable	Applicable	Not Applicable	Not Applicable

Pollutant	Units of measure	Frequency	Method[1]
Solid particles	mg/m^3	Continuous	Special Method 1[4]
Solid particles	mg/m^3	Quarterly	TM-15
PM_{10}	mg/m^3	Quarterly	OM-5
$PM_{2.5}$	mg/m^3	Quarterly	OM-5
NO_2 or NO or both, as NO_2 equivalent	mg/m^3	Continuous	CEM-2
NO_2	mg/m^3	Continuous	CEM-2
CO	mg/m^3	Continuous	CEM-4
VOC[2]	mg/m^3	Continuous	CEM-8
Speciated VOC	mg/m^3	Annual	TM-34
Speciated PAH[3]	$\mu g/m^3$	Annual	OM-6
Parameter	**Units of measure**	**Frequency**	**Method[1]**
Velocity	m/s	Continuous	CEM-6
Volumetric flow rate	m^3/s	Continuous	CEM-6
Moisture	%	Continuous	TM-22
Temperature	°C	Continuous	TM-2
Other	**Units of measure**	**Frequency**	**Method[1]**
Selection of sampling locations	N/A	N/A	TM-1

Notes:

1. Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA 2007) or an alternative method approved by the Secretary in consultation with the EPA.

2. Must include, but not be limited to: Benzene, Toluene, Xylenes, 1,3-Butadiene, Formaldehyde and Acetaldehyde.

3. Must include, but not limited to; 16 USEPA priority PAHs, namely; Naphthalene, Phenanthrene, Benz(a)anthracene, Benzo(a)pyrene, Acenapthylene, Anthracene, Chrysene, Indeno(1,2,3-cd)pyrene, Acenaphthene, Fluoranthene, Benzo(b)fluoranthene, Dibenz(a,h)anthracene, Fluorene,Pyrene, Benzo(k)fluoranhtene, Benzo(g,h,i)perylene.

4. Special Method 1 means a method approved by the Secretary in consultation with the EPA

E20	The Proponent must continuously monitor (by sampling and obtaining results from analysis) the pollutants within the tunnel specified in Table 7, using the methods approved by the Secretary. Monitoring must commence on the first day of operation of the CSSI and continue throughout the operation of the CSSI.	Applicable	Applicable	Not Applicable	Not Applicable

	Table 7: In-Tunnel monitoring methodology **Pollutant/parameter** | **Units of measure** CO | ppm NO_2 | ppm Visibility | m^{-1}				
E21	The number and location of the monitoring stations inside the tunnel must be determined to permit an accurate calculation, per the requirements of Conditions E3, E4 and E5, and be independently verified in accordance with a methodology developed in consultation with the EPA and approved by the Secretary prior to the operation of the CSSI. As a minimum, monitoring stations must be installed near intakes to the ventilation outlets, at the entry portals and at tunnel and ramp junctions.	Applicable	Applicable	Not Applicable	Not Applicable
E22	All sampling points and visibility monitoring points must be audited prior to commencing monitoring, for compliance with the requirements set out in Conditions E3, E4, E5 and E20. Verification and compliance auditing is to be undertaken by an independent person(s) or organisation(s) whose appointment has been approved by the Secretary. The independent person(s) must be a Chartered Professional Engineer (either Mechanical, Chemical or Control Systems engineer).	Applicable	Applicable	Not Applicable	Not Applicable
E23	Air quality monitoring data is to be made available in as close to real time as possible, under the website reporting requirements of Condition E28.	Applicable	Applicable	Not Applicable	Not Applicable
E24	The Proponent must monitor (by sampling and obtaining results by analysis) the pollutants and parameters specified in Table 8 using the sampling method, units of measure, and sampling frequency specified in the table. Monitoring must be undertaken at the following locations as a minimum: a) two ground level receptors near the Rozelle ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; b) two ground level receptors near the Victoria Road ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet; c) two ground level receptors near the Campbell Road ventilation outlet, at locations suitable for detecting any impact on air quality from the outlet with one in a location different to that established under SSI 6788; and	Applicable	Applicable	Not Applicable	Not Applicable

d) two ground level receptors near the Haberfield ventilation outlet, at location suitable for detecting any impact on air quality from the outlet (these may be the same as those established under SSI 6307).

Table 8: Ambient Air Quality Monitoring Methodologies

Pollutant	Units of measurement	Averaging Period	Frequency	Method[1]
NO	pphm	1-hour	Continuous	AM-12
NO_2	pphm	1-hour	Continuous	AM-12
NO_x	pphm	1-hour	Continuous	AM-12
PM_{10}	$\mu g/m^3$	24-hour	Continuous	AS3580.9.8-2008[2]
$PM_{2.5}$[5]	$\mu g/m^3$	24-hour	Continuous	AS3580.9.13-2013[3] or as otherwise agreed by the Secretary in consultation with the EPA
CO	ppm	1-hour,8-hour	Continuous	AM-6
Parameter[4]	**Units of measurement**	**Averaging Period**	**Frequency**	**Method[1]**
Wind Speed @ 10 m	m/s	1-hour	Continuous	AM-2 & AM-4
Wind Direction @ 10 m	°	1-hour	Continuous	AM-2 & AM-4
Sigma Theta @ 10 m	°	1-hour	Continuous	AM-2 & AM-4
Temperature @ 2m	K	1-hour	Continuous	AM-4
Temperature @ 10 m	K	1-hour	Continuous	AM-4
Other	**Units of measurement**	**Averaging Period**	**Frequency**	**Method[1]**
Siting	NA	NA	NA	AM-1 & AM-4

Notes:

1. *Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales (EPA, 2007) or as otherwise agreed by EPA.*
2. *AS3580.9.8-2008, Methods for the Sampling and Analysis of Ambient Air – Determination of Suspended Particulate Matter – PM10 Continuous Direct Mass Method using Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2008).*
3. *AS 3580.9.13-2013, Methods for the Sampling and Analysis of Ambient Air – Determination of Suspended Particulate Matter – PM2.5 Continuous Direct Mass Method using a Tapered Element Oscillating Microbalance Analyser (Standards Australia, 2013).*

	4. *TBD - location for meteorological monitoring station(s) to be representative of weather conditions likely to occur in the vicinity of the Haberfield, Rozelle (including the Rozelle Rail Yards and Victoria Road) and Campbell Road ventilation outlets.* 5. *Appropriately modified to include size selective inlet for PM2.5 or as otherwise approved by the EPA.*				
E25	The monitoring locations must be selected with the objective of achieving like-to-like comparison of monitoring results with available pre-construction data. The locations must also allow for the review of the accuracy of predicted environmental outcomes discussed in the documents referred to in Condition A1 against monitored air quality as part of the environmental audit required under Condition A36. The location of the monitoring stations must be agreed to by the AQCCC and subject to landowner's and occupier's agreement. The establishment and operation of the monitoring stations is to be undertaken in accordance with recognised Australian standards and undertaken by an organisation accredited by NATA for this purpose and approved by the Secretary in consultation with the EPA and the AQCCC. The quality of the monitoring results must be assured through a NATA accredited process prior to the data being considered as a basis for compliance/auditing purposes.	Applicable	Applicable	Not Applicable	Not Applicable
E26	The Proponent must commence monitoring for at least 12 continuous months prior to operation and continue monitoring for at least two (2) years following the commencement of operation. At the conclusion of the two (2) year operational monitoring period, the Proponent must review the need for the continued use of ambient monitoring stations in consultation with the AQCCC and EPA. Closure or discontinued use of an ambient monitoring station will require the approval of the Secretary.	Applicable	Applicable	Not Applicable	Not Applicable
E27	The Proponent must develop and implement a reporting system for ventilation outlet, in-tunnel and ambient limits. The reporting system must be approved by the Secretary and fully implemented and operational prior to operation. Minimum analytical reporting requirements for air pollution monitoring stations must be as specified in the Approved Methods for the Sampling and Analysis of Air Pollutants in NSW (EPA, 2007, or as updated).	Applicable	Applicable	Not Applicable	Not Applicable
E28	Results of hourly updated real-time monitoring and relevant meteorological data must be provided on a website in an easy to interpret format. This data must be preliminary until a quality assurance check has been undertaken by a person or organisation, who is accredited by NATA for this purpose.	Applicable	Applicable	Not Applicable	Not Applicable

E29	The availability of monitoring data must be conveyed to the local community by way of newsletter (including translation into common community languages in the area) and newspaper advertisement at least one month prior to the commencement of operation.	Applicable	Applicable	Not Applicable	Not Applicable
E29A	The Proponent must notify the Secretary, EPA and Ministry of Health of any recordings above the emission limits (Above-Emission Limit Recording) in Condition E2A as soon as possible and within 24 hours of the recording. This notification must provide details of the circumstances of the event, including: (a) the nature of the event; (b) the concentration levels that occurred; (c) the timing and duration of the event; and (d) the measures employed to minimise the concentration levels.	Applicable	Applicable	Not Applicable	Not Applicable
E29B	Within one (1) month of any notification of Above-Emission Limit Recording, the Proponent must prepare and submit to the EPA for information a Report on Above-Emission Limit Recording that details the cause of the exceedance, the effectiveness of any action(s) taken in response to the exceedance and the options available to prevent recurrence. The Report on Above-Emission Limit Recording must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ventilation outlet emission limits.	Applicable	Applicable	Not Applicable	Not Applicable
E30	In addition to the general reporting requirements specified in Condition E27, the Proponent must notify the Secretary, EPA and Ministry of Health of any recordings above the limits specified in Conditions E3, E4 and E5 as early as possible and within 24 hours of the recorded event. This notification must provide details of the circumstances of the event, including: a) the nature and location of the event, including details relating to the cause; b) the timing and duration of the event; c) the extent and severity of the event; d) the measures employed to minimise the concentration levels, and measures to improve visibility levels in the event that visibility levels were above the specified limit;	Applicable	Applicable	Not Applicable	Not Applicable

	e) the frequency of the event, including whether an event with the same or similar circumstances has occurred previously; and f) the date when the Proponent will submit a Tunnel Air Quality Management Systems Effectiveness Report in accordance with Condition E31.				
E31	Within 20 working days of a request by the Secretary, the Proponent must prepare and submit to the Secretary for information a Tunnel Air Quality Management Systems Effectiveness Report on the overall system performance and cause and major contributor of any exceedances, including: a) the overall performance and concentration levels in the tunnel for the preceding six (6) month period (or since commencement of operation, where the CSSI has operated for under six (6) months), including average and maximum levels and time periods; b) details of any instances throughout the operation of the CSSI where pollutant concentration levels in the tunnel have exceeded the limits specified in Conditions E3, E4 and E5; and c) consideration of improvements to the tunnel air quality management system. The Tunnel Air Quality Management Systems Effectiveness Report is to be prepared by the Proponent and reviewed by a suitably qualified and experienced independent specialist(s) whose appointment has been approved by the Secretary. The Proponent must comply with any requirements arising from the Secretary's review of the Tunnel Air Quality Management Systems Effectiveness Report.	Applicable	Applicable	Not Applicable	Not Applicable
E32	The Proponent must prepare an Ambient Air Quality Goal Protocol for evaluating a potential measurement that exceeds the goals in Condition E6. The Ambient Air Quality Goal Protocol must be developed by the Proponent in consultation with the AQCCC and submitted to the Secretary for approval at least 12 months prior to the commencement of operation of the CSSI. The Ambient Air Quality Goal Protocol must include: a) a process for notification of a recording above the ambient air quality goals in Condition E6, subject to Condition E33; b) the template that would be used for the Report on Above-Goal Recording, required by Condition E34; and	Applicable	Applicable	Not Applicable	Not Applicable

	c) a process for appointing an independent person/organisation to prepare the Report on Above-Goal Recording. The process must include - i) approval of the independent person (independent of the environmental assessment, design and construction of the CSSI) by the Secretary prior to preparation of the report, and ii) the appointment of the independent person/organisation at least one (1) month prior to the commencement of operation, or at some other time prior to preparation of the report with the agreement of the Secretary.				
E33	In addition to the general reporting requirements specified in Condition E27, the Proponent must notify the Secretary, EPA and Ministry of Health of any recordings above the goals in Condition E6 as soon as possible and within 24 hours of the recording. This notification must provide details of the circumstances of the event, including: a) the nature of the event; b) the concentration levels that occurred; c) the timing and duration of the event; d) the measures employed to minimise the concentration levels; and e) the date when the Proponent will submit a Report on Above-Goal Recording in accordance with Condition E34.	Applicable	Applicable	Not Applicable	Not Applicable
E34	Within 20 working days of any Notification of Above-Goal Recording, the Proponent must prepare and submit to the Secretary for information a Report on Above-Goal Recording that details the cause and major contributor of the exceedance, the effectiveness of any action(s) taken in response to the exceedance and the options available to prevent recurrence. Where the operation of the tunnel is identified to be a significant contributor to the recorded above-goal reading, the Report on Above-Goal Recording must include consideration of improvements to the tunnel air quality management system so as to achieve compliance with the ambient air quality goals, including but not limited to installation of the additional ventilation management facilities allowed for under Condition E10.	Applicable	Applicable	Not Applicable	Not Applicable

E35	The provision, operation and maintenance (including all auditing and validation of data) of all air quality monitoring and reporting must be funded by the Proponent.	Applicable	Applicable	Not Applicable	Not Applicable
E36	All continuous emissions monitoring systems installed and operated as a requirement of Condition E21 must undergo relative accuracy test audits at an interval not exceeding 12 months, or within another timeframe agreed with the Secretary.	Applicable	Applicable	Not Applicable	Not Applicable
E37	The Proponent must engage a person independent from the design and construction of the CSSI, to audit the air quality monitoring (in-tunnel and ambient) for the CSSI at six (6) monthly intervals following commencement of operation of the CSSI, or at any longer interval if approved by the Secretary.	Applicable	Applicable	Not Applicable	Not Applicable
E38	The Proponent must consult with the EPA and AQCCC before nominating the proposed auditor to the Secretary. Operation of the CSSI must not commence until the auditor's appointment is approved by the Secretary.	Applicable	Applicable	Not Applicable	Not Applicable
E39	The auditor must ensure that the operating procedures and equipment to acquire air monitoring, meteorological data and emission monitoring data and monitoring reporting comply with NATA (or equivalent) requirements and sound laboratory practice.	Applicable	Applicable	Not Applicable	Not Applicable
E40	The Proponent must document the results of the audit and make available all audit data for inspection by the Secretary upon request. A copy of the audit report must also be issued to the Proponent and AQCCC.	Applicable	Applicable	Not Applicable	Not Applicable
E41	The Proponent must undertake appropriate quality assurance (QA) and quality control (QC) measures for air quality and ventilation outlet emission monitoring data. This must include, but not be limited to: accreditation/quality systems; staff qualifications and training; auditing; monitoring procedure; service and maintenance; equipment or system malfunction; and records/reporting. The QA/QC measures must be approved by an expert independent from the design and construction of the CSSI. The independent expert must be approved by the Secretary prior to monitoring of air quality and ventilation outlet emissions, as appropriate.	Applicable	Applicable	Not Applicable	Not Applicable
E42	The Proponent must assist the relevant planning authority(s) in developing an air quality assessment process for inclusion in a Development Control Plan or other appropriate planning instrument, in considering planning and building approvals for new development in areas adjacent to the ventilation outlets which would be within a potential three-dimensional zone of affectation (buffer volume).	Applicable	Applicable	Not Applicable	Not Applicable

	This process must include procedures for identifying the width and height of buildings that are likely to be either affected by the plume from the ventilation outlet or affect the dispersion of the plume from the ventilation outlet through building wake effects. A part of this process, the Proponent must provide data detailing the results of modelling of pollution concentrations at various heights and distances from the ventilation outlets. This information must be provided within 18 months following the date of this approval. The Proponent must meet all reasonable costs for the development of this process and any necessary amendments to the planning instrument(s) required to implement the process.				
E43	During construction, where bus stops are required to be temporarily closed or relocated, such closure must not occur until relocated bus stops are functioning, have similar capacity and are relocated within a 400 metre walking distance of the existing bus stop. Closures and relocation of bus stops during construction must be undertaken in consultation with Transport for NSW and relevant council(s). Wayfinding signage must be provided directing commuters to adjacent or relocated bus stops. Footpaths must be provided to any relocated bus stops such that accessibility standards are met.	Applicable	Applicable	Applicable	Not Applicable
E44	Prior to the commencement of operation of the CSSI, all bus stops temporarily closed or relocated must be reinstated in a manner that provides equal or improved capacity and accessibility (including footpaths) in consultation with Transport for NSW and relevant council(s).	Applicable	Applicable	Applicable	Not Applicable
E45	Access to Light Rail stops must be maintained at all times.	Applicable	Applicable	Applicable	Not Applicable
E46	Access to all utilities and properties must be maintained during construction, where practicable, unless otherwise agreed with the relevant utility owner, landowner or occupier.	Applicable	Applicable	Applicable	Applicable
E47	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier.	Applicable	Applicable	Applicable	Applicable
E48	Bignell Lane, Camperdown, must be reinstated to its preimpact alignment and length prior to operation, unless otherwise approved by the Secretary following consultation with the relevant council.	Applicable	Not Applicable	Not Applicable	Not Applicable
E49	Spoil haulage vehicles associated with the construction of the CSSI are not permitted to use local roads within one (1) kilometre of construction works and construction ancillary facilities, unless otherwise approved by the Secretary.	Applicable	Applicable	Not Applicable (spoil is generated during	Not Applicable (This stage does not include tunnel

				excavation of the tunnel and large bulk earthworks in Stage 1 and Stage 2)	excavation or large bulk earthworks)
E49A	Use of Route A as the primary route for spoil haulage from the Northcote Street construction ancillary facility is limited to the first two (2) months of spoil haulage commencing at the Northcote Street facility or once the G-Loop is operational, whichever is the sooner, unless an alternative time period is agreed to by the Planning Secretary. During this time period, spoil haulage vehicles are permitted to use Route A only between the hours of 7:00 am and 7:00 pm.	Applicable	Not Applicable	Not Applicable	Not Applicable
E49B	Once the G-Loop is operational, use of Route A by spoil haulage vehicles is limited to the following circumstances: a) during the hours of 7:00 am to 9:00 am and 4:00 pm to 6:00 pm Monday to Friday (excluding public holidays) and 8:00 am to 9:00 am and 4:00 pm to 6:00 pm on Saturdays; b) during periods of maintenance and/or unserviceability of the G-Loop (such as repairs, signal failure, unauthorised standing of vehicles); c) in the event that there is an incident or maintenance works on the road network in the vicinity of the Northcote Street construction ancillary facility and the G-Loop that prevents spoil haulage vehicles from accessing or travelling on Route B; d) in the event that there is insufficient capacity for a spoil haulage vehicle to enter the Northcote Street construction ancillary facility and it must bypass the access gate; and e) in peak spoil generating period(s) of no greater than six months approved by the Planning Secretary. Notwithstanding the above, the use of Route A is restricted to 7:00 am to 7:00 pm daily.	Applicable	Not Applicable	Not Applicable	Not Applicable
E49C	The Proponent must submit to the Planning Secretary the following information when seeking the approval of the Planning Secretary under **Condition 0e)**: a) the estimated dates and duration of the peak spoil generating period;	Applicable	Not Applicable	Not Applicable	Not Applicable

	b) the estimated hourly number of spoil haulage vehicle trips on Route A both during and outside the hours specified in **Condition 0a)** each day during the peak spoil generating period; c) at least six months of data as specified in **Condition 0a)** and **b)**; and d) analysis of the operational performance of the G-Loop, including the need to restrict the use of the G-Loop during the hours identified in **Condition 0a)**.				
E49D	Within four (4) months following the commencement of tunnelling at the Northcote Street construction ancillary facility, and at three (3) monthly intervals thereafter until the completion of tunnelling and backfilling from that site, the Proponent must submit to the Secretary data which details on an hourly basis: a) the total number of spoil haulage vehicle trips associated with tunnelling and backfilling at the Northcote Street construction ancillary facility (inbound and outbound); and b) the number of trips (times) spoil haulage vehicles have used Route A, and Wattle Street / Parramatta Road (instead of the M4 East Motorway tunnels) when exiting the G-Loop, including the dates and times of use as well as the reasons for use of these routes noting the criteria for use specified in **Condition 0.** *Notes: For the purposes of Conditions **Error! Reference source not found.** and 0:* 1. *Spoil haulage vehicles includes vehicles removing spoil from the Northcote Street construction ancillary facility during tunnelling and delivering spoil to the site to backfill the construction access tunnel;* 2. *Route A from the Northcote Street construction ancillary facility is left turn onto Wattle Street, left turn on Ramsay Street, left turn on Fairlight Street, left turn on Great North Road; and* 3. *Route B from the Northcote Street construction ancillary facility is left turn onto Wattle Street, continue along Wattle Street/Dobroyd Parade and left turn into G-Loop, right-hand turn onto Dobroyd Parade from G-Loop, continue along Dobroyd Parade / Wattle Street into M4 East tunnel or onto Parramatta Road.*	Applicable	Not Applicable	Not Applicable	Not Applicable
E50	Construction vehicles must not use Robert Street, Rozelle to access the White Bay Civil Site and the Glebe Island Construction Ancillary Facility site.	Not applicable	Applicable	Not Applicable	Not Applicable

E50A	All heavy vehicles must only access and exit the Parramatta Road East and Parramatta Road West construction ancillary facilities via Parramatta Road during the operation of the facilities, except for when exiting the Parramatta Road West site and they need to travel east. In these circumstances the site may be exited via Bland Street or as otherwise approved by the Planning Secretary.	Applicable	Not Applicable	Not Applicable	Not Applicable
E51	All requests to the Secretary for local road usage need to include a traffic and pedestrian impact assessment, and should include a swept path analysis if required. The traffic and pedestrian impact assessment, incorporated in the Site Establishment Management Plan or Traffic and Transport CEMP as relevant, must: a) demonstrate that the local road usage will not compromise the safety of the public and have minimal amenity impacts; b) provide details as to the date of completion of the road dilapidation surveys for the subject local roads; and c) describe the measures that will be implemented to avoid where practicable the use of local roads past schools, aged care facilities and child care facilities during peak times for operation.	Applicable	Applicable	Partially Applicable, Refer Appendix D.	Not Applicable (local roads will not be required)
E52	Construction vehicles (including staff vehicles) associated with the CSSI must be managed to: a) minimise parking on public roads; b) minimise idling and queuing on public roads; and c) ensure spoil haulage vehicles must adhere to the nominated haulage routes identified in the Traffic and Transport CEMP.	Applicable	Applicable	Applicable	Applicable
E53	The locations of all construction spoil haulage vehicles must be able to be monitored in real time and the records of monitoring be made available electronically to the Secretary and the EPA upon request for a period of no less than one year following construction. *Note: Refer to Condition A44 in relation to vehicle identification.*	Applicable	Applicable	Not applicable (spoil is generated during excavation of the tunnel and large bulk earthworks in Stage 1 and Stage 2)	Not Applicable (This stage does not include tunnel excavation or large bulk earthworks)

E54	A Construction Parking and Access Strategy must be prepared and implemented to identify and mitigate impacts resulting from on- and off-street parking changes during construction of the CSSI. The Strategy must include, but not necessarily be limited to: a) confirmation and timing of the removal of on- and off-street parking associated with construction of the CSSI; b) parking surveys of all parking spaces to be removed to determine current demand during peak, off-peak, school drop off and pickup, and weekend periods; c) consultation with affected stakeholders utilising existing on- and off-street parking stock which will be impacted as a result of construction; d) assessment of the impacts of changes to on- and off-street parking stock taking into consideration outcomes of consultation with affected stakeholders; e) identification of mitigation measures to manage impacts to stakeholders as a result of on- and off-street parking changes including, but not necessarily limited to, staged removal and replacement of parking, provision of alternative parking arrangements, managed staff parking arrangements and working with relevant council(s) to introduce parking restrictions adjacent to work sites and compounds; f) provision of a shuttle bus service(s) to transport workers to site(s) and details of the shuttle bus service(s), including service timing and frequency; g) mechanisms for monitoring, over appropriate intervals, to determine the effectiveness of implemented mitigation measures; h) provision of contingency measures should the results of mitigation monitoring indicate implemented measures are ineffective; and i) provision of reporting of monitoring results to the Secretary and relevant council(s) at three (3) monthly intervals. The Construction Parking and Access Strategy must be submitted to the Secretary for approval at least one (1) month prior to the commencement of any works that impact parking.	Applicable	Applicable	Partially Applicable, Refer Appendix D.	Applicable
E55	The CSSI (including new or modified local roads, parking, pedestrian and cycle infrastructure) must be designed to meet relevant capacity, design, engineering and safety guidelines, including the Austroads Guide to Traffic Management.	Applicable	Applicable	Applicable	Not Applicable

	Note: This includes ensuring sufficient capacity to accommodate pedestrians and cyclists waiting during non-crossing phases at the corner of The Crescent and Johnston Street intersection.				
E56	An independent Road Safety Audit(s) is to be undertaken by an appropriately qualified and experienced person during detailed design to assess the safety performance of new or modified local road, parking, pedestrian and cycle infrastructure provided as part of the CSSI (including ancillary facilities) to ensure that they meet the requirements of relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Management. Audit findings and recommendations must be actioned prior to construction of the relevant infrastructure and must be made available to the Secretary on request.	Applicable	Applicable	Applicable	Not Applicable
E57	Safe pedestrian and cyclist access must be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate route which complies with the relevant standards must be provided and signposted prior to the restriction or removal of the relevant pedestrian and cyclist access.	Applicable	Applicable	Applicable	Applicable
E57A	A traffic controller must be present at entry and exit points on the Parramatta Road East and West construction ancillary facilities between the hours or 7:30 am to 9:30 am and 2:30 pm and 4:30 pm during school terms whenever: a) a heavy vehicle is to enter or exit the site via that point; and b) light vehicles are entering and exiting the site at that point during staff shift change over periods.	Applicable	Not Applicable	Not Applicable	Not Applicable
E58	The Proponent must provide improved connectivity for cyclist and pedestrians between Roberts Street and Springside Street, and incorporate these in the Pedestrian and Cycle Implementation Strategy required by Condition E60. *Note: This condition does not specifically require work to be undertaken in the Victoria Road reservation, but could include works on the parallel local road network.*	Not Applicable	Not Applicable	Applicable	Not Applicable
E58A	The Proponent must provide east-west connectivity for cyclists and pedestrians through the Rozelle Rail Yards open space area and north-south connectivity through the Rozelle Rail Yards open space area generally between Gordon Street, Rozelle and The Crescent and incorporate these in the Pedestrian and Cycle Implementation Strategy required by Condition E60.	Not applicable	Applicable	Not Applicable	Not Applicable

E59	Enhanced cycle facilities at Rozelle Bay light rail stop must be investigated and implemented if possible, in consultation with Transport for NSW and incorporated into the **Pedestrian and Cycle Implementation Strategy** required by **Condition E60**.	Not Applicable	Applicable	Not Applicable	Not Applicable
E60	A detailed Pedestrian and Cycle Implementation Strategy must be included as a component of the Urban Design and Landscape Plan required by Condition E133 and reviewed by the Design Review Panel. The Strategy must be prepared in consultation with relevant council(s) and Bicycle NSW. The Strategy must be consistent with the Active Transport Strategy in Volume 2F, Appendix N of the EIS and must incorporate the requirements of Conditions E58, E58A and E59 and include: a) details of selected routes and connections to existing local and regional routes;; b) timing and staging of all works; c) infrastructure details, including lighting, safety, security, and standards compliance; d) signage and wayfinding measures; and e) details of associated landscaping works, including on the southern portion of the pedestrian and cycling green link. All identified works arising from this condition are to be implemented prior to the commencement of project operations, except as permitted by this approval.	Not Applicable	Applicable	Applicable (implementation of E58)	Not Applicable
E61	A Road Dilapidation Report must be prepared by a suitably qualified person, for local roads (and associated infrastructure within the road reserve) proposed to be used by heavy vehicles for works associated with the CSSI, before the commencement of use by such vehicles. Copies of the Road Dilapidation Report must be provided to the relevant road authorities within three (3) weeks of completing the surveys and no later than one (1) month before the use of local roads by such vehicles.	Applicable	Applicable	Applicable	Not Applicable (local roads not required)
E62	If damage to roads occurs as a result of the construction of CSSI, the Proponent must either: a) compensate the relevant road authority for the damage so caused. The amount of compensation may be agreed with the relevant road authority, but compensation must be paid even if no agreement is reached; or	Applicable	Applicable	Applicable	Applicable

	b) rectify the damage so as to restore the road to at least the condition it was in pre-construction.				
E63	Prior to the commencement of operation of the full CSSI (mainline tunnel and Rozelle Interchange), the Proponent must prepare a Road Network Performance Plan in consultation with Transport for NSW and the relevant council(s). The Plan should incorporate operational traffic modelling results from the M4 East and New M5 (SSI 6307 and SSI 6788) projects, and include: a) consideration of movement and place analysis and local initiatives, such as local area improvement strategies and potential land use changes, and any traffic changes as a result of other major road projects within the project area; b) an updated analysis, including modelling of traffic impacts to the adjoining road network (including impacts on local roads from rat-running), as a consequence of the CSSI; c) an assessment of the performance of the road network, including potential 'pinch-points' where the merging of tunnel exit traffic and surface traffic would occur at the Haberfield Interchange, the St Peters Interchange and Rozelle Interchange and Iron Cove Link; and d) mitigation measures to manage predicted traffic performance impacts including local area traffic management and bus priority measures as relevant. The Road Network Performance Plan must be submitted to the Secretary and relevant council(s). The implementation of the Plan must have commenced prior to the full operation of the CSSI. The Proponent is responsible for the implementation of the identified measures under Condition E63(d). *Note: Identified mitigation measures may need to be further assessed under the Environmental Planning and Assessment Act, 1979. Works will need to meet relevant design standards and be subject to independent road safety audits.*	Not Applicable	Applicable	Not Applicable	Not Applicable
E64	The Proponent must prepare an Operational Road Network Performance Review, within 12 months and five (5) years after the commencement of operation of the full CSSI (of the mainline tunnels and Rozelle Interchange). The Review must address road network performance and review the performance of the CSSI on the adjoining road network. The Review must confirm the adequacy of the mitigation measures identified in the Road Network Performance Plan required under Condition E63.	Not Applicable	Applicable	Not Applicable	Not Applicable

	The Review must be undertaken in consultation with Transport for NSW and relevant council(s) and be completed within six (6) months of the review timeframes. The Review must be provided to the Secretary within 60 days of its completion. Further mitigation measures, if required, must be included in the Review. The Proponent is responsible for the implementation of the identified measures. *Note: Identified mitigation measures may need to be further assessed under the Environmental Planning and Assessment Act, 1979. Works will need to meet relevant design standards and to subject to independent road safety audits.*				
E65	In the event that the Rozelle Interchange is not open to traffic within 24 months of the opening of the mainline tunnel, an Operational Road Network Performance Review must be prepared prior to the operation of the Rozelle Interchange.	Not Applicable	Applicable	Not Applicable	Not Applicable
E66	A detailed land use survey must be undertaken to confirm sensitive receivers (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area prior to the commencement of works which generate construction or operational noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Construction Noise and Vibration Management Sub-plan.	Applicable	Applicable	Not Applicable	Not Applicable
E67	All noise and vibration assessment, management and mitigation required by this approval must consider the cumulative noise impacts of approved CSSI and SSI projects. This includes using ambient and background levels which do not include other WestConnex M4 East and New M5 (SSI 6307 and SSI 6788) projects. This condition applies to all works and operation.	Applicable	Applicable	Applicable	Applicable
E68	Works must be undertaken during the following hours: a) 7:00 am to 6:00 pm Mondays to Fridays, inclusive; b) 8:00 am to 1:00 pm Saturdays; and c) at no time on Sundays or public holidays.	Applicable	Applicable	Applicable	Applicable
E69	Notwithstanding Condition E68, works may be undertaken between 1:00 pm to 6:00 pm on Saturday.	Applicable	Applicable	Applicable	Applicable

E70	Notwithstanding Conditions E68 and E69 the following works are permitted to be undertaken 24 hours a day, seven days a week: a) tunnelling activities excluding cut and cover tunnelling; b) haulage of spoil, excluding from the Iron Cove civil site (C8) at which haulage is limited to the work hours specified in Conditions E68 and E69, and delivery of material; c) works within an acoustic shed; and d) tunnel fit out works. Other surface works associated with tunnelling must only be undertaken in accordance with the requirements of Condition E73.	Applicable (Partial – haulage of spoil from the Iron Cove civil site (C9) is not applicable for this stage)	Applicable	Not Applicable	Not Applicable
E71	Deleted.				
E72	Except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken: a) between the hours of 8:00 am to 6:00 pm Monday to Friday; b) between the hours of 8:00 am to 1:00 pm Saturday; and c) in continuous blocks not exceeding three (3) hours each with a minimum respite from those activities and works of not less than one (1) hour between each block. For the purposes of this condition, 'continuous' includes any period during which there is less than a one (1) hour respite between ceasing and recommencing any of the work that are the subject of this condition.	Applicable	Applicable	Applicable	Applicable
E73	Notwithstanding Conditions E68 to E72 works may be undertaken outside the hours specified under those conditions in the following circumstances: a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or	Applicable (Partial – haulage of spoil from the Iron Cove civil site (C9) is not	Applicable	Partially Applicable E73(a), (b) and (e) are only applicable for this stage	Partially Applicable E73(a) and (b) are only applicable for this stage

	b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or c) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or d) works approved under an Out-of-Hours Work Protocol for works not subject to an EPL as required by Condition E77; or e) construction, excluding spoil haulage from the Iron Cove civil site (C8) at which haulage is limited to the work hours specified in Conditions E68 and E69, that causes LAeq (15 minute) noise levels: i) no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and ii) no more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses, and iii) continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006), and iv) intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006). *Note: Section 5.24(1)(e) of the EP&A Act requires that an EPL be substantially consistent with this approval. Out of Hours Works considered under* ***Conditions E73(c) and (d)*** *must be justified and include an assessment of mitigation measures.*	applicable for Mainline tunnels)			
E74	On becoming aware of the need for emergency works in accordance with Condition E73(b), the Proponent must notify the AA, the ER and the EPA of the need for that work. The Proponent must use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those works.	Applicable	Applicable	Applicable	Applicable
E75	Out-of-hours works that are regulated by an EPL as per Condition E73(c) or through the Out- of-Hours Work Protocol as per Condition E77 include:	Applicable	Applicable	Applicable	Applicable

	a) works which could result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 “Risk Management – Principles and Guidelines”; or b) where the relevant road network operator has advised the Proponent in writing that carrying out the works and activities could result in a high risk to road network operational performance; or c) where the relevant utility service operator has advised the Proponent in writing that carrying out the works and activities could result in a high risk to the operation and integrity of the utility network; or d) where the TfNSW Transport Management Centre (or other road authority) has advised the Proponent in writing that a road occupancy licence is required and will not be issued for the works or activities during the hours specified in Condition E68 and Condition E69; or e) where Sydney Trains (or other rail authority) has advised the Proponent in writing that a Rail Possession is required. *Note: Other out-of-hours works can be undertaken with the approval of an EPL, or through the project’s **Out-of-Hours Work Protocol** for works not subject to a EPL.*				
E76	In order to undertake out-of-hours work described in Condition E75, the Proponent must identify appropriate respite periods for the out-of-hours works in consultation with the community at each affected location. This consultation must include (but not be limited to) providing the community with: a) a schedule of likely out-of-hours work for a period no less than three (3) months; b) the potential works, location and duration; c) the noise characteristics and likely noise levels of the works; and d) likely mitigation and management measures. The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour works must be provided to the AA, EPA and the Secretary.	Applicable	Applicable	Applicable	Applicable
E77	An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of works which are outside the hours defined in Conditions E68 and E69, and that are not subject to an EPL. The Protocol must be approved by the Secretary prior to	Applicable	Applicable	Applicable. OOHW Protocol	Applicable

	commencement of the works. The Protocol must be prepared in consultation with the EPA and AA. The Protocol must: a) provide a process for the consideration of out-of-hours works against the relevant noise and vibration criteria, including the determination of low and high-risk activities; b) provide a process for the identification of mitigation measures for residual impacts, including respite periods in consultation with the community at each affected location, consistent with the requirements of Condition E76; c) identify procedures to facilitate the coordination of out-of-hours works approved by an EPL to ensure appropriate respite is provided; d) identify an approval process that considers the risk of activities, proposed mitigation, management, and coordination, including where: i) low risk activities can be approved by the ER in consultation with the AA, and ii) high risk activities that are approved by the Secretary; and e) identify Department, EPA and community notification arrangements for approved out of hours works, which maybe detailed in the Communication Strategy.			already approved in accordance with this condition will apply.	OOHW Protocol already approved in accordance with this condition will apply.
E78	All works undertaken for the delivery of the CSSI, including those undertaken by third parties, must be coordinated to ensure respite periods are provided. The Proponent must: a) reschedule any works to provide respite to impacted noise sensitive receivers so that the respite is achieved in accordance with Condition E76; or b) consider the provision of alternative respite or mitigation to impacted noise sensitive receivers; and c) provide documentary evidence to the AA in support of any decision made by the Proponent in relation to respite or mitigation.	Applicable	Applicable	Applicable	Applicable
E79	Construction Noise and Vibration Impact Statements must be prepared for construction ancillary facility(s) before any works that result in noise and vibration impacts commence, and include specific mitigation measures identified through consultation with affected sensitive receivers. The Statements must supplement the Construction Noise and Vibration Management Sub-plan or Site Establishment Management Plan(s) and are to be implemented for the duration of the works.	Applicable	Applicable	Not Applicable	Not Applicable

	The Construction Noise and Vibration Impact Statement for the White Bay Civil Site (C11) must be prepared in consultation with the Port Authority of NSW and NSW Heritage Council.				
E80	Noise generating works in the vicinity of potentially-affected community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.	Applicable	Applicable	Applicable	Applicable
E81	Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria: a) construction 'Noise affected' noise management levels established using the Interim Construction Noise Guideline (DECC, 2009); b) vibration criteria established using the Assessing vibration: a technical guideline (DEC, 2006) (for human exposure); c) Australian Standard AS 2187.2 - 2006 "Explosives - Storage and Use - Use of Explosives"; d) BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2" as they are "applicable to Australian conditions"; and e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage). Comparison against the criteria must take into account the cumulative noise and vibration levels from concurrent activities associated with the CSSI. Any works identified as exceeding the noise management levels and/or vibration criteria must be managed in accordance with the Construction Noise and Vibration Management Sub-plan. Predicted vibration levels must be used to select the specific management measures to be applied to individual properties during construction. *Note: The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level before comparing to the construction Noise Management Level.*	Applicable	Applicable	Partially Applicable, refer Appendix D.	Applicable

E82	Mitigation measures must be applied when the following residential ground-borne noise levels, including cumulative levels from concurrent activities associated with the CSSI, are exceeded: a) evening (6:00 pm to 10:00 pm) — internal LAeq(15 minute): 40 dB(A); and b) night (10:00 pm to 7:00 am) — internal LAeq(15 minute): 35 dB(A). The mitigation measures must be outlined in the Construction Noise and Vibration Management Sub-plan, including in any Out-of-Hours Work Protocol, required by Condition E77. Predicted ground-borne noise levels must be used to select the specific management measures to be applied to individual properties during construction.	Applicable	Applicable	Applicable	Applicable
E83	Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified before works that generate vibration commences in the vicinity of those properties. If the potential exceedance is to occur more than once or extend over a period of 24 hours, owner and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier. These properties must be identified and considered in the Construction Noise and Vibration Management Sub-plan.	Applicable	Applicable	Applicable	Applicable
E84	The Proponent must conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and monitoring shows that the preferred values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures.	Applicable	Applicable	Applicable	Applicable
E85	The Proponent must seek the advice of a heritage specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures.	Applicable	Applicable	Not Applicable	Not Applicable
E86	All acoustic sheds must be erected as soon as site establishment works at the facilities are completed and before undertaking any works which are required to be conducted within the sheds.	Applicable	Applicable	Not Applicable	Not Applicable
E86A	Tunnelling and excavation works from the Iron Cove civil site (C8) to construct the ventilation tunnel and caverns must not commence until the chamber beneath the roof of the cut and cover structure has been converted into a temporary acoustic shed and fitted with a roller door.	Not Applicable	Applicable	Not Applicable	Not Applicable
E87	For out-of-hours work undertaken in accordance with Condition E75, at-receiver noise mitigation in the form of at-property treatment must be offered to the land owner for habitable living spaces, or	Not Applicable	Applicable	Not Applicable.	Not Applicable. Already

	other mitigation or management measures, as agreed by the occupier, to properties identified in Appendix D. Mitigation must be offered prior to out-of-hours work commencing. This requirement does not apply if the sensitive receiver has been provided with noise mitigation under the RMS Noise Abatement Program or the State Environment Planning Policy (Infrastructure) 2007 (clause 102(3)). The adequacy of at-property treatments will be reviewed where previous treatments have been installed as part of other SSI or CSSI projects. *Note: This condition does not preclude the application of other noise and vibration mitigation and management measures.*			Already completed under Stage 2.	completed under Stage 2.
E88	At receiver noise mitigation in the form of at-property treatment must be offered to the land owner for habitable living spaces, or other mitigation or management measures as agreed by the occupier, to residential properties identified in Appendix E. Mitigation must be offered prior to works commencing. This requirement does not apply if the sensitive receiver has been provided with noise mitigation under the RMS Noise Abatement Program or the State Environment Planning Policy (Infrastructure) 2007 (clause 102(3)). The adequacy of at-property treatments will be reviewed where previous treatments have been installed as part of other SSI or CSSI projects. *Note: This condition does not preclude the application of other noise and vibration mitigation and management measures.*	Applicable	Not Applicable	Not Applicable	Not Applicable
E89	A Noise Insulation Program must be prepared and implemented for the duration of CSSI works for receivers at/to which the requirements of Conditions E87 and E88 apply. The Program must be incorporated into the Construction Noise and Vibration Management Sub-plan. The Noise Insulation Program must detail the following matters: a) receivers eligible for the scheme; b) the scope of the insulation package; c) responsibility for the noise insulation works; d) procedure and the terms of the noise insulation works; e) program monitoring; and	Applicable	Applicable	Not Applicable	Not Applicable

	f) program review and amendment. The Noise Insulation Program must be endorsed by the AA.				
E90	Receivers which are eligible for receiving treatment under the Noise Insulation Program required under Condition E89 must have treatment implemented within six (6) months following the commencement of construction which would affect the receiver. The implementation of the Noise Insulation Program must be prioritised based on the degree and duration of exceedance with high priority exceedances undertaken within three (3) months of the commencement of construction.	Applicable	Applicable	Not Applicable	Not Applicable
E91	At no time can noise generated by construction exceed the National Standard for exposure to noise in the occupational environment of an eight-hour (8hr) equivalent continuous A-weighted sound pressure level of LAeq,8h of 85 dB(A) for any employee working at a location near the CSSI.	Applicable	Applicable	Applicable	Applicable
E92	The Proponent must prepare an Operational Noise and Vibration Review (ONVR) to confirm noise and vibration control measures that would be implemented for the operation of the CSSI. The ONVR must be prepared in consultation with the Department, relevant council(s), other relevant stakeholders and the community and must: a) confirm the appropriate operational noise and vibration objectives and levels for adjoining development, including existing sensitive receivers; b) confirm the operational noise predictions based on the final design. Confirmation must be based on an appropriately calibrated noise model (which has incorporated noise monitoring, and concurrent traffic counting, where necessary for calibration purposes). The assessment must specifically include verification of noise levels at all fixed facilities, based on noise monitoring undertaken at appropriately identified noise catchment areas surrounding the facilities; c) confirm the operational noise and vibration impacts at adjoining development based on the final design of the CSSI, including operational daytime LAeq,15 hour and night-time LAe, 9 hour traffic noise contours; d) review the suitability of the operational noise mitigation measures identified in the documents listed in Condition A1and, where necessary, investigate, identify and implement 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;	Applicable	Applicable	Not Applicable	Not Applicable

	e) include a consultation strategy to seek feedback from directly affected landowners on the noise and vibration mitigation measures; and f) procedures for the management of operational noise and vibration complaints. The ONVR is to be verified by a suitably qualified and experienced noise and vibration expert. The ONVR is to be undertaken at the Proponent's expense and submitted to the Secretary for approval prior to the implementation of mitigation measures. The Proponent must implement the identified noise and vibration control measures and make the ONVR publicly available.				
E93	Noise mitigation measures as identified in Condition E92 that will not be physically affected by works, or which have not been implemented in accordance with Conditions E87 and E88 must be implemented within six (6) months of the commencement of construction in the vicinity of the impacted receiver to minimise construction noise impacts, and detailed in the Construction Noise and Vibration Management Sub-plan for the CSSI.	Applicable	Applicable	Not Applicable	Not Applicable
E94	Where implementation of operational noise mitigation measures are not proposed early in accordance with Condition E93, the Proponent must submit to the Secretary a report providing justification as to why, along with details of temporary measures that would be implemented to reduce construction noise impacts, until such time that the operational noise mitigation measures identified in Condition E92 are implemented. The report must be endorsed by the AA and submitted to the Secretary prior to the commencement of construction which would affect the identified sensitive receivers.	Applicable	Applicable	Not Applicable	Not Applicable
E94A	Within three months of commencement of operation of the high voltage regulators at Iron Cove, the Proponent must undertake noise monitoring to compare the actual noise level emitted by the regulators to the noise performance at sensitive receivers as predicted in the document WestConnex M4-M5 Link Rozelle Interchange Iron Cove Ventilation Underground Modification Report (dated November 2019) and project-specific noise level as determined in accordance with the NSW Industrial Noise Policy (EPA, 2000). Monitoring must capture the onload tap changer noise and peak loading. A report detailing the noise monitoring results must be provided to the Secretary for information within one month of undertaking the monitoring. If the noise level at the nearest sensitive receiver exceeds either the predicted noise level or project-specific noise level, then the Proponent must implement noise reduction measures within six months of when the noise monitoring was undertaken.	Not Applicable	Applicable	Not Applicable	Not Applicable

E95	Within 12 months of the commencement of operation of the CSSI, the Proponent must undertake monitoring of operational noise to compare actual noise performance of the CSSI against the noise performance predicted in the review of noise mitigation measures required by Condition E92. The Proponent must prepare an Operational Noise Compliance Report to document this monitoring. The Report must include, but not necessarily be limited to: a) noise monitoring to assess compliance with the operational noise levels predicted in the review of operational noise mitigation measures required under Condition E92; b) a review of the operational noise levels in terms of criteria and noise goals established in the NSW Road Noise Policy 2011; c) methodology, location and frequency of noise monitoring undertaken, including monitoring sites at which CSSI noise levels are ascertained, with specific reference to locations indicative of impacts on sensitive receivers; d) details of any complaints and enquiries received in relation to operational noise generated by the CSSI between the date of commencement of operation and the date the report was prepared; e) any required recalibrations of the noise model taking into consideration factors such as noise monitoring and actual traffic numbers and proportions; f) an assessment of the performance and effectiveness of applied noise mitigation measures together with a review and if necessary, reassessment of mitigation measures; and g) identification of additional measures to those identified in the review of noise mitigation measures required by Condition E92, that would be implemented with the objective of meeting the criteria outlined in the NSW Road Noise Policy (EPA, 2011) and Industrial Noise Policy (EPA, 2000), when these measures would be implemented and how their effectiveness would be measured and reported to the Secretary and the EPA. The Operational Noise Report must be submitted to the Secretary and the EPA within 60 days of completing the operational noise monitoring and made publicly available.	Applicable	Applicable	Not Applicable	Not Applicable
E96	If blasting is proposed a Blast Management Strategy must be prepared and must include: a) sequencing and review of trial blasting to inform blasting;	Applicable	Applicable	Not Applicable	Not Applicable

	b) regularity of blasting; c) intensity of blasting; d) impact mitigation measures including periods of relief; and e) blasting program.				
E97	The Blast Management Strategy must be endorsed by a suitably qualified and experienced person and reviewed by an independent specialist.	Applicable	Applicable	Not Applicable	Not Applicable
E98	The Blast Management Strategy must be prepared in accordance with relevant guidelines and in consultation with the EPA to ensure that all blasting and associated activities are carried out so as not to generate unacceptable noise and vibration impacts or pose a significant risk to sensitive receivers.	Applicable	Applicable	Not Applicable	Not Applicable
E99	The Blast Management Strategy must be submitted to the Secretary for information no later than one (1) month prior to the commencement of blasting. The Strategy as submitted to the Secretary, must be implemented for all blasting activities.	Applicable	Applicable	Not Applicable	Not Applicable
E100	Blasting associated with the CSSI must only be undertaken during the following hours: a) 9:00 am to 5:00 pm, Monday to Friday, inclusive; b) 9:00 am to 1:00 pm, Saturday; and c) at no time on Sunday or on a public holiday; or as authorised through an EPL if blasting is proposed outside of these hours. This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons to avoid loss of life, property loss and/or to prevent environmental harm.	Applicable	Applicable	Not Applicable	Not Applicable
E101	A geotechnical model of representative geological and groundwater conditions must be prepared prior to excavation and tunnelling to identify geological structures and groundwater features. The model must include details of proposed excavations and tunnels, construction staging, and identify surface and sub-surface structures, including any specific attributes, which may be impacted by the CSSI. The Proponent must use this model to assess the cumulative predicted settlement, ground	Applicable	Applicable	Not Applicable	Not Applicable

<table>
<tr><td></td><td>movement, stress redistribution and horizontal strain profiles caused by excavation and tunnelling, including groundwater drawdown and associated impacts, on adjacent surface and sub-surface structures.</td><td></td><td></td><td></td><td></td></tr>
<tr><td>E102</td><td>The Proponent must undertake a review of surface and sub-surface structures at risk from damage to determine appropriate criteria to prevent damage, prior to excavation and tunnelling works that may pose a settlement risk. Criteria for surface and sub-surface structures which are not included in Condition E103 (Table 9) must be determined in consultation with the owner(s) of the surface and sub-surface structures prior to commencement of any excavation or tunnelling works potentially affecting the surface and sub-surface structures.</td><td>Applicable</td><td>Applicable</td><td>Not Applicable</td><td>Not Applicable</td></tr>
<tr><td>E103</td><td>In the case of buildings, roads, parking areas and parks, the appropriate criteria which governs the greatest risk of damage are to be selected from Table 9 (Maximum Settlement, Maximum Angular Distortion or Limiting Tensile Strain) unless the Proponent has determined more stringent criteria as a result of Condition E102.

Table 9: Settlement criteria<table><tr><th>Surface and Sub-Surface Structures</th><th>Maximum Settlement</th><th>Maximum Angular Distortion</th><th>Limiting Tensile Strain (percent)*</th></tr><tr><td>Buildings – Low or non-sensitive properties (i.e. ≤ 2 levels and carparks)</td><td>30 mm</td><td>1 in 350</td><td>0.1</td></tr><tr><td>Buildings and pools – High or sensitive properties (i.e. ≥ 3 levels and heritage items)</td><td>20 mm</td><td>1 in 500</td><td>0.1</td></tr><tr><td>Roads and parking areas</td><td>40 mm</td><td>1 in 250</td><td>n/a</td></tr><tr><td>Parks</td><td>50 mm</td><td>1 in 250</td><td>n/a</td></tr></table>* As defined in Burland et al. ‘Building response to tunnelling – Case studies from construction of the Jubilee Link Extension’, London, Thomas Telford (2001)

* As defined in Burland et al. ‘Building response to tunnelling – Case studies from construction of the Jubilee Link Extension’, London, Thomas Telford (2001)</td><td>Applicable</td><td>Applicable</td><td>Not Applicable</td><td>Not Applicable</td></tr>
<tr><td>E104</td><td>Should the geotechnical model in Condition E101 identify exceedances of the relevant criteria established by Conditions E102 and E103, the Proponent must implement an instrumentation and monitoring program to measure settlement, distortion or strain as required. The Proponent must also identify and implement appropriate mitigation measures in consultation with the owner(s) of the</td><td>Applicable</td><td>Applicable</td><td>Not Applicable</td><td>Not Applicable</td></tr>
</table>

	relevant surface and sub-surface structures prior to excavation and tunnelling works to ensure where possible that the surface and sub-surface structures will not experience exceedances of the relevant criteria. The adopted criteria does not remove any responsibility from the Proponent for the protection of existing surface and sub-surface structures or for rectifying any damage to surface and sub- surface structures resulting from the CSSI.				
E105	The Proponent must offer pre-dilapidation surveys and must undertake and prepare pre- dilapidation reports where the offer is accepted, on the current condition of surface and sub- surface structures identified as at risk from settlement or vibration by the geotechnical model described in Condition E101. The pre-dilapidation surveys and reports must be prepared by a suitably qualified and experienced person(s) and must be provided to the owners of the surface and sub-surface structures for review prior to the commencement of potentially impacting works.	Applicable	Applicable	Not Applicable	Not Applicable
E106	Where pre-dilapidation surveys have been undertaken in accordance with Condition E105, subsequent post-dilapidation surveys must be undertaken to assess damage to the surface and sub-surface structures that may have resulted from the construction of the CSSI within three (3) months of the completion of construction.	Applicable	Applicable	Not Applicable	Not Applicable
E107	The results of the surveys must be documented in a Condition Survey Report for each surface and sub-surface structure surveyed. Copies of the Condition Survey Reports must be provided to the owner(s) of the structures surveyed within three (3) weeks of completing the surveys and no later than four (4) months following the completion of construction.	Applicable	Applicable	Not Applicable	Not Applicable
E108	Where damage has been determined to occur as a result of the project, the Proponent must carry out rectification at its expense and to the reasonable requirements of the surface and sub-surface structure owner(s) within three (3) months of completion of the post-dilapidation surveys unless another timeframe is agreed with the owner of the affected surface or sub-surface structure.	Applicable	Applicable	Applicable	Applicable
E109	The Proponent must establish an Independent Property Impact Assessment Panel before works that have the potential to result in property impacts commence. The Panel must comprise geotechnical and engineering experts independent of the design and construction team. The Panel will be responsible for independently reviewing Condition Survey Reports undertaken under Conditions E105 and E106, the resolution of property damage disputes, and the establishment of ongoing settlement and vibration monitoring requirements. The Secretary must be informed of the Panel Members prior to property impact.	Applicable	Applicable	Applicable	Not Applicable

	Either the affected owner or the Proponent may refer unresolved disputes arising from potential and/or actual property impacts to the Panel for resolution. All costs incurred in establishing and implementing the Panel must be borne by the Proponent regardless of which party makes a referral to the Panel.				
E110	The mitigation measures SE3, SE4 and SE5 in Chapter 29 of the EIS must be actioned for at least six (6) months following the final acquisition of residential and business-related properties.	Applicable	Applicable	Not Applicable	Not Applicable
E111	Land considered surplus to needs for the operation of the motorway, as identified in the documents listed in Condition A1, as well as the opportunity sites in Rozelle as identified in Appendix L (Volume 2F of the EIS) and land not occupied by operational infrastructure at construction site C7, and that is not retained by the Proponent, is to be considered residual land and managed in accordance with Condition E112.	Applicable	Applicable	Not Applicable	Not Applicable
E112	A Residual Land Management Plan (RLMP) must be prepared in consultation with the relevant council(s) and government agencies. The RLMP must be submitted to the Secretary for approval at least 12 months prior to the commencement of operation of the CSSI. The RLMP must identify (and consider), but not be limited to: a) identification and illustration of all residual land following construction of the CSSI, including the physical location, land use characteristics, size and adjacent land uses; b) identification of feasible uses for each piece of residual land guided by relevant environmental planning instruments and - i) the Eastern City District Plan (or where updated), ii) The Bays Precinct Urban Transformation Program (or where updated), iii) Parramatta Road Corridor Urban Transformation Strategy, and iv) other strategic planning documents applicable to any residual land from the CSSI; c) identification of residual land that does not have feasible development potential; and d) timeframes for implementing the various components of the RLMP.	Applicable	Applicable	Not Applicable	Not Applicable

E113	Residual land that is to be used for a public use and/or transferred to a public authority is to be in a condition suitable for end use that does not incur additional cost to the public authority to reasonably rehabilitate the land for the future development identified in the RLMP.	Applicable	Applicable	Not Applicable	Not Applicable
E114	All residual land identified for open space uses in accordance with an approved RLMP must be made available to the relevant council or public authority within 12 months of the completion of construction.	Applicable	Applicable	Not Applicable	Not Applicable
E115	All residual land is to be managed in accordance with the maintenance requirements of the UDLP until such time as it is transferred to a differing owner or authority in accordance with the RLMP, unless otherwise agreed with the Secretary (and any relevant authority to own the land).	Applicable	Applicable	Not Applicable	Not Applicable
E116	The CSSI must be constructed in a manner that minimises visual impacts of construction sites, including, providing temporary landscaping and vegetative screening of the construction sites, minimising light spill, and incorporating architectural treatment and finishes within key elements of temporary structures that reflect the context within which the construction sites are located.	Applicable	Applicable	Applicable	Applicable
E117	The Proponent must investigate, and implement where reasonable, opportunities to consolidate operational ancillary facilities at the Rozelle Rail Yards to maximise the amount of open space across the site.	Not Applicable	Applicable	Not Applicable	Not Applicable
E117A	The façade of the high voltage switch room facing Victoria Road at Iron Cove must be articulated and landscaped to reduce its visual impact, unless otherwise approved in the UDLP.	Not Applicable	Applicable	Not Applicable	Not Applicable
E117B	Façades of operational buildings and walls at Iron Cove that are adjacent to or adjoin residential properties must be designed and have finishes that are sympathetic with the surrounding residential neighbourhood.	Not Applicable	Applicable	Not Applicable	Not Applicable
E117C	The stair access to the underground ventilation facility at Iron Cove must be designed and sited to optimise the extent of useable surplus land along Victoria Road.	Not Applicable	Applicable	Not Applicable	Not Applicable
E118	The ventilation outlets at Rozelle and Iron Cove must incorporate a living vertical garden over their total areas. Notwithstanding, a reduced coverage or an alternative living green design treatment (such as wall climbers or landscape shielding) can be implemented subject to review by the Design Review Panel. The green elements are to be an integrated part of the architectural composition in aesthetic balance with the non-green elements and addressing key view corridors.	Not Applicable	Applicable	Not Applicable	Not Applicable

E119	The design of the landscape verge associated with the Iron Cove Link (Area 01, figure 5.24 of Appendix L, Volume 2F of the EIS) must maximise planting opportunities.	Not Applicable	Applicable	Not Applicable	Not Applicable
E120	A pedestrian and cycling green link, as described in Modification 2 Report and amended by Modification 2 Amendment Report, to be provided from the Rozelle Rail Yards to the Rozelle Bay light rail stop, must have adequate soil depth to facilitate planting along the majority of the bridge with a diverse range of vegetation. 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, unless otherwise agreed by the Secretary.	Not Applicable	Applicable	Not Applicable	Not Applicable
E121	The mouth of Whites Creek north east of The Crescent and to the west of the proposed utilities bridge, must not be fully enclosed. Infrastructure over this section of the creek must be limited to the utilities bridge / shared user path, unless otherwise agreed by the Secretary.	Not Applicable	Applicable	Not Applicable	Not Applicable
E122	The Proponent must construct and operate the CSSI with the objective of minimising light spillage to residential properties. All lighting associated with the construction and operation of the CSSI must 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. Notwithstanding, the Proponent must provide mitigation measures to manage any residual night lighting impacts to protect properties adjoining or adjacent to the CSSI, in consultation with affected landowners.	Applicable	Applicable	Applicable	Applicable
E122A	The Proponent must implement measures, in consultation with affected residents, to prevent headlights from vehicles exiting the G-Loop spilling onto residences in the vicinity of the intersection of Dobroyd Parade / Wattle Street / Waratah Street.	Applicable	Not Applicable	Not Applicable	Not Applicable
E123	The Proponent must construct and operate the CSSI with the objective of avoiding adverse or distracting lighting configuration, spillage or intensity to aircraft operations. All lighting associated with the construction and operation of the CSSI must adhere to the Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer (CASA, 1999) and National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (DIRD, 2012). Notwithstanding, the Proponent must provide mitigation measures to manage any residual night lighting impacts to protect aircraft operations, in consultation with CASA and DIRD.	Applicable	Applicable	Not Applicable	Not Applicable
E124	Notwithstanding Condition E123, the Proponent must consult with CASA, DIRD and Sydney Airport Operators prior to the commencement of construction to determine the need and potential positioning	Applicable	Applicable	Not Applicable	Not Applicable

	of aviation hazard lighting on any equipment or built form component associated with the CSSI where such consultation deems it necessary.				
E125	The Proponent must establish a Design Review Panel during detailed design and prior to construction.	Applicable	Applicable	Not Applicable	Not Applicable
E126	During design development of the CSSI, the Design Review Panel must review the design (excluding the tunnels between portals) to assess whether it is consistent with the commitments and outcomes made in the documents listed in Condition A1.	Applicable	Applicable	Not Applicable	Not Applicable
E127	The Design Review Panel must be given the opportunity to and may review and refine the design objectives for place making, public realm and urban and heritage interpretation applicable to the length of the project and provide advice on the application of the objectives to key design elements in relation to place making, architecture, heritage, urban and landscape design and public art and aesthetic aspects of the CSSI. The Panel must be given the opportunity to also review the Urban Design and Landscape Plan(s) prior to these being submitted to the Secretary. Evidence of this review and the Proponent's consideration of the review is to be provided to the Secretary. Where the Panel has decided to not review a plan, it must provide a written statement to this effect.	Applicable	Applicable	Not Applicable	Not Applicable
E128	The Design Review Panel must be comprised of, a suitably qualified, experienced and independent professional in each of the fields of: a) architecture; b) urban design; c) landscape design; and d) Aboriginal cultural heritage and non-Aboriginal heritage. The NSW Government Architect (or representative) is to be the Chair of the Panel. The Proponent and its contractor(s) are to be invited onto the Panel as observers only and to provide technical advice. The Proponent is to provide independent secretarial resources to the Panel. The Design Review Panel may seek specialist advice from Infrastructure NSW (when the Panel convenes to discuss matters relating to the Rozelle Rail Yards and its surrounds).	Applicable	Applicable	Not Applicable	Not Applicable

E129	The Design Review Panel members must be nominated by the Proponent and approved by the Secretary in accordance with the timeframes in Condition E125.	Applicable	Applicable	Not Applicable	Not Applicable
E130	Nomination and appointments of the Design Review Panel must comply with the Public Service Commission's Appointment Standards: Boards and Committees in the NSW Public Sector guideline.	Applicable	Applicable	Not Applicable	Not Applicable
E131	Once the Design Review Panel is composed, and prior to the detailed design of the CSSI, a Design Review Panel Terms of Reference is to be developed and endorsed by all panel members. The Terms of Reference must be submitted to the Secretary for information and: a) establish best practice governance and protocols for the operation of the Design Review Panel; b) include a Code of Conduct; c) outline the agreed frequency of Design Review Panel meetings, coordinated with Proponent program requirements, to ensure timely advice and design adjustment; and d) outline secretariat functions and administration including the recording and storing of meeting agendas, minutes and actions. Details on the design and landscaping should be presented to the Design Review Panel by the suitably qualified and experienced urban design and landscape specialists who have been engaged on the CSSI.	Applicable	Applicable	Not Applicable	Not Applicable
E132	The Design Review Panel is to be operated and managed in accordance with the approved Design Review Panel Terms of Reference and in accordance with the NSW Government Boards and Committees Guidelines (Department of Premier and Cabinet, September 2015).	Applicable	Applicable	Not Applicable	Not Applicable
E133	An Urban Design and Landscape Plan(s) (UDLP) must be prepared based on the detailed design, and in accordance with the project objectives, and the commitments made in Chapters 13 and 29 of the EIS and updated in Part E of the SPIR.	Applicable	Applicable	Not applicable (design detailed in E58 report, and appended to UDLP)	Applicable
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 NSW, the community and affected landowners and businesses. The UDLP(s) must include, but not necessarily be limited to:	Applicable (Partial - the Urban Design	Applicable	Not Applicable	Applicable

	Objectives, Principles and Standards a) demonstrated consideration of design objectives, principles and standards including: i) local environmental and heritage values, ii) urban design context, iii) sustainable design and maintenance, iv) community safety, amenity and privacy including 'safer by design' principles where relevant, v) relevant design standards and guidelines, vi) prioritising the visual amenity and values of adjoining receivers over the road user experience, vii) minimising the footprint of the project (including operational facilities), and viii) the urban design principles outlined in the document referred to in Condition A1, and ix) the urban design principles outlined in Better Placed and Greener Places by the NSW Government Architect; and x) DRP review. Consultation b) details of where and how recommendations from the Design Review Panel have been incorporated into the plan; c) evidence of consultation with the relevant council(s), Infrastructure NSW and the community on the proposed urban design and landscape measures, prior to finalisation of the UDLP, and details of how the outcomes of this consultation have informed the development of the UDLP; Context and Form d) an analysis of the built, natural and community context and the urban design objectives, principles and standards for the CSSI;	and Landscape Plan for Mainline tunnels will not address Part (f)(ii), Part (f)(iii), Part (g), Part (h), Part (l)(i), Part (l)(ii), Part (i), Part (n), Part (q)).			(Urban Design and Landscape Plan will be updated to reflect Stage 4 design enhancements)

	e) detailed consideration of integration and continuity with urban design and landscape outcomes for the M4 East and New M5 projects taking into account the respective UDLP(s) for each project; f) landscaping (soft and/or hard) and building and bridge design opportunities to mitigate the visual impacts of road and active transport infrastructure and operational fixed facilities (including ventilation outlets, tunnel portals, Motorway Operations Complexes, noise walls and The Crescent overpass (and related pedestrian and cycling green link, traffic islands and medians).), including: i) building placement, designs and landscaping that are reflective of the local built form, ii) a living vertical garden(s) or alternative treatment for ventilation outlets consistent with the requirements of Condition E118, iii) enhancing the amenity and interface between the pedestrian and cycling green link, light rail stop and shared user path ramp, to provide a sense of place; Access g) the Pedestrian and Cycle Implementation Strategy identified in Condition E60; h) the following interim park infrastructure must be provided at Rozelle Rail Yards to support passive recreational uses of the land: toilet facilities, seating, bins and bicycle parking; i) details of staging to maximise progressive public access and use of the Rozelle Rail Yards site; Design j) the design of the project landform and earthworks; k) the design of the CSSI elements including their form, materials and detail (including the City West Link pedestrian and cycling green link identified in Condition E120); l) a description of the CSSI design features, including graphics such as sections, perspective views and sketches of key elements of the CSSI; (i) visualisations (from a distance and within the intersections) of The Crescent overpass, the pedestrian and cycling green link, shared user path ramp and the at-grade pedestrian and cyclist crossing of The Crescent, and;				

	(ii) cross sections showing the full width of The Crescent between Johnston Street and The Crescent/City West Link intersection; m) visual screening requirements; n) development and delivery of public art opportunities throughout the Rozelle Rail Yards and where possible within the construction footprint surrounding the intersection of The Crescent and City West Link using local artists; o) demonstrated integration of Crime Prevention Through Environmental Design principles into the detailed design process; Lighting p) an assessment of the location, design and impacts of operational lighting associated with the CSSI and measures proposed to minimise lighting impacts in accordance with Conditions E122, E123 and E124; q) development of a Rozelle Rail Yards Lighting and Wayfinding Strategy that provides for effective, safe and innovative lighting and wayfinding throughout the Rozelle Rail Yards land and that also explores lighting as a public art opportunity whilst ensuring adherence to conditions E122, E123 and E124; Heritage r) the location of existing heritage items; s) information on the reuse of heritage items and items of significance to the urban form and landscape character including identification of opportunities for interpretative and innovative reuse of salvaged items from the Rozelle Rail Yards to ensure the character of the land remains connected to previous and surrounding industrial, transport and maritime land uses; Landscaping t) a description of disturbed areas (including construction ancillary facilities) and details of the strategies to progressively rehabilitate, regenerate and/or revegetate these areas; u) details on the location of existing vegetation and proposed landscaping (including use of endemic and advanced tree stock where appropriate). Details of species to be replanted/revegetated must be provided, including their appropriateness to the areas and habitat for threatened species;				

	v) demonstrated integration of water-sensitive urban design principles into the detailed design process and maximisation of integration of existing and enhanced water features into the open space features of the site including enhancements to Whites Creek and other waterways as well as the constructed wetland; Implementation and monitoring w) the timing for implementation of access, landscape and open space initiatives; and x) monitoring and maintenance procedures for the built elements, rehabilitated vegetation and landscaping (including weed control) including performance indicators, responsibilities, timing and duration and contingencies where rehabilitation of vegetation and landscaping measures fail.				
E135	The Urban Design and Landscape Plan(s), and its sub-plans, must be reviewed by the Design Review Panel. The Proponent must respond to the outcomes of the Design Review Panel's review and submit the UDLP to the Secretary for approval no later than one (1) month prior to the construction of permanent built surface works that are the subject of the Urban Design and Landscape Plan(s) (in the area to which the UDLP applies) or earth works for the final surface contouring of the Rozelle Rail Yards open space, whichever is the sooner.	Applicable	Applicable	Not Applicable	Partially Applicable DRP Chair endorsement
E136	Construction of permanent built works or landscaping that are the subject of the Urban Design and Landscape Plan must not be commenced (in the area to which the UDLP applies) until the Urban Design and Landscape Plan(s) has been approved by the Secretary, after taking into consideration advice received from the Design Review Panel.	Applicable	Applicable	Not Applicable	Applicable
E137	The Urban Design and Landscape Plan(s), as approved by the Secretary, must be implemented during construction, as required, and operation.	Applicable	Applicable	Not Applicable	Applicable
E137A	The Urban Design and Landscape Plan (UDLP) must be updated to include the interim design of the Northcote Street permanent closure. A copy of the UDLP must be provided to the Planning Secretary and relevant council for information within one (1) month of commencement of the works.	Applicable	Not Applicable	Not Applicable	Not Applicable
E137B	The UDLP must be updated for the final design of Northcote Street in consultation with the relevant council and be reviewed by the Design Review Panel in accordance with Condition E135. The UDLP must be submitted to the Planning Secretary one (1) month prior to the construction of permanent works that relate to the urban design, no more than two (2) years from the approval date of	Applicable	Not Applicable	Not Applicable	Not Applicable

	Modification 7, or another time as agreed by the Planning Secretary. The final design must have regard to: a) the Haberfield heritage conservation area, b) integration with the existing streetscape and development on adjoining sites (actual or planned) c) interface with Parramatta Road, and d) improved geometry for the turnaround of vehicles on Northcote Street.				
E138	Existing residential properties (and approved residential developments, at the time of this approval) that are affected by overshadowing from the CSSI (including any noise mitigation measures) are to receive a minimum of three (3) hours of direct sunlight in habitable rooms and in at least 50% of the principal private open space area between 9:00 am and 3:00 pm on 21 June. Such properties must be identified for further consideration by the Proponent in a Solar Access and Overshadowing Report which addresses compliance with these requirements. The Solar Access and Overshadowing Report must be reviewed by the Design Review Panel. The Proponent must respond to the outcomes of the Design Review Panel's review and then submit the Report to the Secretary prior to the commencement of construction of any structures that may cause overshadowing of residential premises, whenever is the sooner and must include: a) identification of potentially affected properties; b) assessment of the detailed design's compliance at each property, informed by – i) a review of the habitable rooms within structures, ii) the size and nature of private open spaces, and iii) shadow diagrams in plan and elevation at hourly intervals between 9:00 am and 3:00 pm on 21 June; and c) a consultation plan to detail how potential impacts and mitigation measures will be discussed and negotiated with potentially affected landowners in the event that compliance with this condition is not achieved. Where existing residential development currently receives less than the required amount of solar access, existing access to sunlight should not be unreasonably reduced.	Applicable	Applicable	Not Applicable	Not Applicable

	Where affected properties include dwellings held under strata or community title, this condition must be interpreted in relation to individual units within those properties.				
E139	The ongoing maintenance and operation costs of urban design, open space, landscaping and recreational items and works implemented as part of this approval will remain the Proponent's responsibility until satisfactory arrangements have been put in place for the transfer of the asset to the relevant authority. Prior to the transfer of assets, the Proponent will maintain items and works to at least the design standards established in the Urban Design and Landscape Plan, and its sub-plans, required by Condition E133.	Applicable	Applicable	Applicable	Applicable
E140	A Utilities Management Strategy must be prepared and implemented for all utility works. The Strategy must identify how utility works will be defined and managed. The Utilities Management Strategy must include: a) a definition of low impact utility work. The definition must consider parameters including, but not limited to, type of works, duration of works, hours of works, noise impacts, and traffic and access impacts; b) the functions of the Utility Coordination Manager as required by Condition E141; c) a description of all utility works to be undertaken, including low impact utility works and how they meet the definition in subclause (1); and d) the management measures that will be implemented to manage dust, noise, traffic, access and lighting impacts associated with low impact utility works. The Utilities Management Strategy must be submitted to the Secretary for approval at least one (1) month prior to the commencement of low impact utility works. *Note: Utility works that are not low impact are construction and appropriate management measures would be included in the CEMP.*	Applicable	Applicable	Not Applicable	Not Applicable
E141	A Utility Coordination Manager must be appointed for the duration of the CSSI works. The role of the Utility Coordination Manager must include, but not be limited to: a) the management and coordination of all utility works associated with the delivery of the CSSI, to ensure respite is provided to the community, as required under Condition E75;	Applicable	Applicable	Not Applicable	Not Applicable

	b) providing advice to the Public Liaison Officer(s), regarding upcoming utility works, including the scope of the works and responsibility for the works; and c) investigating complaints received from the Community Complaints Mediator or the Public Liaison Officer(s), relating to utility works, and providing a response to the Community Complaints Mediator or Public Liaison Officer(s).				
E142	Prior to operation, the Proponent must prepare an Emergency Response Plan, in consultation with FRNSW and NSW Police Force. The Emergency Response Plan must include, but not be limited to: a) protocols and procedures to be followed during emergency situations associated with the operation of the project (including fires, explosions and, for the purposes of this condition, vehicle collisions). The protocols and procedures are to take into account the needs of people with a disability or who may experience access problems in emergency situations; b) details of traffic management measures to be implemented during emergencies, where appropriate, to minimise the potential for escalation of the emergency; c) design and management measures for containment of contaminated fire-fighting water, fuel spills and gaseous combustion products; d) details of a training and testing program to ensure that - i) all operational staff familiar with the Emergency Response Plan, and ii) coordination with FRNSW and NSW Police is regularly exercised; and e) provision for a simulated emergency response exercise, including the Proponent, FRNSW and NSW Police, to be conducted in accordance with the approved Emergence Response Plan on at least one occasion prior to the opening of the tunnel to traffic. The time for the exercise is to be agreed by the participants.	Applicable	Applicable	Not Applicable	Not Applicable
E143	Fire simulation and hot smoke testing must be undertaken as part of the simulated emergency response exercise to be staged prior to opening of the project to traffic as required in Condition E142façade. The Proponent must respond in writing to any recommendations made by FRNSW and NSW Police as a result of the exercise.	Applicable	Applicable	Not Applicable	Not Applicable

E144	The Proponent must undertake annual Hazard Reviews of the project for the first five (5) years of operation. The Hazard Review must detail all hazardous incidents that have occurred during the preceding period, identify safety measures required to rectify those incidents, and address any ongoing issues. The first Hazard Review must be undertaken for the first three (3) months of operation after the opening of the project to traffic. Subsequent Hazard Reviews must be undertaken for the following nine (9) months and thereafter at 12 monthly intervals. FRNSW may also direct the Proponent to undertake a Hazard Review following any major incident in the tunnel.	Applicable	Applicable	Not Applicable	Not Applicable
E145	A Hazard Review Report, outlining the results of the Hazard Review, and any proposed additional safety measure(s) to be implemented in response to the findings of the Hazard Review, must be submitted to FRNSW no later than one (1) month after the review period. The Proponent must respond in writing to any recommendation made by FRNSW in relation to the findings of a Hazard Review, within such time as may be agreed to by FRNSW.	Applicable	Applicable	Not Applicable	Not Applicable
E146	The Proponent must develop a Fire Engineering Brief and Fire Engineering Report to address fire and life safety in the tunnel, in consultation with FRNSW. The documents must be prepared prior to finalising the relevant design details for the tunnel. The documents must outline fire protection systems and other tunnel equipment, systems, and operational protocols required for fire and smoke management. The Proponent must respond in writing to any recommendation made by FRNSW in relation to the Fire Engineering Brief and Fire Engineering Report, within such time as may be agreed by FRNSW.	Applicable	Applicable	Not Applicable	Not Applicable
E147	In developing the Fire Engineering Brief and Fire Engineering Report, the Proponent must undertake a detailed Fire Engineering Study in accordance with Australian Building Codes Board codes and guides, and Fire Safety Engineering Guidelines. Detailed design of the tunnel must incorporate the design and operational measures developed in the Fire Engineering Study to minimise the potential for, and effect of, fire and hazardous material incidents in the tunnel. The final design of the tunnel in relation to the fire and life safety features must be verified against the Fire Engineering Study in consultation with FRNSW by an Accredited Fire Engineer.	Applicable	Applicable	Not Applicable	Not Applicable

E148	Prior to the opening of the project to traffic, a full audit of the fire and life safety system as defined by the Fire Engineering Study required by Condition E147 must be undertaken by an Accredited Fire Engineer. The objective of the audit must be to ensure that all design and operational measures outlined in the fire engineering study has been installed, are operational, and achieve the required design criteria. The results of the audit must be submitted to FRNSW prior to opening of the project to traffic. The Proponent must respond in writing to any recommendations resulting from the FRNSW review of the audit.	Applicable	Applicable	Not Applicable	Not Applicable
E149	A detailed maintenance-testing program outlining the methods of testing the fire and life safety systems and schedule for implementation must be developed in consultation with FRNSW prior to opening of the project to traffic. The Proponent must respond in writing to any recommendations made by FRNSW.	Applicable	Applicable	Not Applicable	Not Applicable
E150	Maintenance testing of fire and life safety systems must be undertaken at least annually, or any other interval as required by the design engineer and in consultation of FRNSW. Results of maintenance testing must be made available to FRNSW for review, and the Proponent must respond in writing to any recommendations from FRNSW to ensure the reliability of the fire and life safety systems.	Applicable	Applicable	Not Applicable	Not Applicable
E151	The CSSI must be designed so that the following flooding characteristics are not exceeded on adjacent lands / properties: a) a maximum increase in inundation time of one hour in a 1 in 100 year ARI rainfall event; b) a maximum increase of 10 mm in inundation at properties where floor levels are currently exceeded in a 1 in 100 year ARI rainfall event; c) a maximum increase in 50 mm in inundation at properties where floor levels would not be exceeded in a 1 in 100 year ARI rainfall event; and d) no inundation of floor levels which are currently not inundated in a 1 in 100 year ARI rainfall event.	Applicable	Applicable	Not Applicable	Not Applicable

E152	Flood information including flood reports, models and geographic information system outputs, and work as executed information from a registered surveyor certifying finished ground levels and the dimensions and finished levels of all structures within flood prone land, must be provided to the relevant council(s) and the SES. The relevant council(s) and the SES must be notified in writing that the information is available no later than one (1) month following the completion of construction and be provided with that information. Information requested by the relevant council(s) or the SES must be provided no later than six (6) months following the completion of construction or within another timeframe agreed with the relevant council(s) and the SES.	Applicable	Applicable	Not Applicable	Not Applicable
E153	The Proponent must prepare a Flood Review Report(s) after the first defined flood event for any of the following flood magnitudes – the 5 year ARI event, 20 year ARI event, 100 year ARI event and probable maximum flood – to assess the actual flood impact against that predicted in the documents referred to in Condition A1. The Flood Review Report(s) must be prepared within three (3) months of each flood event. The report(s) must prepared by an appropriately qualified person(s) and include: a) identification of the properties and infrastructure affected by flooding during the reportable event; b) a comparison of the actual extent, level, velocity and duration of the flooding event against the impacts predicted in the documents referred to in Condition A1 and the requirements specified in Condition E151; and c) where the actual extent and level of flooding exceed the predicted level and / or the requirements specified in Condition E151, with the consequent effect of adversely impacting on property(s), structures and infrastructure, identification of the measures to be implemented to reduce future impacts of flooding related to the CSSI works, including the timing and responsibilities for implementation. Flood mitigation measures must be developed in consultation with the affected property / structure / infrastructure owners and the relevant council(s). A copy of the Flood Review Report(s) must be submitted to the Secretary and relevant council(s) within one (1) months of finalising the report(s).	Applicable	Applicable	Not Applicable	Not Applicable
E154	The Proponent must not destroy, modify or otherwise physically affect any heritage items, including human remains, outside of the CSSI boundary, or undertake works in or on Alexandra Canal.	Applicable	Applicable	Applicable	Applicable

E155	The Proponent must not to harm, modify, or otherwise impact human remains uncovered during the construction of the CSSI.	Applicable	Applicable	Applicable	Applicable
E156	Identified impacts to heritage items and heritage conservation areas must be minimised through both detailed design and construction. The measures for ensuring this are to be detailed in the Construction Non-Aboriginal Heritage Management Sub-Plan and Aboriginal Cultural Heritage Management Sub-Plan required by Conditions C4(g) and (h), respectively.	Applicable	Applicable	Applicable	Partially Applicable
E157	An Unexpected Heritage Finds Procedure must be prepared: a) to manage unexpected heritage finds in accordance with any guidelines and standards prepared by the Heritage Council of NSW or OEH; and b) by a suitably qualified and experienced heritage specialist. The Procedure must be included in the Construction Non-Aboriginal Heritage Management Sub-plan and Aboriginal Cultural Heritage Management Sub-Plan required by Conditions C4(g) and (h). *Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.*	Applicable	Applicable	Applicable	Applicable
E158	The Proponent must not destroy, modify or otherwise cause direct damage to the following items: a) Southern Penstock associated with White Bay Power Station; and b) 5 Lilyfield Road, Rozelle.	Not Applicable	Applicable	Not Applicable	Not Applicable
E159	The Proponent must undertake a condition survey of the Southern Penstock and establish and maintain a suitable exclusion zone around the penstock for the duration of construction. The extent of the exclusion zone must be determined in consultation with the Heritage Division of OEH.	Not Applicable	Applicable	Not Applicable	Not Applicable
E160	The Proponent must investigate the feasibility of retaining Cadden Le Messurier (84 Lilyfield Road), Former Hotel (78 Lilyfield Road) and tfaçadeade of the former Bank of NSW building (164 Parramatta Road) during detailed design.	Applicable –Partial - the Mainline tunnels will not address this condition for the properties	Applicable –Partial - the Rozelle interchange will not address this condition for	Not Applicable	Not Applicable

		at 84 Lilyfield Road or 78 Lilyfield Road)	the property at 164 Parramatta Road)		
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. The consultation process must include consultation on the final design and location of the works. All reasonable steps must be undertaken to ensure that the lateral extent and degree of impact to the canal fabric is minimised.	Not Applicable	Applicable	Not Applicable	Not Applicable
E162	Prior to conducting acoustic treatment at any heritage item identified in the documents listed in Condition A1 the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work minimises any adverse impacts on the heritage significance of the item.	Applicable	Applicable	Not Applicable	Not Applicable
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. Archival recording must be undertaken by a suitably qualified heritage specialist and prepared in accordance with NSW Heritage Office's How to Prepare Archival Records of Heritage Items (1998) and Photographic Recording of Heritage Items Using Film or Digital Capture (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).	Applicable	Applicable	Not Applicable	Not Applicable

E164	Archival recording as required by Condition E163 must also be undertaken for the Cadden Le Messurier, former Hotel and the former Bank of NSW building, should these structures be demolished, and for The Crescent Mural at Annandale. Note: The Crescent Mural must not be destroyed.	Applicable –Partial - the Mainline tunnels will not address this condition for the properties at 84 Lilyfield Road,78 Lilyfield Road or The Crescent Mural)	Applicable –Partial - the Rozelle interchange will not address this condition for the property at 164 Parramatta Road)	Not Applicable	Not Applicable
E165	Following archival recording as required by Condition E163, and prior to demolition, the Proponent must assess options for sympathetic reuse (including integrated heritage displays and interpretation) on the project or other options for conservation, including architectural salvage for re-use in comparable buildings and display. Where salvage supports good conservation outcomes, the material is to be collected and stored in suitable repository locations established in consultation with relevant council(s). The salvage from any State-listed items or elements must be determined in consultation with the Heritage Division of OEH. Any residual items and materials are to be made available, through a process to be developed by the Proponent in consultation with the relevant council(s), to landowners within the locality from where the material originated.	Applicable	Applicable	Not Applicable	Not Applicable
E166	The Proponent must investigate options for utilising salvaged rail related infrastructure from the Rozelle Rail Yards into the landscaping of the Rozelle Rail Yards. How the items are to be used is to be detailed in the Urban Design and Landscape Plan required by Condition E133.	Not Applicable	Applicable	Not Applicable	Not Applicable
E167	The Proponent must prepare a Heritage Interpretation Plan, as committed to in the SPIR (NAH02) which identifies and interprets the key heritage values and stories of heritage items and heritage conservation areas impacted by the CSSI. The Heritage Interpretation Plan must include, but not be limited to:	Applicable	Applicable	Not Applicable	Not Applicable

	a) a discussion of the key interpretive themes, stories and messages proposed to interpret the history and significance of the affected heritage items and sections of heritage conservation areas; and b) identification of interpretive initiatives implemented to mitigate impacts to archaeological relics, heritage items and conservation areas affected by the CSSI.				
E168	Prior to works that have a direct material impact on a Historical Archaeological Management Unit (HAMU), the Proponent must engage a suitably qualified archaeologist whose experience complies with the Heritage Council of NSW's Criteria for Assessment of Excavation Directors (July, 2011) (referred to as the Excavation Director) to oversee and advise on matters associated with historic archaeology and to prepare an Historical Archaeological Research Design and Excavation Methodology.	Applicable	Applicable	Applicable if triggered	Applicable if triggered
E169	The Historical Archaeological Research Design and Excavation Methodology must to be submitted to the Heritage Council of NSW (or its delegate) for review and comment prior to finalisation. The Historical Archaeological Research Design and Excavation Methodology must: a) be consistent with the NSW Heritage Council's Archaeological Assessments Guideline (1996) or as updated; b) provide for the detailed analysis of any heritage items discovered during the investigations; c) include management options for discovered heritage items, whether known or unexpected finds (including options for avoidance, salvage, relocation and display); d) for unexpected finds that are determined to be relics, set out the assessment process that will determine an appropriate archaeological response to managing their significance; e) include procedures for notifying the Heritage Council of NSW (or its delegate) and Secretary of any relic findings; and f) if the findings of the investigations are significant, provide for the preparation and implementation of a Heritage Interpretation Plan, as required under Condition E167.	Applicable	Applicable	Partially Applicable (implement Historical Archaeological Research Designs covering Historical Archaeological Management Units 4 (Victoria Road/City West Link) and 8 (Iron Cove).	Not Applicable
E170	Where excavation works are required in the vicinity of potential archaeological sites, the Excavation Director must be consulted to advise on how the works are to be managed and any archaeological impact minimised. The Excavation Director must be given the authority to advise on the duration and extent of oversight required during excavation.	Applicable	Applicable	Applicable if triggered	Not Applicable

E171	Works within the vicinity of the find must not recommence until the relevant requirements of the Historical Archaeological Research Design and Excavation Methodology or advice on unexpected finds from the Excavation Director have been met.	Applicable	Applicable	Applicable if triggered	Applicable if triggered
E172	The Proponent must prepare an Archaeological Excavation Report containing the findings of any excavations, including artefact analysis and the identification of a final repository of any finds. The report must be submitted to the Secretary within 12 months of completing all archaeological investigations. The Archaeological Excavation Report must also be submitted to the Heritage Council of NSW, the local library and the local Historical Society in the relevant local government area(s). A copy of the Archaeological Excavation Report must be retained with the relics at all times.	Applicable	Applicable	Applicable if triggered	Not Applicable
E173	The Proponent must take all reasonable steps so as not to harm, modify or otherwise impact any Aboriginal object associated with the CSSI except as authorised by this approval.	Applicable	Applicable	Applicable	Applicable
E174	The clearing of native vegetation must be minimised with the objective of reducing impacts to any threatened species, populations and ecological communities to the greatest extent practicable. Impacted vegetation must be rehabilitated with endemic species (in the first instance) and locally native species to the greatest extent practicable.	Applicable	Applicable	Applicable	Not Applicable
E175	Prior to removing/clearing any vegetation, or demolition of structures identified as potential roosting sites for microbats, pre-clearing/demolition inspections for microbats and threatened species must be undertaken. The inspections, and any subsequent relocation of species and associated management/offset measures, must be undertaken under the guidance of a suitably qualified and experienced ecologist. Surveys for the presence of microbat roosting must be undertaken to cover the period of roosting, under guidance of a suitably qualified and experienced. Survey methodologies must be incorporated into the Construction Flora and Fauna Management Sub-plan required under Condition C4 and Site Establishment Management Plan required under Condition C22, as relevant.	Applicable	Applicable	Applicable if triggered	Not Applicable
E176	The Proponent must prepare a Microbat Management Strategy in the case that microbats or evidence of roosting are identified during pre-clearing/demolition surveys. The strategy must detail short- and long-term measures to avoid, minimise and mitigate impacts to these species.	Applicable	Applicable	Not Applicable	Not Applicable
E177	The CSSI must be designed to retain as many trees as possible. Where trees are to be removed, the Proponent must provide a net increase in the number of replacement trees. Replacement trees must be planted within, and on public land up to 500 metres from the CSSI boundary. Replacement tree plantings can be undertaken beyond 500 metres on public land within the local government areas to which the CSSI approval applies if no more plantings are practicable within and up to 500 metres	Applicable	Applicable	Not Applicable	Applicable

	from the CSSI boundary. The location of the trees must be determined in consultation with the relevant authority(s).				
E178	Replacement trees are to have a minimum pot size of 75 litres except where the plantings are consistent with the pot sizes specified in a relevant authority's plans / programs / strategies for vegetation management, street planting, or open space landscaping, or as agreed by the relevant authority(s).	Applicable	Applicable	Applicable	Applicable
E179	The Proponent must submit to the Secretary a report which details the type, size, number and location of replacement trees. The report must demonstrate how any replacement plantings with a pot size less than 75 litres are consistent with the requirements of Condition E178. The report must be submitted to the Secretary one (1) month prior to operation.	Applicable	Applicable	Applicable	Applicable
E180	All reasonably practicable erosion and sediment controls must be installed and appropriately maintained to minimise any water pollution. When implementing such controls, any relevant guidance in the Managing Urban Stormwater series must be considered.	Applicable	Applicable	Applicable	Applicable
E181	A Site Contamination Report, documenting the outcomes of Phase 1 and Phase 2 contamination assessments of land upon which the CSSI is to be carried out, that is suspected, or known to be, contaminated must be prepared by a suitably qualified and experienced person in accordance with guidelines made or approved under the Contaminated Land Management Act 1997 (NSW).	Applicable	Applicable	Not Applicable	Not Applicable
E182	If a Site Contamination Report prepared under Condition E181 finds such land contains contamination, a site audit is required to determine the suitability of a site for a specified use. If a site audit is required, a Site Audit Statement and Site Audit Report must be prepared by a NSW EPA Accredited Site Auditor. Contaminated land must not be used for the purpose approved under the terms of this approval until a Site Audit Statement is obtained that declares the land is suitable for that purpose and any conditions on the Site Audit Statement have been complied with.	Applicable	Applicable	Not Applicable	Not Applicable
E183	A copy of the Site Audit Statement and Site Audit Report must be submitted to the Secretary and relevant council for information no later than one (1) month prior to the commencement of operation.	Applicable	Applicable	Not Applicable	Not Applicable
E184	An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared and must be followed should unexpected contaminated land or asbestos be excavated or otherwise discovered during construction.	Applicable	Applicable	Applicable	Applicable

E185	The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.	Applicable	Applicable	Applicable	Applicable
E186	The CSSI construction water treatment plant discharge criteria must comply with the ANZECC (2000) 90 per cent species protection level unless an EPL is in force in respect to the CSSI. Discharge criteria for iron during construction must comply with the ANZECC (2000) recreational water quality criteria.	Applicable	Applicable	Not Applicable	Not Applicable
E187	The CSSI operational water treatment plant discharge criteria must comply with the ANZECC (2000) 95 per cent species protection level and a 99 per cent protection level for contaminants that bioaccumulate unless other discharge criteria are agreed in consultation with relevant stakeholders including EPA, DPI Water and Sydney Water. Discharge criteria for iron during operation must comply with the ANZECC (2000) recreational water quality criteria.	Applicable	Applicable	Not Applicable	Not Applicable
E188	Drainage feature crossings (permanent and temporary watercourse crossings and stream diversions) and drainage swales and depressions must be undertaken in accordance with relevant guidelines and designed by a suitably qualified and experienced person.	Applicable	Applicable	Not Applicable	Applicable
E189	Works on waterfront land must be undertaken in accordance with DPI controlled activity guidelines.	Applicable	Applicable	Not Applicable	Not Applicable
E190	The Proponent must take all practicable measures to limit operational groundwater inflows into each tunnel to no greater than one litre per second across any given kilometre (1L/s/km). Compliance with this condition cannot be determined by averaging groundwater inflows across the length of the tunnel.	Applicable	Applicable	Not Applicable	Not Applicable
E191	The Proponent must identify and commit to the implementation of ‘make good’ provisions for groundwater users in the event of a decline in water supply levels, quality and quantity from registered existing bores associated with groundwater changes from either construction and/or ongoing operational dewatering caused by the CSSI.	Applicable	Applicable	Not Applicable	Not Applicable
E192	The Proponent must undertake further modelling of groundwater drawdown, tunnel inflows and saline water migration (using particle tracking) prior to finalising the design of the tunnels and undertaking any works that would impact on groundwater flows or levels. The modelling must be undertaken in consultation with DPI Water and include the results and hydrogeological analyses of at least 12 continuous months of current baseline groundwater monitoring data from bores identified in the EIS and SPIR. The modelling must also include data from any other existing monitoring bores identified in consultation with DPI Water, as required to supplement baseline data.	Applicable	Applicable	Not Applicable	Not Applicable

E193	The results of the groundwater modelling must be documented in a Groundwater Modelling Report. The Groundwater Modelling Report must be finalised in accordance with the Australian Groundwater Modelling Guidelines (National Water Commission, 2012) and prepared in consultation with DPI Water. The Groundwater Modelling Report must include, but not be limited to: a) justification for layer choice; b) specification and justification of the grid based hydraulic conductivity and storage parameters (specific yield and specific storage) assigned to each layer and/or zone with reference to those values determined from data analyses and the literature; c) an explanation of how groundwater flow was simulated within each model layer with reference to confined, unconfined or variably saturated flow solutions; d) n explanation and justification of the drain-cell conductance term(s) applied to the tunnel boundaries to limit tunnel inflows; e) an explanation and justification of the groundwater recharge values applied across the model domain, including around the modelled specific yield values and the water table fluctuations observed within the monitoring data in response to rainfall-fed groundwater recharge; f) details (including figures) of the expected changes in groundwater flow directions in the vicinity of landfills, groundwater wells and surface water receptors; g) cross-section diagrams of geology showing baseline groundwater levels in the monitoring piezometres, and for the predicted baseline condition groundwater levels in 2030 and 2100; h) statistical evaluation of the model's calibration; i) details of the groundwater monitoring data inputs (levels and quality); j) details of the proposed groundwater model update and validation as additional data is collected; k) assessment of impacts of groundwater drawdown, taking into consideration the NSW Aquifer Interference Policy (DPI, 2012), including potential impacts on licensed bores and groundwater dependent ecosystems; l) a comparison of the results with the modelling results detailed in the documents referred to in Condition A1; and	Applicable	Applicable	Not Applicable	Not Applicable

	m) documentation of any additional measures that would be implemented to manage and/or mitigate groundwater impacts not previously identified. A copy of the Groundwater Modelling Report must be submitted to the Secretary prior to finalising the tunnel design. The Groundwater Modelling Report must include details of consultation with DPI Water.				
E194	The groundwater model must be updated once 24 months of construction groundwater monitoring data are available and the results of the updated modelling provided to the Secretary and DPI Water in an updated Groundwater Modelling Report.	Applicable	Applicable	Not Applicable	Not Applicable
E195	The Proponent must undertake further hydrological and hydraulic modelling based on the detailed design of the CSSI to determine the ability of the receiving drainage systems to effectively convey pavement drainage from the CSSI and include wastewater flows from operational water treatment plants where it is proposed to discharge these flows to the receiving drainage systems. The modelling must be undertaken in consultation with the relevant council(s) and Sydney Water and the outcomes documented in the **Stormwater Drainage Report** required under **Condition E196**.	Applicable	Applicable	Not Applicable	Not Applicable
E196	The **Stormwater Drainage Report** must be prepared at least one (1) month prior to the commencement of any new drainage works, modifications or connections to existing drainage works, construction of hard surfaces that are associated with the operation of the project and would result in runoff to existing stormwater drainage systems, and the discharge of wastewater flows from operational water treatment plants to existing stormwater drainage systems. The **Stormwater Drainage Report** must: a) assess the potential impacts of pavement drainage discharges from the CSSI drainage systems and wastewater flows from operational water treatment plants on the receiving environment and capacity of council or Sydney Water drainage infrastructure; b) identify all mitigation measures to be implemented where pavement drainage from the CSSI drainage systems or wastewater flows from operational water treatment plants are predicted to adversely impact on the receiving environment or capacity of council or Sydney Water drainage infrastructure; and c) set out a clear time frame for the implementation of mitigation measures. Nothing in this condition prevents the Proponent from preparing separate Stormwater Drainage Reports for pavement discharges or wastewater discharges from operational water treatment plants	Applicable	Applicable	Not Applicable	Not Applicable

	to the drainage system provided that each report is prepared at least one month prior to the subject works/discharges commencing.				
E197	All new or modified drainage systems associated with the CSSI must be designed to: a) meet the capacity constraints of any council's drainage system to receive and convey the proposed flows from the CSSI, or otherwise upgrade council's drainage system at the Proponent's expense, in consultation with the relevant council(s); b) minimise impacts on the receiving environment at the final outflow point resulting from any additional flow volume (including, but not limited to scour, flooding, water quality impacts, and impacts on riparian vegetation, aquatic ecology and property); and c) ensure mitigation measures are implemented where increased flows through cross drainage systems adversely impact on council or Sydney Water drainage infrastructure and the receiving environment.	Applicable	Applicable	Not Applicable	Not Applicable
E198	The Proponent must prepare a Water Reuse Strategy which sets out options for the reuse of collected stormwater and groundwater during construction and operation of the CSSI. The Water Reuse Strategy must include, but not be limited to: a) evaluation of reuse options; b) details of the preferred reuse option(s), including volumes of water to be reused, proposed reuse locations and/or activities, proposed treatment (if required), and any additional licences or approvals that may be required; and c) a time frame for the implementation of the preferred reuse option(s). The Water Reuse Strategy must consider public health risks from water recycling and must be managed to avoid misuse of recycled water as potable water. The Water Reuse Strategy must be undertaken following best practice and advice from sought from relevant agencies as required. Justification must be provided in the event that it is concluded that no reuse options prevail. A copy of the Water Reuse Strategy must be submitted to the Secretary for approval prior to commencement of tunnelling works. Nothing in this condition prevents the Proponent from preparing separate Water Reuse Strategies for the construction and operational phases of the CSSI. Where a separate Strategy is prepared for the	Applicable	Applicable	Not Applicable	Not Applicable

	operation of the CSSI, this must be submitted to the Secretary for approval at least six (6) months prior to the commencement of operation of the CSSI.				
E199	A Sustainability Strategy must be prepared to achieve a minimum “Excellent” ‘Design’ and ‘As built’ rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Applicable	Applicable	Not Applicable due to small scale nature of works	Not Applicable due to small scale nature of works
E200	The Sustainability Strategy must be submitted to the Secretary for information prior to the commencement of works, and must be implemented throughout construction and operation.	Applicable	Applicable	Not Applicable due to small scale nature of works.	Not Applicable due to small scale nature of works
E201	Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design. The sustainability initiatives identified must be implemented, reviewed, updated regularly throughout the design development and construction.	Applicable	Applicable	Applicable	Applicable
E202	Waste generated during delivery of the CSSI is to be dealt with in accordance with the following priorities: a) waste generation is to be avoided and where avoidance is not reasonably practicable, waste generation is to be reduced; b) where avoiding or reducing waste is not possible, waste is to be re-used, recycled, or recovered; and c) where re-using, recycling or recovering waste is not possible, waste is to be treated or disposed of at a waste management facility or premise lawfully permitted to accept the materials or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Applicable	Applicable	Applicable	Applicable
E203	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site, except as expressly permitted by a licence or waste exemption under the Protection of the Environment Operations Act 1997, if such a licence is required in relation to that waste.	Applicable	Applicable	Applicable	Applicable

E204	All waste generated during construction and operation must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	Applicable	Applicable	Applicable	Applicable

Appendix B Revised Environmental Management Measures applicability

Note: For **Stage 2** post opening of the Rozelle Interchange, consistent with the applicability of conditions of approval detailed in Appendix A, the following REMMs are not applicable to the remaining Western Harbour Tunnel enabling works construction: SW01, SW02, SW04, B1 and NAH01.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
TT01	A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the CEMP. The CTAMP will include the guidelines, general requirements and principles of traffic management to be implemented during construction. It will be prepared in accordance with Austroads Guide to Road Design (with appropriate Roads and Maritime supplements), the RTA Traffic Control at Work Sites Manual and AS1742.3: Manual of uniform traffic control devices – Part 3: Traffic control for works on roads, and any other relevant standard, guide or manual. The CTAMP will be prepared in consultation with relevant transport stakeholders and local councils. The overarching strategy of the CTAMP will be to: • Ensure all relevant stakeholders are considered during all stages of the project • Provide safe routes for pedestrians and cyclists during construction • Design the permanent works and Develop construction methodologies so that interaction with existing road users is minimised thereby creating a safer work and road user environment Plan and stage works to minimise the need for road occupancy, where possible • Develop project staging plans in consultation with relevant traffic and transport stakeholders • Minimise the number of changes to the road users' travel paths and, where changes are required, develop and implement an effective community communication strategy, coupled with temporary wayfinding signage to warn, inform and guide. This will aim to minimise confusion by providing clear and concise traffic management schemes • Comprehensively communicate changes in traffic conditions to roads or paths to emergency services, public transport operators, other road user groups and any other affected stakeholders • Identify measures to manage the movements of construction-related traffic to minimise traffic and access disruptions in the public road network • Minimise the use of local roads for heavy vehicles • Minimise the loss of on-road parking for local residents	Partially Applicable, refer Appendix D.	Partially applicable, refer Appendix E.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Describe a car parking strategy for construction staff at the various worksites and ancillary facilities		
TT02	Identify potential road user delays during the planning and consultation phases and include strategies within the CTAMP to reduce identified delays.	Partially Applicable, refer Appendix D.	Partially applicable, refer Appendix E.
TT03	Develop construction staging and temporary works that minimises conflicts with the existing road network and maximises spatial separation between work areas and travel lanes.	Not applicable due to small scale nature of works	Applicable, refer Appendix E.
TT04	The car parking strategy described in the CTAMP will: • Quantify construction workforce parking demand around project work sites and ancillary facilities during site establishment and the construction phase generally • Identify public transport options and other management measures (such as carpooling and shuttle-buses) to reduce construction workforce parking demand • Identify all locations that will be used for construction workforce parking (including potential use of government owned land and other potential areas near to the construction ancillary facilities) • Identify potential offsite areas that could be used for construction workforce parking that would be investigated and secured for use during construction where required and possible • Identify parking exclusion zones, in consultation with potentially affected stakeholders, around construction sites and facilities where construction workforce parking would be restricted. The strategy will also be developed in consultation with the M4 East and New M5 contractors to identify opportunities to use existing parking arrangements associated with those projects during their respective construction periods and once those periods are completed.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT05	Isolate work areas from general traffic through the implementation of appropriate traffic and access controls.	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
TT06	Develop and implement work methods to minimise delays and road user impacts, for example utilising more efficient plant and equipment, and applying different design solutions.	Applicable	Applicable
TT07	Provide temporary closed-circuit television (CCTV) and Variable Message Signs (VMS) in consultation with the Traffic Management Centre (TMC) to link with the existing TMC network to facilitate real time monitoring and management of impacts and traffic safety in the vicinity of the project.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT08	During construction, work with the TMC to improve traffic conditions around work and incidents from CCTV footage and modify sites wherever practicable.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT09	Provide a mechanism for the community to report incidents and delays, for example a project phone number. Advertise details along the construction site's interface with the road network.	Applicable	Applicable
TT10	Schedule construction-related transport movements to avoid peak traffic periods and minimise project-related congestion, where possible.	Applicable	Applicable
TT11	Develop and adopt robust community and stakeholder communication protocols regarding altered traffic conditions.	Applicable	Applicable
TT12	Minimise impacts on the pedestrian paths and cycle lanes, and provide timely alternatives during construction where practical and safe to do so.	Applicable	Applicable
TT13	Identify impacts on bus stops and provide alternative locations and access in consultation with Transport for NSW.	Applicable	Not applicable
TT14	Manage local road closures and maintain adequate property access. This will be undertaken in consultation with Roads and Maritime, local councils and property owners likely to be impacted.	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
TT15	Identify spoil haulage routes and designated routes for other project-related heavy vehicles and communicate, along with site access requirements and restrictions, to all relevant drivers. Designated heavy vehicle routes will be identified with consideration of potentially affected stakeholders, such as schools, day care centres, nursing homes and places of worship, around project sites that might be adversely affected by project-related heavy vehicle movements. Routes and associated restrictions of use of the routes will be developed to minimise identified potential impacts. Project-related heavy vehicle routes and any associated restrictions of use will be documented in the CTAMP.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT16	Develop and implement a truck management strategy (as part of the CTAMP) that: • Identifies truck marshalling areas that will be used by project-related heavy vehicles • Describes management measures for project-related heavy vehicles to avoid queuing and site-circling in adjacent streets and other potential traffic and access disruptions • Describes monitoring programs to demonstrate that project-related heavy vehicles are complying with the strategy.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT17	Monitor and manage project-related heavy vehicle movements to and from sites with the aim of limiting any associated increases in road traffic noise levels during the night-time period to no more than 2 dBA. Any increases in road traffic noise of more than 2 dBA due to project-related vehicle movements will be managed in accordance with the Construction Noise and Vibration Guideline (Roads and Maritime 2016).	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
TT18	Prepare a road dilapidation report, in consultation with relevant councils and road owners, identifying existing conditions of local roads and mechanisms to repair damage to the road network caused by heavy vehicle movements associated with the project.	Applicable	Applicable
TT19	Roads and Maritime will continue to consult with the Port Authority of NSW and other stakeholders as appropriate to ensure coordination between the operation of the White Bay civil site (C11) and other relevant projects in the vicinity, including existing operations associated with port activities.	Applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
TT20	An Active Transport Network Implementation Strategy will be prepared for the project. The strategy will be consistent with the Active transport strategy in Appendix N of the EIS. The strategy will be prepared in consultation with relevant councils and Bicycle NSW and implemented prior to the commencement of project operations or as otherwise agreed to by the Secretary of NSW Department of Planning and Environment.	Applicable	Not applicable due to small scale nature of works
OpTT1	A review of operational network performance will be undertaken 12 months and five years from the opening of the project to confirm the operational impacts of the project on surrounding arterial roads and major intersections in proximity to the Wattle Street interchange, Rozelle interchange and St Peters interchange. The assessment will be based on updated traffic surveys at the time and the methodology used will be comparable with that used in this assessment. The results of the review will be considered in future operational network performance planning carried out by Roads and Maritime.	Not applicable	Not applicable due to small scale nature of works
OpTT2	To manage potential performance constraints at the Wattle Street interchange, Roads and Maritime will investigate the implementation of the following in consultation with local councils: • Queuing and capacity monitoring and management on the Frederick Street/Milton Street corridor • Managing lane use and utilisation to improve the operation of the corridor.	Not applicable	Not applicable due to small scale nature of works
OpTT3	Roads and Maritime will develop a strategy to ensure appropriate network integration in the areas surrounding the Rozelle interchange. The strategy will include a review of: • Capacity improvement measures • The interface with road based public transport on the Western Distributor and Victoria Road in consultation with Transport for NSW • Project staging options • Demand management measures	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
AQ1	A Construction Air Quality Management Plan will be developed and implemented to monitor and manage potential air quality impacts associated with the construction for the project. The management plan will include controls required to reduce the emission of dust out of the door openings of acoustic sheds. The Plan will be implemented for the duration of construction.	Partially Applicable, refer Appendix D.	Partially Applicable, refer Appendix E.
AQ2	Regular communication to be carried out with other WestConnex projects under construction sites in close proximity to ensure that measures are in place to manage cumulative dust impacts	Not Applicable	Not Applicable
AQ3	Regular site inspections will be conducted to monitor for potential dust issues. The site inspections, required actions and ongoing issues, will be recorded and actioned appropriately within agreed timeframes by relevant project personnel.	Applicable	Applicable
AQ4	Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation.	Applicable	Applicable
AQ5	Measures to reduce potential dust generation, such as the use of water carts, sprinklers, dust screens and surface treatments, will be implemented within project sites as required	Applicable	Applicable
AQ6	Access roads within project sites will be maintained and managed to reduce dust generation.	Applicable	Applicable
AQ7	Where reasonable and feasible, appropriate control methods will be implemented to minimise dust emissions from the project site.	Applicable	Applicable
AQ8	Storage of materials that have the potential to result in dust generation will be minimised within project sites at all times	Applicable	Applicable
AQ9	All construction vehicles and plant will be inspected regularly and maintained to ensure that they comply with relevant emission standards.	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
AQ10	Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions.	Applicable	Applicable
AQ11	The use of mains electricity will be favoured over diesel or petrol-powered generators where practicable to reduce site emissions.	Applicable	Applicable
AQ12	Haul roads will be treated with water carts and monitored during earthworks operations, ceasing works if necessary during high winds where dust controls are not effective.	Applicable	Applicable
AQ13	Suitable dust suppression and/or collection techniques will be used during cutting, grinding or sawing activities likely to generate dust in close proximity to sensitive receivers.	Applicable	Applicable
AQ14	The potential for dust generation will be considered during the handling of loose materials. Equipment will be selected and handling protocols developed to minimise the potential for dust generation.	Applicable	Applicable
AQ15	All loaded spoil haulage trucks and other project-related heavy vehicles carrying materials with the potential to result in dust generation will be covered to prevent dust emissions during transport in accordance with relevant road regulations.	Applicable	Applicable
AQ16	Demolition activities will be planned and carried out to minimise the potential for dust generation.	Not applicable. Demolition not proposed as part of Stage 3.	Not applicable Demolition not proposed as part of Stage 4.
AQ17	Adequate dust suppression will be applied during all demolition works required to facilitate the project.	Not applicable. Demolition not proposed as part of Stage 3.	Not applicable Demolition not proposed as part of Stage 4.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
AQ18	All potentially hazardous material will be identified and removed from buildings in an appropriate manner prior to the commencement of and/or progressively during demolition and in accordance with all relevant codes of practice	Not applicable. Demolition not proposed as part of Stage 3.	Not applicable Demolition not proposed as part of Stage 4.
AQ19	Areas of soil exposed during construction will be minimised at all times to reduce the potential for dust generation	Applicable	Applicable
AQ20	Exposed soils will be temporarily stabilised during weather conditions conducive to dust generation and prior to extended periods of inactivity to minimise dust generation.	Applicable	Applicable
AQ21	Exposed soils will be permanently stabilised as soon as practicable following disturbance to minimise the potential for ongoing dust generation.	Applicable	Applicable
AQ22	Ensure that stockpiles of materials with the potential to result in dust emissions are adequately protected and managed to reduce potential dust generation.	Applicable	Applicable
AQ23	Ensure fine materials are stored and handled to minimise dust.	Applicable	Applicable
AQ24	All sealed surfaces within sites and site accesses will be managed to reduce dust generation and sediment tracking onto roads.	Applicable	Applicable
AQ25	At the commencement of establishment of project ancillary facilities, controls such as wheel washing systems and rumble grids will be installed at all site exits to prevent deposition of loose material on sealed surfaces outside project sites to reduce potential dust generation.	Not applicable. Ancillary sites not proposed as part of Stage 3.	Applicable
AQ26	Tunnel infrastructure will be designed in such a way that the generation of pollutant emissions by the traffic using the tunnel is minimised. The main considerations are minimising gradients and ensuring that lane capacity remains constant or increases from entry to exit point.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
AQ27	An in-tunnel air quality monitoring system will be included in the detailed design. The system will monitor oxides of nitrogen, nitrogen dioxide, carbon monoxide and visibility (as a minimum) throughout the tunnel. Monitoring of each pollutant will be undertaken throughout the tunnel. The locations of monitoring equipment will generally be at the beginning and end of each ventilation section. This will include, for example, monitors at each entry ramp, exit ramp, merge point and ventilation exhaust and supply point. The location of monitors will be governed by the need to meet the in-tunnel air quality criteria for all possible journeys through the tunnel system, especially for nitrogen dioxide. This will require sufficient, appropriately placed monitors to calculate a journey average.	Not applicable	Not applicable
AQ28	Air velocity monitors will be placed in each tunnel ventilation section and at portal entry and exit points. The specific location of air velocity monitors will be subject to the detailed design of the project. The velocity monitors in combination with the air quality monitors will be used to modulate the ventilation within the tunnel to manage air quality and to ensure net air inflow at all tunnel portals.	Not applicable	Not applicable
AQ29	Ambient air quality monitoring will be carried out in the vicinity of the ventilation outlets installed as part of the project. Monitoring will occur at key representative locations, identified in consultation with an independent air quality specialist and an Air Quality Community Consultative Committee (AQCCC), to allow direct comparison of measured ambient air quality with dispersion model predictions. The monitoring will commence at least 12 months prior to and continue for at least two years following the commencement of operation. Monitoring results and a comparison of monitoring results against dispersion model predictions and relevant ambient air quality criteria will be made publicly available.	Not applicable	Not applicable
NV1	A suitably qualified and experienced acoustics advisor Acoustics Advisor, who is independent of the design and construction personnel, will be engaged for the duration of construction of the project. The Acoustics Advisor will be responsible for: • Reviewing management plans related to noise and vibration and endorsing that they address all relevant conditions of approval and requirements of all applicable guidelines	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)

	• Reviewing location and activity specific noise and vibration impact assessments prepared during the project and endorsing the assessments and proposed mitigation measures
	• Reviewing proposals regarding works outside standard construction hours, confirming that the works are appropriate and endorsing the proposed mitigation measures
	• Monitoring noise and vibration from construction generally and:
	  ○ Confirming that actual noise and vibration levels and impacts are consistent with predictions
	  ○ Confirming that reasonable and feasible noise and vibration mitigation measures are being implemented
	  ○ Suggesting additional reasonable measures to further reduce impacts
	• Monitoring and providing advice in relation to compliance with conditions of approval and project commitments related to noise and vibration
	• Providing advice in relation to complaints regarding noise and vibration impacts that cannot be resolved between the complaint and the project
	• Reviewing and endorsing the proposed operational noise controls, the associated noise model and the proposed implementation program.		

NV2	A Construction Noise and Vibration Management Plan (CNVMP) will be prepared for the project. The plan will: • Identify relevant performance criteria in relation to noise and vibration • Identify noise and vibration sensitive receivers and features in the vicinity of the project • Include standard and additional mitigation measures from the Construction Noise and Vibration Guideline (CNVG) (Roads and Maritime 2016) and details about when each will be applied • Describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures	Partially Applicable, refer Appendix D.	Partially applicable, refer Appendix E.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Include protocols that will be adopted to manage works required outside standard construction hours in accordance with relevant guidelines • Detail monitoring that will be carried out to confirm project performance in relation to noise and vibration performance criteria. The CNVMP will be implemented for the duration of construction of the project.		
NV3	Detailed noise assessments will be carried out for all ancillary facilities required for construction of the project. The assessment will consider the proposed site layouts and noise generating activities that will occur at the facilities and assess predicted noise levels against the relevant noise management levels determined in accordance with the requirements of the Interim Construction Noise Guideline (ICNG) (NSW Department of Environment and Climate Change NSW (DECC) 2009). The assessments will be used to determine the appropriate heights and configurations of noise barriers, and other appropriate noise management measures, consistent with the requirements of the ICNG and the CNVG. Noise barriers, as confirmed through the noise assessments, will be installed as early as possible during site establishment and as a minimum prior to the commencement of excavation associated with tunnel access.	Not applicable due to small scale nature of works	Not applicable
NV4	Location and activity specific noise and vibration impact assessments will be carried out prior to (as a minimum) activities: • With the potential to result in noise levels above 75 dBA at any receiver Required outside standard construction hours likely to result in noise levels greater than the relevant noise management levels • With the potential to exceed relevant performance criteria for vibration. The assessments will clarify predicted impacts at relevant receivers in the vicinity of the activities to assist with the selection of appropriate management measures, consistent with the requirements of ICNG and CNVG that will be implemented during the works.	Partially Applicable, refer Appendix D.	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
NV5	An out-of-hours works protocol will be developed for the construction of the project. The protocol will include: • Details of works required outside standard construction hours, including justification of why the activities are required outside standard construction hours • Measures that will be implemented to manage potential impacts associated with works outside standard construction hours • Location and activity specific noise and vibration impact assessment process(es) that will be followed to identify potentially affected receivers, clarify potential impacts and select appropriate management measures • Details of the approval process (internal and external) for works proposed outside standard construction hours. The protocol will be included in the CNVMP, prepared in consultation with NSW Department of Planning and Environment and the NSW EPA, endorsed by the Acoustics Advisor for the project and implemented during construction of the project.	Applicable, refer Appendix D.	Applicable
NV6	Monitoring will be carried out at the commencement of activities for which a location and activity specific noise and vibration impact assessment has been prepared to confirm that actual noise and vibration levels are consistent with noise and vibration impact predictions and that the management measures that have been implemented are appropriate.	Not applicable due to small scale nature of works	Partially applicable, refer Appendix E.
NV7	Acoustic sheds will be designed within with consideration of the activities that will occur within them and the relevant noise management levels in adjacent areas. Monitoring will be carried out to confirm that the actual acoustic performance of each shed is consistent with predicted acoustic performance.	Not applicable	Not applicable
NV8	A Blast Management Strategy will be prepared and implemented for the project if blasting is proposed. The strategy will: • Identify relevant performance criteria in relation to potential noise and vibration impacts due to blasting with reference to (as a minimum) Technical Basis for Guidelines to Minimise Annoyance Due to Blasting	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	Overpressure and Ground Vibration (Australian and New Zealand Environment Conservation Council (ANZECC), 1990) and Australian Standard AS 2187.2-2006 Explosives - Storage, transport and use, Part 2: Use of explosives • Describe trials that will be carried out to confirm vibration levels from blasting and facilitate development of predictive tools to allow potential noise and vibration impacts to be identified • Include details of management measures that will be implemented to ensure compliance with relevant performance criteria • Include details of community consultation requirements prior to commencing blasting. The Blast Management Strategy will be implemented for all blasting carried out as part of the project.		
NV9	Receivers that qualify for assessment for at receiver treatment in relation to operational noise that are also predicted to experience significant exceedances of noise management levels due to construction will be given priority preference for assessment for treatment based on the severity and timing of impact. Where the building owner accepts the at receiver treatment proposal, the treatments will be installed as soon as possible.	Not applicable	Not applicable
NV10	Where reasonable and feasible, operational noise mitigation such as noise barriers, berms and at property treatments identified during detailed design should be installed early in the project so as to provide a benefit to receivers during the construction phase of the project.	Not applicable	Not applicable
NV11	Open Graded Asphalt (OGA) or equivalent will be investigated during detailed design taking into account whole life engineering considerations and the overall social, economic and environmental effects. If low noise pavement is found to be appropriate, it will be considered as a management measure when assessing operation noise impacts based on the detailed design.	Not applicable	Not applicable
NV12	The area in the vicinity of the western portal of the Iron Cove Link, Rozelle, will be assessed further during development of the detailed design to identify appropriate noise mitigation measures to address predicted increases in road traffic noise to the project. The measures that will be considered will include low road noise pavement, noise barriers, at-property treatments and the project design.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
NV13	Potential operational noise performance of the project based on the detailed design will be assessed in accordance with NSW Road Noise Policy (DECCW 2011) and appropriate management measures will be confirmed and implemented.	Not applicable.	Not applicable
NV14	Within 12 months of the commencement of the operation of the project, actual operational noise performance will be compared to predicted operational noise performance. The need for any additional management measures to address any identified operational performance issues and meet relevant operational noise criteria will be assessed and implemented where reasonable and feasible.	Not applicable.	Not applicable
PL1	Land acquisition for the project will be undertaken in accordance with the Land Acquisition (Just Terms Compensation) Act 1991 (NSW) and the Roads and Maritime Services Land Acquisition Information Guide (Roads and Maritime 2014) and the land acquisition reforms announced by the NSW Government in 2016.	Not applicable. Land acquisition not proposed for Stage 3.	Not applicable
PL2	Access to all properties will be maintained during construction, where feasible and reasonable, unless otherwise agreed by the relevant property owner or occupier. Any access physically affected by the project will be reinstated to at least an equivalent standard, unless agreed with by the property owner.	Applicable	Applicable
PL3	A Residual Land Management Plan will be prepared in consultation with relevant local councils and other key stakeholders. The plan will: • Identify and illustrate all remaining project land following construction of the project, including the physical location, land use characteristics, size and adjacent land uses • Identify feasible uses for remaining project land including justification for the selected use • Identify timeframes for implementation of the actions in relation to the identified feasible uses.	Not applicable	Not applicable
PL4	Existing residential properties (and approved residential developments approved prior to project approval) that are affected by overshadowing from the final detailed design of the project (including any noise mitigation measures) are to receive a minimum of three hours of direct sunlight in habitable rooms and in at least 50 per cent of the	Not applicable	Not applicable

<table>
<tr><th>REMM</th><th>Description</th><th>Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58)

(Stage 3)*</th><th>Rozelle Parkland Enhancement

(Stage 4)</th></tr>
<tr><td></td><td>principal private open space area between 9.00 am and 3.00 pm on 21 June. Such properties must be identified for further consideration by the Proponent in a Solar

Access and Overshadowing Report which addresses compliance with these requirements:

• Where existing residential development currently receives less than the required amount of solar access, existing access to sunlight during operation should not be unreasonably reduced

• Where affected properties include dwellings held under strata or community title, these requirements must be interpreted in relation to individual units within those properties.</td><td></td><td></td></tr>
<tr><td>PL5</td><td>Detailed design of the ventilation facility building at the Iron Cove Link motorway operations complex (MOC4) will include consideration of treatments to minimise overshadowing on properties south of Victoria Road. This may include reducing the height of the building and/or increasing building setbacks or recessing the building.</td><td>Not applicable</td><td>Not applicable</td></tr>
<tr><td>PL6</td><td>Ground settlement will be managed to comply with the following criteria where possible:

<table><tr><th>Beneath structure/facility</th><th>Maximum settlement</th><th>Maximum angular distortion</th><th>Limiting tensile strain (per cent)*</th></tr><tr><td>Buildings – Low or non-sensitive properties

(ie less than or equal to two levels and carparks)</td><td>30 mm</td><td>1 in 350</td><td>0.1</td></tr><tr><td>Buildings – High or sensitive properties

(ie greater than or equal to 3 levels and carparks)</td><td>20 mm</td><td>1 in 500</td><td>0.1</td></tr><tr><td>Roads and parking areas</td><td>40 mm</td><td>1 in 250</td><td>N/A</td></tr><tr><td>Parks</td><td>50 mm</td><td>1 in 250</td><td>N/A</td></tr></table>
* As defined in Burland et al. ‘Building response to tunnelling – Case Studies from construction of the Jubilee Line Extension’, London, Thomas Telfor (2001)</td><td>Not applicable</td><td>Not applicable</td></tr>
</table>

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)

PL7	Further assessment of potential settlement impacts, including numerical modelling, will be undertaken during detailed design. In areas where ground movement in excess of settlement criteria is predicted, an instrumentation and monitoring program to measure settlement, distortion or strain will be implemented. Feasible and reasonable measures will be investigated and implemented to ensure where possible that the predicted settlement is within the criteria. Measures that will be considered may include (but are not limited to):
	• Review of the proposed tunnel design including:
	  ○ the depth and alignment of tunnels
	  ○ the proximity of multiple tunnels to each other
	  ○ the proposed tunnel support system
	  ○ the tunnel lining to manage groundwater inflows
	• Rationalising the layout of the proposed ventilation tunnels including the number, location and length of tunnels
	• Review of the proposed construction methodology
	• Consideration of ground improvement options.
		Not applicable	Not applicable

PL8	A Settlement Monitoring Plan Program will be prepared that will provide details on: • Settlement criteria and predictions • Location of monitoring points • Duration of monitoring • Data collection and review (type and method) • Comparison of actual settlement with predictions • Triggers and corrective actions that will be implemented if, based on monitoring results, actual settlement is likely to exceed predictions or the relevant criteria, with the aim of complying with the criteria.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	The Settlement Monitoring Program will be endorsed the Independent Property Impact Assessment Panel (see PL11) prior to the commencement of any construction activities with the potential to result in settlement, as determined by the panel, unless otherwise agreed to by the Secretary		
PL9	Settlement monitoring will be carried out for the period in accordance with the program starting prior to commencement of tunnel construction through to until all settlement has stabilised following completion of tunnel construction. The results of settlement monitoring will be compared to predicted settlement. The implementation and adequacy of the Settlement Monitoring Program will be monitored by the Independent Property Impact Assessment Panel	Not applicable	Not applicable
PL10	Building condition surveys will be offered to property owners within the zone of influence of tunnel settlement (50 metres from the outer edge of the tunnels and within 50 metres of surface works) or as otherwise directed by the Independent Property Impact Assessment Panel (see PL11). Building condition surveys of properties will be carried out prior to the commencement of any project works in the vicinity that have the potential to result in damage to the properties, as identified by the contractor and confirmed by the Independent Property Impact Assessment Panel. Building condition surveys will be carried out by a structural engineer.	Not applicable	Not applicable
PL11	An Independent Property Impact Assessment Panel comprising geotechnical and engineering experts, will be established prior to the commencement of works with the potential to result in ground movement and settlement or damage due to vibration. The panel will be responsible for: • Independently reviewing the verifying building condition survey reports process and checking that reports are adequate to assist with any property damage disputes • Resolving any property damage disputes • Endorsing the Settlement Management Program and monitoring its implementation and ongoing adequacy. The panel will include at least one specialist with experience with ground movement and settlement due to excavations.	Applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
PL12	Interface agreements will be entered into with the owners of infrastructure and utility services likely to be impacted by construction of the project. The agreements will likely identify: • Minimum separation distances and appropriate settlement criteria for utility infrastructure • Settlement monitoring requirements during construction • Contingency actions in the event that settlement limits are exceeded.	Not applicable	Not applicable
PL13	In the event that damage occurs to a property as a result of the construction of the project, the damage will be appropriately rectified. Any disputes between a property or infrastructure owners regarding damage and rectification will be referred to the Independent Property Impact Assessment Panel (see PL11) for resolution.	Applicable	Applicable
PL14	The Utilities Management Strategy (Appendix F of the EIS) will be implemented.	Not Applicable, See Appendix D	Not applicable
UD1	Prepare an Urban Design and Landscape Plans Plan (UDLPs) for permanent built works and landscaping in consultation with relevant councils, stakeholders and the community. The construction of permanent built works will not commence until the element is included in a suitably prepared and approved UDLP, unless otherwise agreed to by the Secretary.	Not applicable due to small scale nature of works	Partially Applicable, UDLP will be updated to reflect Stage 4
UD2	Specific design measures at construction ancillary facilities to prevent crime, based on principles of Crime Prevention Through Environmental Design (CPTED), will be identified and implemented at each facility prior to the commencement of facility operation.	Not applicable due to small scale nature of works	Applicable
UD3	Specific design measures at surface operational infrastructure to prevent crime, based on principles of CPTED, will be identified and implemented at each facility prior to the commencement of facility operation.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
UD4	Wayfinding signage for the road infrastructure will be developed to the satisfaction of Roads and Maritime. Consultation will occur with the relevant local council regarding road signs for council roads. Signage for road infrastructure will be installed prior to the commencement of operation.	Applicable	Not applicable
UD5	Establish an Urban Design Review Panel to provide advice and input into the development of the UDLP and associated sub-plans. Where an UDLP is required to address heritage matters, the panel will include an independent heritage architect.	Not applicable due to small scale nature of works	Not applicable
LV1	Ancillary facilities, including the locations of visible structures and plant and perimeter fencing and treatments, will be developed to minimise visual impacts for adjacent receivers where feasible and reasonable. Measures to minimise visual impacts for adjacent receivers will be implemented progressively during the site establishment phase.	Not Applicable. Ancillary facilities not proposed for Stage 3.	Applicable
LV2	Site lighting will be designed to minimise glare issues and light spillage in adjoining properties and will be generally consistent with the requirements of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting.	Applicable	Applicable
LV3	Regular maintenance of site hoarding and perimeter site areas should be undertaken, including the prompt removal of graffiti and litter.	Applicable	Applicable
LV4	Construction worksites and construction ancillary facilities will be established in such a manner as to minimise the need to remove screening vegetation wherever practicable.	Applicable	Applicable
LV5	Hoardings and temporary noise walls will be erected as early as possible within the site establishment phase to provide visual screening.	Not applicable	Not applicable
LV6	Acoustic sheds will be designed to be visually recessive and minimise potential overshadowing impacts where possible.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
LV7	Where necessary, construction lighting will comply with the requirements of the Civil Aviation Safety Authority (CASA) and Sydney Airport at all times.	Not applicable	Not applicable
LV8	Visible elements of operational facilities will be designed to satisfy functional requirements and adopt the design principles detailed in the M4-M5 Link Urban Design Report. The proposed designs will be documented in the relevant UDLP for the project.	Not applicable	Not applicable
LV9	The slopes of vegetated batters that form part of the final urban design and landscaping solution will be limited to no more than 1:4 where possible in order to maximise the impact of vegetation on these batters and minimise maintenance.	Not applicable	Not applicable
LV10	Where construction ancillary facilities are located in close proximity to sensitive residential receivers such as residents and users of recreational space, high quality fencing suitable for parks and public spaces should be considered.	Not Applicable. Ancillary facilities not proposed for Stage 3.	Applicable
LV11	Investigate options for planting of vegetation to screen residents on the southern side of Darley Road from the Darley Road motorway operations complex. Include feasible and reasonable measures in the relevant UDLP.	Not applicable	Not applicable
LV12	Architectural design and detailing of the water treatment facility, substation and front fencing should achieve articulation, visual interest, and integrate with the streetscape.	Not applicable	Not applicable
LV13	Integrate the new open space at Rozelle with the Lilyfield Road streetscape through considered street tree planting and associated landscape works in accordance with Austroads guidelines.	Not applicable	Not applicable
LV14	Implement urban design and landscape measures that allow permeable views between the City West Link carriageway and the new open space to provide a sense of openness and connection with the open space for motorists and the community.	Not applicable	Not applicable
LV15	Investigate measures to minimise view impacts of the project to sensitive residential receptors in the vicinity of the Rozelle Rail Yards as described in this assessment and include in the relevant UDLP where reasonable and feasible.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
LV16	Develop a design that aims to incorporate the ventilation outlets at the Rozelle Rail Yards as an integral component of the larger open space composition, with reference and consideration to the Ventilation Facility Design Review (Annexure 2 of Appendix L (Technical working paper: Urban design)).	Not applicable	Not applicable
LV17	Consult with UrbanGrowth NSW regarding the interface between the project footprint and the White Bay Power Station precinct. Design the interface to ensure optimise compatibility between the two areas from a landscaping, visual, heritage and active transport connectivity perspective.	Not applicable	Not applicable
LV18	Investigate options to retain the mature trees of high retention value adjacent to the light rail corridor at the corner of The Crescent and City West Link and to, or provide screen planting alongside the retaining wall edge of the light rail corridor, to minimise landscape and visual impacts. Implement options where feasible and reasonable with consideration of site constraints.	Not applicable	Not applicable
LV19	Investigate vegetative and other screening measures along Victoria Road to improve the visual amenity of the streetscape and reduce impacts associated with the ventilation outlet and increased glare from the portals to residential dwellings to the north of Victoria Road. Reasonable and feasible landscaping measures will be included in the relevant UDLP.	Not applicable	Not applicable
LV21	The UDLP sub-plan for the area adjoining Campbell Road motorway operations complex is to be consistent with the New M5 St Peters Interchange Recreational Area Sub-plan at St Peters.	Not applicable	Not applicable
LV22	Investigate measures during detailed design to reduce the height, bulk, scale and enhance the landscape setting of the ventilation outlets, subject to achieving desired ventilation outcomes, and in accordance with the design principles detailed in the M4-M5 Link Urban Design Report.	Not applicable	Not applicable
SE1	A Business Management Plan will be prepared and will include: • Identification of businesses that have the potential to be adversely affected by construction activities that will occur as part of the project	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Management measures that will be implemented to maintain appropriate vehicular and pedestrian access to businesses and business clusters during business hours and to maintain visibility of the businesses and communicate access arrangements to potential customers during construction, including alternative arrangements for times when access and visibility cannot be maintained. These will be determined in consultation with the owners of the identified businesses.		
SE2	A Community Communication Strategy will be prepared that details: • Procedures and mechanisms that will be implemented in response to the key social impacts identified for the project • Property acquisition support services that will be provided • Procedures and mechanisms to communicate to project stakeholders (including affected communities), the access and connectivity enhancements and new community and social facilities that will be delivered as part of the project through the Social Infrastructure Plan and to update stakeholders on delivery progress • Procedures and mechanisms that will be used to engage with affected business owners to identify potential access, parking, business visibility and other impacts to develop measures to address potential impacts on a case by case basis.	Applicable	Applicable
SE3	Property acquisition will continue to be undertaken in accordance with the Roads and Maritime Services Land Acquisition Information Guide (Roads and Maritime 2014), the Land Acquisition (Just Terms Compensation) Act 1991 (NSW) and the land acquisition reforms announced by the NSW Government in 2016 (NSW Government 2016). A property acquisition factsheet that outlines the process and provides further information for concerned residents will continue to be made available online and in hard copy at project information centres.	Not applicable. Property acquisition not proposed for Stage 3.	Not applicable. Property acquisition not proposed for Stage 4.
SE4	Affected households will continue to have access to a counselling service that assists people through the property acquisition process.	Not applicable. Property acquisition not proposed for Stage 3.	Not applicable. Property acquisition not proposed for Stage 4.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
SE5	An independent service will continue to be provided to vulnerable households (eg elderly, those suffering an illness) to assist with relocation. Assistance could include finding a suitable house for relocation, arranging removalists, disconnecting services and attending appointments with solicitors or other representatives.	Not applicable. Property acquisition not proposed for Stage 3.	Not applicable. Property acquisition not proposed for Stage 4.
SE6	A community relations support toll-free telephone line will be operated to respond to any community concerns or requests for translation services.	Applicable	Applicable
OSE8	A Social Infrastructure Plan will be prepared that details: • Measures that will be delivered as part of the project to improve community connectivity in areas affected by the project, including pedestrian and cyclist access • Community and social facilities, for example open space, that will be delivered or enhanced as part of the project • Community initiatives and programs that will receive support as part of the project, including the manner in which support will be provided. The Social Infrastructure Plan will be prepared by a suitably qualified and experienced person in consultation with the community and relevant councils and implemented as part of the project.	Not applicable	Not applicable
SW01	A Construction Soil and Water Management Plan (CSWMP) will be prepared for the project. The plan will include the measures that will be implemented to manage and monitor potential surface water quality impacts during construction. The CSWMP will be developed in accordance with the principles and requirements in Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom 2004) and Volume 2D (NSW Department of Environment, Climate Change and Water 2008), commonly referred to as the 'Blue Book'.	Partially Applicable, Refer Appendix D	Partially Applicable, Refer Appendix E
SW02	A program to monitor potential surface water quality impacts due to the project will be developed and included in the CSWMP. The program will include the water quality monitoring parameters and the monitoring locations identified in Annexure E of Appendix Q (Technical working paper: Surface water and flooding) to the EIS where appropriate.	Not applicable due to small scale nature of works	Not applicable due to small

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	The monitoring program will commence prior to any ground disturbance to establish appropriate baseline conditions and continue for the duration of construction and until the affected waterways are rehabilitated to an acceptable condition as certified by a suitably qualified and experienced independent expert (or as otherwise required by any project conditions of approval). Further details to be included in the program are outlined in Appendix Q (Technical working paper: Surface water and flooding) of the EIS.		scale nature of works
SW03	Erosion and Sediment Control Plans (ESCPs) will be prepared for all work sites in accordance with the Blue Book. ESCPs will be implemented in advance of site disturbance and will be updated as required as the work progresses and the sites change.	Applicable, Refer Appendix D	Applicable, Refer Appendix E
SW04	A soil conservation specialist will be engaged for the duration of construction to provide advice regarding erosion and sediment control.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
SW05	The extent of ground disturbance and exposed soil will be minimised to the greatest extent practicable to minimise the potential for erosion.	Applicable	Applicable
SW06	Disturbed ground and exposed soils will be temporarily stabilised prior to extended periods of site inactivity to minimise the potential for erosion.	Applicable	Applicable
SW07	Disturbed ground and exposed soils will be permanently stabilised and proposed landscaped areas will be suitably profiled and vegetated as soon as possible following disturbance to minimise the potential erosion.	Applicable	Applicable
SW08	The proposed bridge crossing over and widening of Whites Creek, including all associated temporary and permanent infrastructure, will be designed and constructed in a manner consistent with: • Controlled Activities on Waterfront Land, Guidelines for watercourse crossings on waterfront land (NSW Department of Primary Industries (DPI) 2012)	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (Fairfull and Witheridge 2003) • Policy and Guidelines for Fish Friendly Waterway Crossings (NSW Fisheries February 2004) • Policy and Guidelines for Fish Habitat Conservation and Management Update 2013 (DPI-Fisheries 2013). Appropriate fish passage will be provided for crossings of fish habitat streams.		
SW09	Consultation will be undertaken with Sydney Water regarding the timing of the works at Whites Creek and compatibility of the proposed design and Sydney Water's naturalisation works.	Not applicable	Not Applicable
SW10	Temporary construction water treatment plants will be designed and managed so that treated water will be of suitable quality for discharge to the receiving environment. An ANZECC (2000) species protection level of 90 per cent is considered appropriate for adoption as discharge criteria for toxicants where practical and feasible. The discharge criteria for the treatment facilities will be included in the CSWMP.	Not applicable	Not applicable
SW11	Procedures, prepared in accordance with the requirements of the Acid Sulfate Soil Manual (Acid Sulfate Soil Management Advisory Committee 1998), will be included in the CSWMP and implemented in the event that acid sulfate soils, rocks or monosulfidic black oozes are encountered during construction of the project.	Partially Applicable, See Appendix D	Not applicable
OSW12	Stormwater from the project during operation will be treated prior to discharge. Where space is available, bioretention systems or constructed wetlands will be installed. Where space is not available, other smaller devices, such as proprietary stormwater treatment devices, will be installed. The final design of treatments will be supported by MUSIC modelling and water sensitive urban design principles.	Not applicable due to small scale nature of works	Not Applicable
OSW13	Maintenance requirements for all stormwater treatment systems and devices installed as part of the project will be identified and included in relevant operational maintenance schedules/systems.	Not Applicable	Not Applicable
OSW14	Spill containment will be provided on the motorway. Spill management and emergency response procedures will be documented in the Operation Environmental Management Plan (OEMP) and/or Emergency Response Plan.	Not applicable	Not Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
OSW15	The constructed wetland at the Rozelle interchange will be appropriately designed considering Water Sensitive Urban Design Principles to cater for the continuous release of treated groundwater from the water treatment plant and onsite stormwater flows and lined to prevent potential interaction with groundwater.	Not applicable	Not Applicable
OSW16	The operational water treatment facilities will be designed and managed such that effluent will be of suitable quality for discharge to the receiving environment. Opportunities to incorporate nutrient treatment within the plant at Darley Road will be investigated during detailed design. Discharge criteria will be developed in accordance with the ANZECC (2000) and relevant NSW WQOs, including the following discharge criteria: • 0.3 milligrams per litre for iron • 1.9 milligrams per litre for manganese. The discharge criteria for the treatment facilities will be nominated during detailed design in consultation with relevant stakeholders and included in the OEMP.	Not applicable	Not Applicable
OSW17	New discharge outlets will be designed with appropriate energy dissipation and scour protection measures as required to minimise the potential for sediment disturbance and resuspension in the receiving waters. Outlet design and energy dissipation/scour protection measures will be informed by drainage modelling.	Not applicable due to small scale nature of works	Not Applicable
OSW18	Existing drainage outlets that will be subject to increased inflow from the project will be assessed. If necessary, energy dissipation or scour protection will be added to prevent sediment disturbance and resuspension in receiving waters.	Not applicable due to small scale nature of works	Not Applicable
CM01	Potentially contaminated areas directly affected by the project will be investigated and managed in accordance with the requirements of guidance endorsed under section 105 of the Contaminated Land Management Act 1997 (NSW) (CLM Act).	Not Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	This includes further investigations in areas of potential contamination identified in the project footprint. If contamination posing a risk to human or ecological receptors is identified, a Remediation Action Plan will be prepared.		
CM02	Asbestos handling and management will be undertaken in accordance with an Asbestos Management Plan (or similar) prepared in accordance with relevant legislation, regulations and codes of practice) as described in Chapter 23 (Resource use and waste minimisation) of the EIS.	Applicable, Refer Appendix D.	Applicable.
CM03	A hazardous materials assessment will be carried out prior to and during the demolition of buildings. Demolition works will be undertaken in accordance with the relevant Australian Standards and relevant NSW WorkCover Codes of Practice, including the Work Health and Safety Regulation 2011 (NSW).	Not applicable. Building demolition not proposed as part of Stage 3.	Not applicable. Building demolition not proposed as part of Stage 4.
CM04	The Construction Waste Management Plan for the project, prepared as described in Chapter 23 (Resource use and waste minimisation) of the EIS, will include procedures for handling and storing potentially contaminated substances.	Partially Applicable, refer Appendix D.	Partially Applicable, refer Appendix E.
CM05	Stockpile management procedures will be implemented to control dust, odour and cross contamination.	Not Applicable. No stockpiling	Applicable
CM06	The discovery of previously unidentified contaminated material will be managed in accordance with an unexpected contaminated lands discovery procedure, as outlined in the Guideline for the Management of Contamination (Roads and Maritime 2013) and detailed in the CEMP. The procedure will include: • Cease work in the vicinity • Initial assessment by an appropriately qualified environmental consultant • Further assessment and management of contamination, if confirmed, in accordance with section 105 of the CLM Act.	Applicable, refer Appendix D.	Applicable, refer Appendix E.

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
CM07	A Construction Soil and Water Management Plan will be prepared for the project including procedures to minimise the interaction of stormwater with contaminated land, including acid sulfate soils, and manage potentially contaminated stormwater runoff, as described in Chapter 15 (Soil and water quality) of the EIS.	Partially Applicable, refer Appendix D	Partially Applicable, refer Appendix E
CM08	Measures identified in Chapter 25 (Hazard and risk) of the EIS will be implemented to appropriately store contaminated materials and materials with the potential to cause contamination dangerous goods and reduce the potential for environmental contamination due to spills and leaks.	Partially Applicable, refer Appendix D.	Partially Applicable, refer Appendix E
OpCM01	Procedures to address spills, leaks and tunnel washing will be developed as part of an OEMP and implemented during operation of the project.	Not Applicable	Not Applicable
FD01	A Flood Mitigation Strategy (FMS) will be prepared by a suitably qualified and experienced person in consultation with directly affected landowners, DPI-Water, NSW Office of Environment and Heritage (OEH), State Emergency Services (SES), Sydney Water and the relevant local councils. It will include but not be limited to: • Identification of flood risks to the project and adjoining areas, including consideration of local drainage catchment assessments and climate change implications on rainfall, drainage and tidal characteristics • Identification of design and mitigation measures to protect proposed operations and not worsen existing flooding characteristics during construction and operation, including soil erosion and scouring • Identification of drainage system upgrades • The 100 year annual recurrence interval (ARI) flood level will be adopted in the assessment of measures which are required to mitigate flood risk to the project, as well as any adverse impacts on surrounding property • Changes in flood behaviour under probable maximum flood (PMF) conditions will also be assessed in order to identify impacts on critical infrastructure and significant changes in flood hazards as a result of the project • Consideration of limiting flooding characteristics to the following levels: o A maximum increase in inundation time of one hour in a 100 year ARI rainfall event	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	○ No inundation of floor levels which are currently not inundated in a 100 year ARI rainfall event ○ A maximum increase of 10 mm in inundation at properties where floor levels are currently exceeded in a 100 year ARI rainfall event ○ A maximum increase of 50 mm in inundation at properties where floor levels will not be exceeded in a 100 year ARI rainfall event ○ Or else provide alternative flood mitigation solutions consistent with the intent of these limits ○ Consideration of the EIS documents.		
FD02	Hydrologic and hydraulic assessments will be carried out for all temporary project components (including ancillary facilities) and permanent design features that have the potential to affect flood levels in the vicinity of the project. The results of the assessment will inform the preparation of the Flood Mitigation Strategy (FD01) as well as the design development of temporary and permanent works.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
FD03	Measures developed to manage potential flood impacts, as identified in the Flood Mitigation Strategy, will be incorporated into the design of temporary and permanent project components and construction and operational management systems as relevant.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
FD04	All entries (portals) into the tunnels will be designed so that they are located above the peak level of the PMF or the 100 year ARI design flood plus 0.50 metres, whichever is greater. The same hydrological standard will be applied to tunnel ancillary facilities such as tunnel ventilation and emergency response facilities, electrical substations and water treatment plants. where the ingress of floodwaters will also have the potential to flood the tunnels.	Not applicable	Not applicable
FD05	Bridge crossings over existing waterways and proposed drainage channels will be designed for the underside of bridge structure to be above the peak 100 year ARI design flood level.	Not applicable	Not applicable
FD06	The need to maintain flood conveyance will be factored into construction planning associated with the new bridge structure over Whites Creek.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
FD07	Parts of the site that will be adversely affected by floodwaters, such as tunnel dive shafts, portals and cut and cover sections, will be protected from floodwater ingress during construction. The flood level adopted for design of temporary protection will be informed by consideration of both mainstream and local overland flows, the potential risk to the environment, safety and the potential disruption and damage to project works.	Not applicable	Not applicable
FD08	The Pyrmont Bridge Road tunnel site (C9) will be designed with consideration of and to appropriately manage the existing surface water flow path on Bignell Road Lane.	Not applicable	Not applicable
FD09	The permanent surface water conveyance solution within the Rozelle Rail Yards will be implemented as soon as possible.	Not applicable	Not applicable (completed as part of Stage 2)
FD10	Flood contingency measures will be prepared and implemented where construction ancillary facilities and vulnerable temporary facilities (including fuel storages, water treatment plants and substations) are located in the 20 year ARI design flood extent.	Not applicable due to small scale nature of works	Not Applicable
FD11	Further hydrological and hydraulic modelling based on the detailed design will be undertaken to determine the ability of the receiving drainage systems to effectively convey drainage discharges from the project once operational. The modelling must be undertaken in consultation with the relevant council(s). It will include, but not be limited to: • Confirming the location, size and capacity of all receiving drainage systems affected by the operation of the project • Assessing the potential impacts of drainage discharges from the project drainage systems on the receiving drainage systems • Identifying all feasible and reasonable mitigation measures to be implemented where drainage from the project is predicted to adversely impact on the receiving drainage systems.	Not applicable due to small scale nature of works	Not Applicable
FD12	Where drainage systems are to be upgraded or replaced during the project, existing systems will be left in place and remain operational during the process wherever possible.	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
FD13	Runoff generated from project construction and operational facilities and discharges from water treatment facilities will be managed to mitigate risk of overloading the receiving drainage system.	Not Applicable. Such facilities not relevant to Stage 3.	Applicable
FD14	Entry points to the stormwater used by or immediately downgradient from the project sites will be inspected regularly for blockages and cleaned as required to maintain performance.	Applicable	Applicable
FD15	Hydrological and hydraulic assessments of the permanent design will consider the climate change related flood risk to the project and flood impacts from the project, and will confirm requirements for any management measures. The assessment will be undertaken in accordance with the Practical Considerations of Climate Change – Floodplain Risk Management Guideline (DECC 2007).	Not applicable due to small scale nature of works	Not Applicable
FD16	Where peak levels in the 100 year ARI design flood are predicted to increase at any residential, commercial and/or industrial buildings due to construction or operation of the project, a floor level survey will be carried out. If the survey indicates flood impacts in excess of the limits set in FD01, further refinements will be made to the temporary or permanent designs as required to minimise impacts.	Not applicable due to small scale nature of works	Not Applicable
FD17	A Flood Review Report will be prepared after the first defined flood event affecting the project works for any of the following flood magnitudes – the five year ARI event, 20 year ARI event and 100 year ARI event - to assess the actual flood impact against those predicted in the design reports or as otherwise altered by the FMS. The Flood Review Report(s) must be prepared by an appropriately qualified person(s) and include: • Identification of the properties and infrastructure affected by flooding during the reportable event • A comparison of the actual extent, level, velocity and duration of the flooding event against the impacts predicted in the design reports or as otherwise altered by the FMS • Where the actual extent and level of flooding exceeds the predicted level with the consequent effect of adversely impacting of property(ies), structures and infrastructure, identification of the measures to be implemented to reduce future impacts of flooding related to the M4-M5 Link project including the timing and responsibilities for implementation.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	Flood mitigation measures will be developed in consultation with the affected property, structure and/or infrastructure owners, OEH and the relevant council(s).		
B1	A Construction Flora and Fauna Management Plan (CFFMP) will be developed and implemented during construction. The CFFMP will include the following: • Identification of guidelines relevant to construction, the matters they apply to and what is required to ensure compliance • Pre-disturbance inspection requirements to identify features of biodiversity conservation significance and select appropriate management measures and environmental controls • Management measures and environmental controls to be implemented before and during construction including: o An unexpected threatened species finds procedure o Section 3.3.2 Standard precautions and mitigation measures of the Policy and Guidelines for Fish Habitat Conservation and Management Update 2013 (DPI-Fisheries 2013) o Tree assessment and management protocols consistent with AS 4970-2009 Protection of trees on development sites o Weed management protocols. The plan will include management measures outlined in Appendix S (Technical paper: Biodiversity) and from any additional assessments carried out during detailed design and project delivery as relevant.	Partially Applicable, refer Appendix D	Partially Applicable, refer Appendix E
B2	Prior to the commencement of any works associated with the modification of the Victoria Road bridge, an inspection will be carried out by a suitably qualified and experienced ecologist to confirm the presence of roosting microbats. If roosting microbats are identified, measures to manage potential impacts will be developed in consultation with an appropriate microbat expert and included in the CFFMP prior to the commencement of any work with the potential to disturb the roosting locations (as confirmed by the microbat expert).	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
B3	The proposed road bridge at Whites Creek will be designed with consideration of Policy and Guidelines for Fish Habitat Conservation Update 2013 (DPI-Fisheries 2013) and Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (NSW-Fisheries 2003).	Not applicable	Not applicable
B4	Site-specific Erosion and Sediment Control Plans (ESCPs) will be prepared for each work location associated with or in the vicinity of waterways and culverts that will be modified as part of the project. The ESCPs will contain measures to stabilise all surfaces disturbed as a result of the project as soon as possible following the disturbance to prevent erosion and to minimise sedimentation in adjacent aquatic environments	Applicable	Applicable
B5	The CFFMP will include measures to manage potential impacts on trees. Measures will include: • The establishment of tree protection zones • Ground protection measures for trees to be retained.	Applicable, refer Appendix D	Partially applicable, Refer Appendix E
B6	As many trees as possible will be retained during construction. In the event that tree removal cannot be avoided, a tree replacement strategy will be prepared. Replacement trees will be included in the relevant UDLP. Opportunities for the provision of replacement trees outside the project boundary will be investigated in consultation with local councils.	Applicable	Applicable
B7	The CFFMP will include tree management protocols and provision for the development of tree management plans (in accordance with the requirements of AS 4970-2009) where required for specific trees. Protection of trees on development sites will be carried out in consultation with an arborist with a minimum Australian Qualifications Framework (AQF) Level 5 qualification in arboriculture for each tree proposed for retention where works associated with the project have the potential to impact on the tree root zone.	Partially Applicable, refer Appendix D	Partially Applicable, refer Appendix E
B8	Tree removal, pruning and maintenance work will be carried out by an arborist with a minimum AQF Level 3 qualification in accordance with AS 4373-2007 Pruning of Amenity Trees and the NSW WorkCover Code of Practice for the Amenity Tree Industry (1998) and advice provided by an arborist with a minimum AQF Level 5 qualification in arboriculture (or equivalent).	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
OB9	The UDLP will be prepared and implemented to include compensatory planting for trees removed by the project. The plan will include: • A tree replacement strategy • Species recommendations for the landscape design to consider, including foraging trees for the Grey-headed Flying-fox • Relevant project specific rehabilitation and revegetation measures associated with the M4 East and New M5 projects, where there is an overlap in use of project footprint.	Not applicable due to small scale nature of works	Partially Applicable, UDLP to be updated to reflect Stage 4
OB10	Consultation will be undertaken with Sydney Water regarding integration of naturalisation works at Whites Creek, including re-establishment of vegetation where possible following construction activities. Vegetation re-establishment will be undertaken in accordance with Guide 3: Re-establishment of native vegetation of the Biodiversity Guidelines: Protecting and Management Biodiversity on RTA Projects (NSW Roads and Traffic Authority 2011).	Not applicable	Not applicable
GW1	Groundwater inflows within the tunnels will be minimised by designing the final tunnel alignment to minimise intersections with known palaeochannels and alluvium present in the project footprint.	Not applicable	Not applicable
GW2	Appropriate waterproofing measures will be identified and included in the detailed design to permanently, where reasonable and feasible, reduce the inflow into the tunnels to below one litre per second per kilometre for any kilometre length of the tunnel.	Not applicable	Not applicable
GW3	Appropriate measures will be investigated and implemented at dive structures and shafts and for cut- and-cover sections of the tunnel to minimise groundwater inflow.	Not applicable	Not applicable
GW4	Further assessment of the risk posed by the presence of sulfate reducing bacteria and groundwater aggressivity will be undertaken prior to construction. A corrosion assessment will be undertaken by the construction contractor to assess the impact on building materials that may be used in the tunnel infrastructure such as concrete, steel,	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	aluminium, stainless steel, galvanised steel and polyester resin anchors. The outcomes of the corrosion assessment will be considered when selecting building materials likely to encounter groundwater.		
GW5	In accordance with the Aquifer Interference Policy (DPI-Water 2012), measures will be taken to 'make good' the impact on an impacted water supply bore by restoring the water supply to pre-development levels. The measures taken will be dependent upon the location of the impacted bore but could include, for example, deepening the bore, providing a new bore or providing an alternative water supply.	Not applicable	Not applicable
GW6	Potential impacts associated with subsurface components of the project intercepting and altering groundwater flows and levels will be considered during detailed design. Measures to reduce potential impacts will be identified and included in the detailed construction methodology and the detailed design as relevant.	Not applicable	Not applicable
GW7	A detailed groundwater model will be developed by the construction contractor during detailed design. The model will be used to predict groundwater inflow rates and volumes within the tunnels and groundwater levels (including drawdown) in adjacent areas during construction and operation of the project.	Not applicable	Not applicable
GW8	Groundwater inflow within and groundwater levels in the vicinity of the tunnels will be monitored during construction and compared to model predictions and groundwater performance criteria applied to the project. The groundwater model will be updated based on the results of the monitoring as required and proposed management measures to minimise potential groundwater impacts adjusted accordingly to ensure that groundwater inflow performance criteria are met.	Not applicable	Not applicable
GW9	Further investigations will be carried out to identify areas where groundwater inflows to the tunnels are likely to be elevated, to guide the development of the detailed design and construction methodology. The investigations will be carried out prior to the commencement of excavations with the potential to result in groundwater inflow at each identified location.	Not applicable	Not applicable
OGQ9	A groundwater monitoring program will be prepared and implemented to monitor groundwater inflows in the tunnels and groundwater levels as well as groundwater quality in the three main aquifers and inflows during construction.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	The program will identify groundwater monitoring locations, performance criteria in relation to groundwater inflow and levels and potential remedial actions that will be considered to address any non-compliances with performance criteria. As a minimum, the program will include manual groundwater level and quality monitoring monthly and inflow volumes and quality weekly. The monitoring program will be developed in consultation with the NSW EPA, DPI-Fisheries, DPI- Water, City of Sydney Council and Inner West Council.		
OGQ10	The groundwater monitoring program prepared and implemented during construction will be augmented and continued during the operational phase. Groundwater will be monitored during the operations phase for three years or as otherwise required by the project conditions of approval and will include trigger levels for response or remedial action based on monitoring results and relevant performance criteria. At least three monitoring wells and vibrating wire piezometers (VWPs) should be constructed as close as possible to the tunnel centrelines to allow for the comparison of pore pressures and standing water levels. The wells could be constructed about 5-10 metres above the top of the tunnel crown to allow for groundwater drawdown monitoring in the Hawkesbury Sandstone. The program will include procedures for monitoring and reporting of extracted groundwater volumes to DPI-Water annually for the duration of construction and operation, unless otherwise agreed to or directed by the Secretary. The operational groundwater monitoring program will be developed in consultation with the NSW EPA, DPI-Water and relevant councils and documented in the OEMP or EMS.	Not applicable	Not applicable
OGW11	Where the corrosion assessment that will be carried out prior to construction indicates potential issues, corrosion and other associated impacts of highly aggressive groundwater on the tunnel infrastructure will be monitored during operations. The monitoring program will be documented in the OEMP or EMS. Corroded or otherwise impacted infrastructure will be repaired or replaced as required to maintain operational integrity of the road infrastructure.	Not applicable	Not applicable
OGW12	In accordance with the NSW Aquifer Interference Policy (DPI-Water 2012), measures will be taken to 'make good' the impact on an impacted water supply bore by restoring the water supply to pre- development levels. The measures	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	taken will be dependent upon the location of the impacted bore but could include, for example, deepening the bore, providing a new bore or providing an alternative water supply.		
NAH01	Construction Heritage Management Plan (CHMP) will be prepared and implemented as part of the Construction Environmental Management Plan. The CHMP will include: • Measures that will be implemented to manage potential impacts to items of heritage significance • Inclusion of heritage awareness and management training for relevant personnel involved in site works • Details regarding the conservation and curation of any historical artefacts recovered during works.	Partially Applicable, refer to Appendix D	Partially Applicable, refer to Appendix E
NAH02	An Interpretation Strategy will be developed and implemented to identify and interpret the key heritage values and stories of the heritage areas affected by the project and inform the development of the Urban Design and Landscape Plan for the project, in accordance with Interpreting Heritage Places and Items Guideline (NSW Heritage Office 2005). The Interpretation Strategy will: • Build on themes, stories and initiatives proposed as part of other stages of WestConnex to ensure a consistent approach to heritage interpretation for the project • Include themes and stories including the Rozelle railways historic functions, trains and trams transport, industrialisation and The Rozelle-Darling Harbour Goods Line • Identify how the rail related infrastructure salvaged from the Rozelle Rail Yards will be reused.	Not applicable	Not applicable
NAH03	Photographic archival recording will be undertaken of: • Infrastructure associated with the White Bay Power Station site that could be affected by the project. • Whites Creek Stormwater Channel (in the area to be impacted) • Stormwater Canal off Lilyfield Road • 'Cadden Le Messurier' at 84 Lilyfield Road • Former Hotel at 78 Lilyfield Road	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Victoria Road overbridge • Each house at 260–266 Victoria Road • Each house at 248–250 Victoria Road • Former Bank of NSW (164 Parramatta Road). It will be undertaken in accordance with the NSW Heritage Office guidelines Photographic Recording of Heritage Items Using Film or Digital Capture (2006). The photographic archival recording will occur prior to any works that have the potential to impact upon the items and the report development process will include the identification of appropriate stakeholders to receive copies of the documentation.		
NAH04	As part of the CHMP, a Historical Archaeological Research Design (HARD) will be prepared before the start of proposed works within each of the following Historical Archaeological Management Units (HAMUs): HAMU 3, HAMU 6, HAMU 7, HAMU 9, HAMU 10, and HAMU 11. The HARD will be prepared by a qualified archaeologist in consultation with the NSW Heritage Council and will include: • Descriptions of clear significance thresholds for possible archaeological items that may be uncovered during works • A methodology and scope for a program of archaeological excavation, investigation, and recording of any historical archaeological remains that will be impacted by the project • Requirement for post-excavation reporting, including artefact analysis and additional historical research, where necessary, and long term management of records • Details of what will happen with any artefacts uncovered and associated reports.	Not applicable	Not applicable
NAH05	Before excavation of archaeological management sites, a suitably qualified Excavation Director who complies with Criteria for Assessment of Excavation Directors (Heritage Council of NSW 2011) will be engaged to advise on	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	matters associated with historic archaeology. Where archaeological excavation is required, the Excavation Director will oversee excavation and advise on archaeological matters.		
NAH06	Potential vibration impacts to features of heritage significance will be managed in accordance with the CNVMP prepared for the project.	Applicable	Partially applicable
NAH07	Potential heritage impacts due to settlement and ground movement caused by the project will be managed in accordance with the relevant measures identified in the land use and property section of this table and monitored in accordance with the Settlement Monitoring Plan Program.	Not applicable due to small scale nature of works	Not applicable
NAH08	Any items of potential heritage conservation significance or human remains discovered during construction will be managed in accordance with an Unexpected Heritage Finds and Humans Remains Procedure developed for the project in accordance with relevant guidance provided by the Heritage Council of NSW, the NSW Heritage Division of OEH and the Standard Management Procedure regarding notification of relevant agencies and the NSW Police and will be implemented for the duration of construction.	Applicable	Applicable
NAH09	A Heritage Salvage Strategy will be prepared to identify the salvage potential of the fabric and features from heritage items and potential heritage items that will be demolished to facilitate the project. This could include timber joinery, fireplaces, stained glass, stairs, decorative tiles, bricks, steel truss structures, windows etc. The strategy will also identify options and a process for dissemination of salvaged items to owners, community groups and interested parties.	Not applicable	Not applicable
NAH10	Sandstone kerbing in the vicinity of 32 and 34 Victoria Road, Rozelle that will be removed to facilitate the project will be salvaged and provided to Inner West Council.	Not applicable	Not applicable
NAH11	The potential for impacts to the railway cutting on the eastern side of Victoria Road, associated with the White Bay Power Station, will be considered during the development of the detailed design for the realigned Victoria Road and associated bridge. The final design will seek to avoid impact to the railway cutting and maintain the visual relationship between the cutting and the White Bay Power Station site. Landscaping sympathetic to the relationship, developed in consultation with a heritage specialist, will be included in the UDLP for the project.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
NAH12	A condition assessment of the southern penstock (and its associated water channels) will be carried out by a heritage specialist and a structural engineer prior to any works in the vicinity with the potential impact upon the item. If required any conservation works required to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) will be identified and implemented prior to construction.	Not applicable	Not applicable
NAH13	The southern penstock and its associated water channels (location and extent unknown) will be protected during works associated with the reconstruction of the Victoria Road bridge.	Not applicable	Not applicable
NAH14	The new bridge over the Whites Creek Stormwater Channel must not impact the extant significant heritage fabric of the channel and should be a solely independent structure.	Not applicable	Not applicable
NAH15	Landscaping, following the construction of the substation, should consider screening the substation and water treatment plant, from the Leichhardt (Charles Street) Underbridge. The design and location of the landscaping will be informed by a heritage specialist and should seek to create a visual separation between the new structure and the heritage item.	Not applicable	Not applicable
NAH16	A condition assessment of the northern penstock will also be carried out by a heritage specialist and a structural engineer prior to any vibratory works in the vicinity that have the potential to impact on the item. The condition assessment will inform additional management measures to protect the northern penstock, if required. Any conservation works required to limit potential impacts on deteriorated fabric (loose bricks, corroded steel) will be identified and implemented prior to commencement of the relevant vibratory works in the vicinity.	Not applicable	Not applicable
AH1	Any items of potential Aboriginal archaeological or cultural heritage conservation significance or human remains discovered during construction will be managed in accordance with the Unexpected Heritage Finds and Humans Remains Procedure developed for the project.	Applicable	Applicable
AH2	Subject to gaining access from the relevant landholder, a suitably qualified archaeologist will visit AHIMS site #45-6-2278 prior to the commencement of any vibration intensive construction activities in the vicinity of the site to verify the site to confirm and record its current condition.	Not applicable	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
AH3	If the AHIMS site #45-6-2278 is verified, an assessment will be completed by a suitably qualified and experienced person prior to the commencement of any vibration intensive construction activities in the vicinity. The assessment will consider all vibration intensive activities that will occur in the vicinity, the likely vibration levels and relevant vibration criteria and identify the management measures, including monitoring, that will be implemented to prevent and reduce potential impacts. A final condition assessment will be carried out at the completion of construction detailing recommendations for remediation measures if required.	Not applicable	Not applicable
GHG1	An Energy Efficiency and Greenhouse Gas Emissions Strategy and Management Plan will be prepared for the project as part of the project's Sustainability Management Plan and will be implemented to assist in achieving 'Design' and 'As Built' ratings of Excellent under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
GHG2	Undertake an updated greenhouse gas (GHG) assessment based on detailed design for ongoing monitoring and review of emissions during construction.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
GHG3	Opportunities to use low emission construction materials, such as recycled aggregates in road pavement and surfacing, and cement replacement materials will be investigated and incorporated where feasible and cost-effective.	Applicable	Applicable
GHG4	Construction plant and equipment will be operated and maintained to maximise efficiency and reduce emissions, with construction planning used to minimise vehicle wait times and idling onsite and machinery turned off when not in use.	Applicable	Applicable
GHG5	Locally produced goods and services will be procured where feasible and cost effective to reduce transport fuel emissions.	Applicable	Applicable
GHG6	At least 20 per cent of construction energy (electricity) required for the project will be sourced from possible. Six per cent of construction energy (electricity) requirements will be offset, with any offset undertaken in accordance with the Australian Government National Carbon Offset Standard.	Not applicable due to small scale nature of works	Not applicable due to small

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
			scale nature of works
OGHG7	The tunnel will be designed with appropriate vertical alignments and grades to allow vehicles to maintain constant speeds and minimise fuel use to reduce potential greenhouse gas emissions.	Not applicable	Not applicable
OGHG8	Energy efficiency will be considered during the design of mechanical and electrical systems such as the tunnel ventilation system, tunnel lighting, water treatment systems and electronic toll and surveillance systems. Energy efficient systems will be installed where reasonable and practicable.	Not applicable	Not applicable
OGHG9	At least six per cent of operational energy (electricity) required for the project will be sourced from an accredited GreenPower energy supplier and/or through renewable energy generated onsite.	Not applicable	Not applicable
RW1	Construction material will be sourced in accordance with the relevant aims of the WestConnex Sustainability Strategy (Sydney Motorway Corporation 2015) and a Sustainability Management Plan (that will be developed during detailed design), including to optimise resource efficiency and waste management, and select locally sourced materials and prefabricated assets where possible, to reduce greenhouse gas emissions. Unnecessary resource consumption will be avoided through the detailed design of the project and by making realistic predictions about the required quantities of resources, such as construction materials.	Not applicable due to small scale nature of works	Applicable
RW2	Wastes will be managed and disposed of in accordance with relevant NSW legislation and government policies.	Applicable	Applicable
RW3	A Construction Waste Management Plan will be prepared as part of the CEMP and regularly updated during detailed design and construction, detailing appropriate procedures for waste management. The plan will include the waste management measures described in this EIS.	Partially Applicable, refer Appendix D	Partially Applicable, refer Appendix E
RW4	Wastes will be managed using the waste hierarchy principles of: • Avoidance of unnecessary resource consumption to reduce the quantity of waste being generated • Recovery of resources for reuse on-site or off-site for the same or similar use, without reprocessing	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Recovery of resources through recycling and reprocessing so that waste can be processed into a similar non-waste product and reused • Disposal of residual waste.		
RW5	Resource recovery will be applied to the management of construction waste and will include: • Recovery of resources for reuse - reusable materials generated by the project will be segregated for reuse on site, or off site where possible, including the reuse of the major waste streams (VENM) • Recovery of resources for recycling - recyclable resources (such as metals, plastics and other recyclable materials) generated during construction and demolition • Resources will be segregated for recycling and sent to an appropriate recycling facility for processing • Recovery of resources for reprocessing - cleared vegetation will be mulched or chipped on-site and used for landscaping, in the absence of a higher beneficial use being identified.	Applicable	Applicable
RW6	Options identified for the off-site reuse of waste will comply with relevant NSW EPA resource recovery exemptions and requirements.	Applicable	Applicable
RW7	The Construction Waste Management Plan will document anticipated volumes of spoil that will be generated by the project, spoil storage locations within project sites and likely spoil disposal sites. The Construction Waste Management Plan and spoil reuse opportunities will be regularly reviewed and updated during detailed design and project construction.	Not Applicable	Not applicable
RW8	The project will reuse or recycle around 95 per cent of uncontaminated spoil generated for beneficial purposes, either within the project or at other locations in accordance with the project spoil management hierarchy.	Not applicable due to small scale nature of works	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
RW9	Suitable areas will be identified to allow for contingency management of unexpected waste materials, including contaminated materials. Suitable areas will be required to be hardstand or lined areas that are appropriately stabilised and bunded, with sufficient area for stockpile storage.	Not applicable due to small scale nature of works	Not Applicable
RW10	The discovery of previously unidentified contaminated material will be managed in accordance with an unexpected contaminated lands discovery procedure, as outlined in the Guideline for the Management of Contamination (Roads and Maritime 2013) and detailed in the CEMP.	Applicable	Applicable
RW11	Spoil stockpiles will be provided with appropriate environmental controls and managed to reduce potential impacts associated with dust generation, erosion and sedimentation.	Applicable	Applicable
RW12	General wastes from site offices such as putrescibles, paper, cardboard, plastics, glass and printer cartridges will be separated and collected for recycling off-site wherever practicable.	Not Applicable	Not applicable
RW13	An asbestos survey will be undertaken of buildings to be demolished as part of the project in accordance with an Asbestos Management Plan as part of the Work Health and Safety Plan. The survey will be conducted by a suitably qualified person.	Not applicable. Building demolition not proposed as part of Stage 3.	Not applicable. Building demolition not proposed as part of Stage 4.
RW14	Asbestos handling and management will be undertaken in accordance with an Asbestos Management Plan (or similar) prepared in accordance with relevant legislation, regulations and codes of practice as described in Chapter 23 (Resource use and waste minimisation) of the EIS. Adjacent communities will be provided with advance notification about potential hazards.	Applicable	Applicable
OpRW1	The project will be operated in accordance with the relevant aims of the WestConnex Sustainability Strategy (Sydney Motorway Corporation 2015) and a Sustainability Strategy will be developed during detailed design to outline ways to optimise resource efficiency and waste management.	Not applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
OpRW2	Waste will be managed and disposed of in accordance with relevant NSW legislation and government policies and the mitigation measures described in this EIS.	Applicable	Applicable
OpRW3	Opportunities to reuse treated groundwater during project operation will be considered in preference to discharge to receiving waterbodies. This could include irrigation of landscaped areas within the project footprint such as new open spaces at the Rozelle interchange.	Not applicable	Not applicable
OpRW4	In order to reduce demand on local water supplies, options will be investigated to provide water for the deluge system from wastewater produced through the tunnel drainage system, where it meets appropriate quality parameters.	Not applicable	Not applicable
CC1	In the refinement of construction Work Health and Safety Management Plans, consider the increased potential for heat stress among construction personnel and implement measures for greater awareness and education of personnel around health and wellbeing during periods of extreme heat.	Applicable	Applicable
CC2	A detailed climate change risk assessment which will be undertaken during detailed design, in accordance with AS 5334-2013 Climate change adaptation for settlements and infrastructure - A risk based approach. The assessment will identify adaptation measures to address medium, high and extreme risks.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
CC3	Adaptation measures will be identified and implemented to address high and extreme climate change risks. Adaptation measures for medium risks will also be considered further during detailed design and implemented where reasonable and feasible.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
CC4	The impact of climate change on potential flood risks will be considered during development of the detailed design in accordance with relevant guidelines as described in Chapter 17 (Flooding and drainage) and Appendix Q (Technical working paper: Surface water and flooding) of the EIS.	Not applicable due to small scale nature of works	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
CC5	Increased flood risks due to climate change will be considered in the detailed design of drainage systems. Drainage network features will be developed and installed to mitigate potential increased flood risks as described in Chapter 17 (Flooding and drainage) and Appendix Q (Technical working paper: Surface water and flooding) of the EIS.	Not applicable due to small scale nature of works	Not applicable
CC6	Potential changes to sea levels due to climate change will be considered during the design of operational water treatment plants that will discharge to waterways. Discharge outlets and relevant water treatment plant features will be designed and constructed accordingly.	Not applicable due to small scale nature of works	Not applicable
CC7	Consider the projected increase in the intensity and frequency of extreme rainfall during detailed design, which may lead to exacerbated risk of road incidents. Consider implementation of operational procedures for surface connections to increase safety during extreme rainfall events, such as use of variable speed signs and reduced speed limits.	Not applicable due to small scale nature of works	Not applicable
HR1	Storage of dangerous goods and hazardous materials will occur in accordance with suppliers' instructions and relevant Australian Standards and legislation including the: • Work Health and Safety Act 2011 (NSW) • Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005) • Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (NSW EPA 1997). Storage methods may include bulk storage tanks, chemical storage cabinets/ containers or impervious bunds.	Not Applicable	Applicable
HR2	Secure, bunded areas will be provided around storage areas for oils, fuels and other hazardous liquids. Impervious bunds will be of sufficient capacity to contain at least 110 per cent of the volume of the largest stored container.	Applicable	Applicable
HR3	Management measures to reduce the potential for spills, reduce potential spill volumes and prevent any contamination will be developed and implemented for activities such as vehicle refuelling, servicing, maintenance, and washdown, where there is a potential for spills and contamination.	Applicable	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
HR4	Safety Data Sheets for dangerous goods and hazardous substances will be stored on site prior to their arrival.	Applicable	Applicable
HR5	Transport of dangerous goods and hazardous substances will be conducted in accordance with relevant legislation and codes, including the Dangerous Goods (Road and Rail Transport) Regulation 2014 (NSW) and the Australian Code for the Transport of Dangerous Goods by Road and Rail (National Transport Commission 2008).	Applicable	Applicable
HR6	Construction lighting will be designed and installed in accordance with the design requirements of the Civil Aviation and Safety Authority (CASA) and the Sydney Airport Master Plan 2033.	Not applicable	Not applicable
OpHR1	The fire and safety systems and measures adopted for the project will be equivalent to or exceed the fire safety measures recommended by National Fire Protection Association 502 (American), Permanent International Association of Road Congresses (European), AS4825 (Australian) and Roads and Maritime standards.	Not applicable	Not applicable
OpHR2	Ongoing consultation will be undertaken with emergency services regarding fire and safety systems and associated measures adopted for the project.	Not applicable	Not applicable
OpHR3	The transport of dangerous goods and hazardous substances will be prohibited through all tunnels and entry and exit ramps associated with the project.	Not applicable	Not applicable
OpHR4	An Incident Response Plan will be developed as part of the Emergency Response Plan for the project and implemented in the event of an accident or incident.	Not applicable	Not applicable
OpHR5	The response to incidents within the motorway will be managed in accordance with the memorandum of understanding between Roads and Maritime and the NSW Police Service, NSW Rural Fire Service, NSW Fire Brigade and other emergency services.	Not Applicable	Not applicable
OpHR6	Storage of dangerous goods and hazardous materials will occur in accordance with suppliers' instructions and relevant Australian Standards and legislation including the: • Work Health and Safety Act 2011 (NSW)	Not applicable (not relevant to operation of Stage 3)	Applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
	• Storage and Handling of Dangerous Goods Code of Practice (WorkCover NSW 2005) • Environment Protection Manual for Authorised Officers: Bunding and Spill Management, technical bulletin (NSW EPA 1997). Storage methods may include bulk storage tanks, chemical storage cabinets/ containers or impervious bunds.		
OpHR7	Secure, bunded areas will be provided around storage areas for oils, fuels and other hazardous liquids. Impervious bunds will be of sufficient capacity to contain at least 110 per cent of the volume of the largest stored container.	Not applicable (not relevant to operation of Stage 3)	Applicable
OpHR8	Management measures to reduce the potential for spills, reduce potential spill volumes and prevent any contamination will be developed and implemented for activities such as vehicle refuelling, servicing, maintenance or washdown, where there is a potential for spills and contamination.	Not applicable (not relevant to operation of Stage 3)	Applicable
OpHR9	Material Safety Data Sheets for dangerous goods and hazardous substances will be stored on site prior to their arrival.	Not applicable (not relevant to operation of Stage 3)	Applicable
OpHR10	The detailed design of the project substations will ensure that the exposure limits for the general public suggested by the Draft Radiation Standard (Australian Radiation Protection and Nuclear Safety Agency 2006) will not be exceeded at the boundary of the substation sites.	Not applicable (not relevant to operation of Stage 3)	Not applicable
OpHR11	Should the exhaust plumes at any of the M4-M5 Link ventilation outlets be assessed as a 'controlled activity' under the Airports Act and the Airspace Regulations, then the project will be operated in accordance with any conditions of approval from the Secretary of Department of Infrastructure and Regional Development.	Not applicable (not relevant to operation of Stage 3)	Not applicable
OpHR12	Aviation hazard lighting (if required), building lighting and surface road lighting will be designed and operated in accordance with the requirements of CASA and the Sydney Airport Master Plan 2033.	Not applicable (not relevant to operation of Stage 3)	Not applicable

REMM	Description	Rozelle Interchange Pedestrian and Cyclist Improvement Strategy (E58) (Stage 3)*	Rozelle Parkland Enhancement (Stage 4)
C1	Cumulative impacts strategy will be prepared in accordance with the Cumulative impact assessment methodology in Chapter 26 and Appendix C (Cumulative impact assessment methodology) of the EIS. It will include strategies and measures to minimise cumulative impacts on the community and other stakeholders including: • Identification of key stakeholders and projects • Identification of precincts for which separate Cumulative impact plans may be developed and implemented • Identification of a co-ordinating body • Procedures and mechanisms for co-ordinating consultation and sharing of information, such as works programs and schedules, with other projects • Opportunities and measures to work with other projects to minimise the effects of impacts and enhance the benefits of multiple projects occurring concurrently or consecutively • Opportunities to co-ordinate community communications across the various projects to provide consistent messaging.	Applicable	Not applicable due to small scale nature of works
C2	A Community Consultative Committee will be established for the project in accordance with Community Consultative Committee Guidelines (NSW Department of Planning and Environment 2016). The committee will provide a forum for discussion between Roads and Maritime, the construction contractor(s), local community and councils regarding the project, including cumulative impacts.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
S1	The construction contractor will develop and implement a Sustainability Management Plan during detailed design. The Sustainability Management Plan will establish governance structures, processes and systems that ensure integration of all sustainability considerations (vision, commitments, principles, objectives and targets), initiatives, monitoring and reporting during the detailed design and construction phases of the project.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works
S2	The project will be designed and constructed to achieve an Excellent 'Design' and 'As built' rating under the Infrastructure Sustainability Council of Australia's Infrastructure Sustainability rating tool.	Not applicable due to small scale nature of works	Not applicable due to small scale nature of works

* All Revised Environmental Mitigation Measures were considered applicable to Stage 1 and Stage 2

Appendix C Key Conditions of Approval consistent across construction

CoA	Report/notification	Timing
A12	Staging Report	This Staging Report specifies the CoAs that apply to each stage of construction and operation and how compliance with those CoAs will be achieved across and between the stages of the project. A single report is applicable to the whole M4-M5 Link project.
A18	Environmental Representative	The Environmental Representative has been engaged across all stages of construction to ensure consistency.
A24	Acoustics Advisor	The Acoustics Advisor has been engaged across all stages of construction to ensure consistency.
A44, A45	Identification of workforce and compounds	All construction spoil haulage vehicles (associated with the excavation of the tunnel and large bulk earthworks in Stage 1 and Stage 2) and signage on hoardings surrounding the construction ancillary facilities for the project will include the project name and CSSI application number to enable immediate identification during construction.
B7	WestConnex Acquisition Assistance Line	The WestConnex Acquisition Assistance Line will be consistent across both stages of the project.
B8	Complaints Management System	The Complaints Management System will be consistently used across both stages during construction to ensure consistency in recording, managing and responding to complaints.
B9	Complaints Register	The Complaints Register will be consistently used during both stages of construction to ensure consistency in reporting to the Secretary.
B10	Community enquiries and complaints	The 24 hour toll-free telephone number, postal address, email address and mechanism for community members to make enquiries in common community languages will be consistent across both stages of construction.
B13	Community Complaints Mediator	The Community Complaints Mediator has been engaged across both stages of construction, to ensure consistency in the delivery of the project.
B17	Website	The WestConnex website will be utilised for both stages.
E2	Air Quality Community Consultative Committee	Some of the members comprising the Air Quality Community Consultative Committee are consistent across the project during construction and operation of Stage 1 and Stage 2.

Appendix D Stage 3 Impact Register

Stage 3 of the project involves delivery of the pedestrian and cycleway improvements in accordance with CoA E58. Activities required to undertake this activity include:

- General construction activities
- Demolition of kerbs and gutter
- Earthworks
- Civil concreting works for raised thresholds
- Milling and resheeting of road pavement
- Tie-in works
- Linemarking and installation / removal of signage
- Landscaping and rehabilitation work.

An environmental risk assessment for the Stage 3 pedestrian and cycleway improvements has been completed to assist in determining applicability of each environmental management category to this stage of the project. The table identifies the construction activity/aspect, the associated potential environmental impacts and a risk rating for that impact. The risk rating (refer to Table 3) is based on the likelihood of the event occurring (refer to Table 1) and the consequence (refer to Table 2); the classification system used is based on the Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPIE April 2020). Where a risk is assessed as low or medium it will be managed with a procedure; high and severe risks will be managed with a sub-plan. There are no high or severe residual risks and therefore procedures rather than sub plans are required to support the Contractor's EMP for Stage 3.

Table 1: Likelihood criteria

Probability (likelihood)	Description
Highly likely (5)	*Is expected to occur in most circumstances*
Likely (4)	*Will probably occur during the life of the project*
Possible (3)	*Might occur during the life of the project*
Unlikely (2)	*Could occur but considered unlikely or doubtful*
Rare (1)	*May occur in exceptional circumstances*

Table 2: Consequence criteria

Consequence (impact)	Description
Minor (1)	*Minor incident of environmental damage that can be reversed*
Medium (2)	*Isolated but substantial instances of environmental damage that could be reversed with intensive efforts*
High (3)	*Substantial instances of environmental damage that could be reversed with intensive efforts*
Major (4)	*Major loss of environmental amenity and real danger of continuing*
Critical (5)	*Severe widespread loss of environmental amenity and irrecoverable environmental damage*

Table 3: Risk rating

		Consequence				
		Minor (1)	Medium (2)	High (3)	Major (4)	Critical (5)
Likelihood	Almost certain (5)	*Medium (5)*	*High (10)*	*High (18)*	*Severe (23)*	*Severe (25)*
	Likely (4)	*Low (4)*	*Medium (9)*	*High (17)*	*High (20)*	*Severe (24)*
	Possible (3)	*Low (3)*	*Medium (8)*	*Medium (13)*	*High (19)*	*Severe (22)*
	Unlikely (2)	*Low (2)*	*Low (7)*	*Medium (12)*	*High (15)*	*High (21)*
	Rare (1)	*Low (1)*	*Low (6)*	*Low (11)*	*Medium (14)*	*High (16)*

Table 4: Stage 3 Pedestrian and cycleway improvements - Impact register

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Air Quality	Generation of dust due to cutting/ grinding/ sawing equipment, material/ waste/ spoil handling; and generation of exhaust emissions due to inappropriate plant maintenance Generation and mobilisation of dust impacting receivers including residents, businesses, vegetation and habitats	9 (Medium)	Direct: ○ Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation ○ Disturbed areas will be maintained and managed in a sequential manner to reduce dust generation ○ Storage of materials that have the potential to result in dust generation will be minimised and kept within dedicated areas at all times ○ During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties ○ Demolition activities will be planned and carried out to minimise the potential for dust generation ○ Adequate dust suppression will be applied during all demolition works required to facilitate the Project Indirect: ○ Other measures outlined in an Air Quality Management Procedure (AQP)	7 (low)	Environmental Management Plan (EMP). Air Quality Management Procedure (AQP)
Biodiversity	Overly excessive tree pruning Accidental tree clearing	8 (Medium)	Direct:	7 (low)	Environmental Management Plan (EMP).

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Accidental damage to tree roots Accidental clearing of high value retention trees / areas of trees to retain		○ Toolbox talks regarding limitation of proposed scope on trees (limited tree pruning proposed only) ○ Clearly delineate the Project footprint prior to commencement of work Indirect: ○ Engage an arborist to supervise works where impact or damage to tree roots is probable ○ Provide tree protection where required at the direction of the arborist ○ Other measures outlined in the Arborist Report		Arborist Report
Contamination	Contamination of soil or water from spill or leak of dangerous or hazardous materials from plant / equipment	17 (High)	Direct: ○ The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds ○ Refuelling shall be undertaken offsite wherever possible ○ Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets ○ All spills or leakages will be immediately contained and absorbed ○ Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect:	13 (Medium)	Environmental Management Plan (EMP). Soil and Water Management Procedure (SWP) Unexpected Contamination Finds Procedure (within SWP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Other measures outlined in the Soil and Water Management Procedure (SWP)		
	Exposure to unidentified contaminated materials during works, causing program delays and injuries and health concerns	13 (Medium)	Direct: ○ Induct construction personnel in the identification and management of previously unidentified contaminated sites. ○ The discovery of previously unidentified contaminated material will be managed in accordance with an unexpected contaminated lands finds procedure. The procedure will include: ○ Cease work in the vicinity ○ Initial assessment by an appropriately qualified environmental consultant ○ Further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act Indirect: ○ Other measures outlined in the Unexpected Contaminated Land Finds Procedure	12 (Medium)	Environmental Management Plan (EMP) Unexpected Contamination Finds Procedure (within SWP)
Heritage	Disturbance or damage of unidentified Aboriginal heritage artefact	11 (Low)	Direct: ○ All on site personnel will be provided with site training in regard to Aboriginal cultural heritage site awareness, key mitigation and management requirements and their responsibilities pertaining to the Aboriginal Heritage provisions of the *NPW Act 1974 (NSW)* prior to construction commencing.	11 (Low)	Environmental Management Plan (EMP) Heritage Management Procedure (HMP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			Training will include unexpected heritage finds procedures for heritage items, objects and human remains. ○ Implement Unexpected Heritage Finds and Human Remains Procedure Indirect: ○ Other measures outlined in the Heritage Management Procedure (HMP)		Unexpected Heritage Finds and Human Remains Procedure (within HMP)
	Disturbance or damage of non-Aboriginal heritage items including	13 (Medium)	Direct: ○ Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must ensure works are performed in accordance with a heritage assessment and regulatory requirements (which may include a dilapidation survey and/or supervision of works by a competent person and/or vibration monitoring) ○ Any such areas should be signposted and segregated by the erection of physical barriers to prevent authorised entry	12 (Medium)	Environmental Management Plan (EMP) Heritage Management Procedure (HMP)
Noise and Vibration	Noise and vibration impacts on nearby receivers, including out of hours impacts resulting in structural damage or community complaints	17 (High)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training ○ Noise and vibration monitoring undertaken in accordance with the	13 (Medium)	Environmental Management Plan (EMP) Noise and Vibration Procedure (NVP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			Project's Construction Noise and Vibration Monitoring Program ○ The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures. (Smooth drum roller will be used for milling and resheeting) ○ Where structures are identified in the safe working distance then a condition survey will be carried out, pre and post construction. ○ Erection of temporary noise walls ○ Community liaison and notification ○ Provision of respite where required ○ Programming the works to minimise the duration of noisy works in any one particular location Indirect: ○ Other measures outlined in the NVP and Construction Noise and Vibration Monitoring Program		Construction Noise and Vibration Monitoring Program Construction Noise Vibration Impact Statement (CNVIS)
	Noise disturbance due to works undertaken out of standard construction hours	17 (Severe)	○ Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol – Works not subject to an EPL ○ Ensure OOHW are appropriately justified – safety or community requirement.	13 (Medium)	Environmental Management Plan (EMP) Noise and Vibration Procedure (NVP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Implement noise mitigation strategies for out of standard hours work as per OOHW Protocol. ○ Monitor noise for compliance to project goals. ○ Community notifications distributed.		OOHW Protocol
Soil and Water	Serious incidents, e.g. uncontrolled release of washout water, major fuel spill, that cause or threaten material harm to the environment	13 (Medium)	Direct: ○ No concrete washout to be undertaken on site. ○ The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds ○ No refuelling to be undertaken on site. ○ Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: ○ Other measures outlined in the SWP	12 (Medium)	Soil and Water Management Procedure (SWP)
	Erosion and sedimentation impacts on downstream waterways due to exposed land, inadequate controls or failure of controls	9 (Medium)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures ○ Suitably qualified Environment Manager to be on site ○ Erosion and Sedimentation Control Plan to advise on the implementation of erosions and sediment controls	8 (Medium)	Soil and Water Management Procedure (SWP) ESCP

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ ○ Hardstand areas and surrounding public roads will be cleaned as required using methods such as brooms, bobcat attachments or street sweepers Indirect: ○ Other measures outlined in the SWP		
Traffic	Traffic and parking impacts due to increased number of construction vehicles, site access arrangements and vehicle movements	17 (High)	Direct: ○ Designated routes for heavy vehicles ○ Deployment of surveillance officers ○ Utilisation of the traffic control centre ○ Limiting vehicle movements to designated entries and exits and haulage routes ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures ○ Communication and adherence to a Worker Code of Conduct ○ Minimise construction vehicle parking on public roads ○ Queuing and idling of construction vehicles in residential streets will be minimised ○ Notifications to be implemented (i.e. parking signage and routine communication) for disruption to roadway and parking areas.	9 (Medium)	Traffic Management Plan (TMP) Construction Parking and Access Strategy (CPAS) Road Dilapidation Report

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Vehicle movements to and from sites will be managed to ensure pedestrian, cyclist and motorist safety. ○ A road dilapidation report will be prepared, in consultation with relevant councils and road owners, identifying existing conditions of local roads and mechanisms to repair damage to the road network caused by heavy vehicle movements associated with the project. ○ Measures identified in the TMP will be implemented for each construction site which requires direct access/egress onto the local/arterial road network Indirect: ○ Other measures outlined in the TMP		
Utilities	Damage to existing utility services	20 (High)	Direct: ○ Ensuring appropriate precautionary measures are undertaken or in place prior to works such as completing Dial Before You Dig searches ○ Positive utility identification such as through potholing or non-destructive digging ○ Utilisation of utility spotters ○ Ensuring Ground Penetration Permits are obtained ○ Liaison with the relevant utility agencies as required ○	19 (Medium)	Environmental Management Plan (EMP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Visual	Visual impacts on nearby receivers due to light spill, construction works, overshadowing	9 (Medium)	Direct: ○ Site establishment works will be conducted to minimise visual impacts. Where there is no noise wall or hoarding in place, boundary fencing will be installed to minimise visual, noise and air quality impacts on adjacent sensitive receivers ○ Retention of existing vegetation or treatment of key temporary structures ○ Minimise light spill from the project by directing construction lighting into the construction areas and ensuring the site is not over-lit	8 (Medium)	Environmental Management Plan (EMP)
Waste	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) or disposal at an unlicensed waste facility	13 (Medium)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures ○ Vegetation disposal in accordance with the Vegetation Management Procedure ○ EPA Waste classification Guidelines to be implemented for works ○ Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail and commercial wastes for either offsite processing and/or disposal to an appropriately licensed facility. ○ Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes	12 (Medium)	Environmental Management Plan (EMP) Waste and Resource Use Management Procedure (WP) Soil and Water Management Procedure (SWP) Vegetation Management Procedure (VMP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Waste tracking register Indirect: ○ Other measures outlined in the Waste and Resource Use Waste Management Procedure (WP), SWP and VMP		
	Litter, inappropriate use of co-mingling and waste receptacles	4 (Low)	Direct: ○ All staff and subcontractors will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the waste management hierarchy) and energy consumption	3 (Low)	Environmental Management Plan (EMP)

Appendix E Stage 4 Impact Register

Stage 4 of the project involves construction of a second facilities building; two multi-purpose courts; lighting towers over the AFL/cricket oval and soccer oval; and an additional toilet. Activities required to undertake this include:

- General construction activities
- Temporary removal of 3 to 4 parking spots along Lilyfield Road
- Minor earthworks/excavation and retaining wall
- Installation of footings and concrete slabs
- Construction of amenities building on site
- Installation of pre-fabricated toilet and lighting towers
- Minor piling
- Utility works including protection and/or adjustment of existing utilities and installation of new utilities
- Linemarking of sports fields
- Landscaping and rehabilitation work.

An environmental risk assessment for Stage 4 has been completed to assist in determining applicability of each environmental management category to this stage of the project. The table identifies the construction activity/aspect, the associated potential environmental impacts and a risk rating for that impact. The risk rating (refer to Table 3) is based on the likelihood of the event occurring (refer to Table 1) and the consequence (refer to Table 2); the classification system used is based on the Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPIE April 2020). Where a risk is assessed as low or medium it will be managed with a procedure; high and severe risks will be managed with a sub-plan. There are no high or severe residual risks and therefore procedures rather than sub plans are required to support the Contractor's CEMP for Stage 4.

Table 8: Stage 4 Rozelle Parkland Enhancements - Impact register

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Air Quality	Generation of dust due to cutting/ grinding/ sawing equipment, material/ waste/ spoil handling, truck movements; and generation of exhaust emissions due to inappropriate plant maintenance Generation and mobilisation of dust impacting receivers including residents, businesses, vegetation and habitats	8 (Medium)	Direct: ○ Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation ○ Disturbed areas will be maintained and managed in a sequential manner to reduce dust generation ○ Storage of materials that have the potential to result in dust generation will be minimised and kept within dedicated areas at all times ○ Adequate dust suppression will be applied during all construction works required to facilitate the Project Indirect: ○ Other measures outlined in the CEMP	3 (Low)	Construction Environmental Management Plan (CEMP)
Biodiversity	Accidental damage to tree roots	3 (Low)	Direct: ○ Toolbox talks regarding limitation of proposed scope on trees ○ Clearly delineate the Project footprint prior to commencement of work Indirect: ○ Engage an arborist to supervise works where impact or damage to tree roots is probable	2 (Low)	CEMP

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Provide tree protection where required at the direction of the arborist.		
Contamination	Contamination of soil or water from spill or leak of dangerous or hazardous materials from plant / equipment	8 (Medium)	Direct: ○ The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds ○ Refuelling shall be undertaken offsite wherever possible ○ Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets ○ All spills or leakages will be immediately contained and absorbed ○ Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: ○ Other measures outlined in CEMP	3 (Low)	CEMP
	Exposure to unidentified contaminated materials during works	8 (Medium)	Direct: ○ Induct construction personnel in the identification and management of previously unidentified contaminated sites. ○ The discovery of previously unidentified contaminated material will be managed in accordance with an Unexpected Contamination and Asbestos Procedure. The procedure will include:	3 (Low)	CEMP Unexpected Contamination and Asbestos Procedure

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Cease work in the vicinity ○ Initial assessment by an appropriately qualified environmental consultant ○ Further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act Indirect: ○ Other measures outlined in the Unexpected Contamination and Asbestos Procedure		
	Impact to existing remediation works due to piling	8 (Medium)	○ Long term EMP ○ Other measures outlined in the CEMP	3 (Low)	CEMP
Heritage	Disturbance or damage of unidentified Aboriginal heritage artefact	11 (Low)	Direct: ○ All on site personnel will be provided with site training in regard to Aboriginal cultural heritage site awareness, key mitigation and management requirements and their responsibilities pertaining to the Aboriginal Heritage provisions of the *NPW Act 1974 (NSW)* prior to construction commencing. Training will include unexpected heritage finds procedures for heritage items, objects and human remains. ○ Implement Heritage Unexpected Finds Procedure	11 (Low)	CEMP Heritage Unexpected Finds Procedure

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	Disturbance or damage of non-Aboriginal heritage items	7 (Low)	Direct: ○ Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must ensure works are performed in accordance with the heritage assessment and regulatory requirements (which may include a dilapidation survey and/or supervision of works by a competent person and/or vibration monitoring)	7 (Low)	CEMP Heritage Unexpected Finds Procedure
Noise and Vibration	Noise and vibration impacts on nearby receivers,or community complaints	9 (Medium)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training ○ Programming the works to minimise the duration of noisy works in any one particular location ○ The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures ○ Where structures are identified in the safe working distance then a condition survey will be carried out, pre and post construction. ○ Community liaison and notification Indirect:	8 (Medium)	CEMP Construction Noise Vibration Impact Statement (CNVIS)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Other measures outlined in the CEMP		
	Noise disturbance due to works undertaken out of standard construction hours	7 (Low)	○ Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol (OOHW) – Works not subject to an EPL ○ Ensure OOHW are appropriately justified – safety or community requirement. ○ Implement noise mitigation strategies for out of standard hours work as per OOHW Protocol. ○ Monitor noise for compliance to project goals. ○ Community notifications distributed.	8 (Medium)	CEMP Construction Noise Vibration Impact Statement OOHW Protocol
Soil and Water	Serious incidents, e.g. uncontrolled release of washout water, major fuel spill, that cause or threaten material harm to the environment	7 (Low)	Direct: ○ No concrete washout to be undertaken on site. The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds ○ No refuelling to be undertaken on site. ○ Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: ○ Other measures outlined in the CEMP	7 (Low)	CEMP
	Erosion and sedimentation impacts on downstream waterways due to exposed land,	8 (Medium)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that	8 (Medium)	CEMP Erosion and Sedimentation Control Plan (ESCP)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	interaction with open swale drain and inadequate controls or failure of controls		will detail erosion and sediment control management measures ○ Suitably qualified Environment Manager to be on site ○ Erosion and Sedimentation Control Plan to advise on the implementation of erosions and sediment controls ○ Hardstand areas and surrounding public roads will be cleaned as required using methods such as brooms, bobcat attachments or street sweepers Indirect: ○ Other measures outlined in the CEMP and ESCP		
Traffic and access	Traffic and parking impacts due to increased number of construction vehicles, temporary loss of 3-4 parks on Lilyfield Road for site access arrangements and vehicle movements. Potential impact to Rozelle Parkland users due to disruption of the shared user path and access through the park. Temporary restriction to sporting facilities.	17 (High)	Direct: ○ Designated routes for heavy vehicles ○ Limiting vehicle movements to designated entries and exits and haulage routes ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures ○ Communication and adherence to a Worker Code of Conduct ○ Minimise construction vehicle parking on public roads ○ Queuing and idling of construction vehicles in residential streets will be minimised	9 (Medium)	CEMP Traffic Management Plan (TMP) Construction Parking and Access Strategy (CPAS) Construction Parking and Access Strategy (E54)

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			○ Notifications to be implemented (i.e. parking signage and routine communication) for disruption to roadway, SUP, access and parking areas. ○ Vehicle movements to and from sites will be managed to ensure pedestrian, cyclist and motorist safety. ○ Measures identified in the TMP and CPAS will be implemented for each construction site which requires direct access/egress onto the local/arterial road network Indirect: ○ Other measures outlined in the TMP and CPAS.		
Utilities	Damage to existing utility services Temporary disruption to existing power and water for users of the park	13 (Medium)	Direct: ○ Ensuring appropriate precautionary measures are undertaken or in place prior to works such as completing Dial Before You Dig searches ○ Positive utility identification such as through potholing or non-destructive digging ○ Utilisation of utility spotters ○ Liaison with the relevant utility agencies as required	8 (Medium)	CEMP
Visual	Visual impacts on nearby receivers and park users due to construction works	4 (Low)	Direct: ○ Site establishment works will be conducted to minimise visual impacts. Where there is no noise wall or hoarding in place, boundary fencing will be	3 (Low)	CEMP

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			installed to minimise visual, noise and air quality impacts on adjacent sensitive receivers		Urban Design and Landscape Plan (UDLP)
Waste	Inappropriate disposal of waste (including demolition and potential hazardous / special waste) or disposal at an unlicensed waste facility	7 (Low)	Direct: ○ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures ○ Waste and vegetation disposal in accordance with the CEMP ○ EPA Waste classification Guidelines to be implemented for works ○ Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail and commercial wastes for either offsite processing and/or disposal to an appropriately licensed facility. ○ Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes ○ Waste tracking register Indirect: ○ Other measures outlined in the CEMP.	7 (Low)	CEMP Long Term EMP
	Litter, inappropriate use of co-mingling and waste receptacles	4 (Low)	Direct: ○ All staff and subcontractors will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the	3 (Low)	CEMP

Issue	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
			waste management hierarchy) and energy consumption		