WestConnex
Rozelle Interchange

JOHN HOLLAND | CPB CONTRACTORS

JHCPB Joint Venture

Site Establishment Management Plan

RIC-JHC-MPL-00-PL-310-001

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Glossary

Abbreviation	Expanded text
ATF	Australian Temporary Fencing
BC Act	*Biodiversity Conservation Act 2016*
Best Practice	A process or method that when executed effectively, leads to enhanced project performance.
CEMP	Construction Environmental Management Plan
CNVG	Construction Noise and Vibration Guideline
CNVIS	Construction noise and vibration impact statement
CoA	NSW Minister for Planning's Conditions of Approval
CSSI	Critical State Significant Infrastructure
CPAS	Construction Parking and Access Strategy
TTAMP	Traffic and Transport and Access Management Plan
CTEAP	Compliance Tracking and Environmental Approvals Program
DPE	NSW Department of Planning and Environment
EIS	M4-M5 Link Environmental Impact Statement
EEC	Endangered Ecological Community
EPA	NSW Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EMS	Environmental Management System
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPL	Environment Protection Licence
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental work method statement
GHG	Greenhouse gas
HAMU	Historical Archaeological Management Unit
HARDEM	Historical Archaeological Research Design and Excavation Methodology
Hold point	A verification point that prevents work from commencing prior to approval from Roads and Maritime Services
ICNG	Interim Construction Noise Guideline
JHCPB	John Holland CPB Contractors Joint Venture
MOC	Motorway Operation Complexes
NIP	Noise Insulation Program
NVMP	Noise and Vibration Management Plan
OEH	Office of Environment and Heritage
PESCP	Progressive Erosion and Sediment Control Plan
PIRMP	Pollution Incident Response Management Plan
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Project	Rozelle Interchange
RAP	Remediation Action Plan
REMM	Revised environmental management measure
RMS	Roads and Maritime Services
ROL	Road occupancy licence
SAP	Sensitive Area Plan
SEP	Site Environmental Plan
SEMP	Site Establishment Management Plan (this document)
SPIR	M4-M5 Link Submissions and Preferred Infrastructure Report
SWMP	Soil and Water Management Plan
TCP	Traffic Control Plan
UMS	Utilities Management Strategy

1. Introduction

1.1. Context

This Site Establishment Management Plan (SEMP) relates to the M4-M5 Link Rozelle Interchange (the Project) has been prepared in accordance with Minister's Condition of Approval (CoA) C22 for the M4-M5 Link.

The SEMP has been prepared in accordance with:

- RMS QA Specification G36, G38 and G40,
- The Conditions of Approval granted to the project on 17 April 2018 and subsequent Approved Modification Reports,
- The WestConnex M4-M5 Link Environmental Impact Statement (EIS),
- The WestConnex M4-M5 Link Submissions and Preferred Infrastructure Report
- Revised environmental management measures (REMM), and
- All other applicable guidelines and legislation.

1.2. Background and project description

The M4-M5 Link EIS (AECOM 2017) assessed the impacts of construction and operation of the Project. The EIS included a description of the construction ancillary facilities, within Chapter 6.5, and assessed the potential impacts in relation to the ancillary facilities in Chapters 8 – 26.

The EIS identified the potential for a range of minor impacts associated with ancillary facilities (and therefore site establishment works). However, it concluded any potential impacts could be managed by standard mitigation and management measures.

1.3. Scope

The scope of this SEMP is to describe the environmental management practices and procedures which will be implemented for the establishment of the construction ancillary facilities.

A total of four ancillary facilities were identified and described in the EIS as being required to deliver the Project. These sites are essential to deliver the Project and include activities such as machinery launch, earthworks support, laydown and workforce amenities.

This SEMP considers the establishment of the four ancillary facilities required for the Project, as described in Section 4 of this Plan.

Operation of the construction ancillary facility operations will be undertaken in accordance with the Construction Environmental Management Plan (CEMP) and associated sub-plans. In the event that the CEMP is approved prior to the completion of site establishment activities, site establishment activities will continue in accordance with the CEMP.

2. Purpose and objectives

2.1. Purpose

The purpose of this Plan is to outline the environmental management practices and procedures to be followed during establishment of the construction ancillary facilities. This plan must be approved by the Secretary of the Department of Planning and Environment (DPE) prior to commencing establishment activities.

Details of the proposed ancillary facility site establishment activities and potential environmental impacts are summarised in Section 5. Management of these potential environmental impacts are summarised in Annexure B and will be undertaken in accordance with this SEMP.

Definitions relating to the SEMP included in the Instrument of Approval are provided in Table 1.

Table 1: Instrument of Approval definitions

Term	Definitions
Ancillary facility	*A temporary facility for construction of the Project including an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory, material stockpile area, car parking compound and truck marshalling facility.*
Site establishment works	*Activities undertaken to establish a construction ancillary facility so that it is able to be used to support the construction of the Critical State Significant Infrastructure (CSSI), including demolition of existing structures on the site, erection of site fencing / hoarding, provision of utility services to the site, site levelling, provision of site access, erection of demountable buildings, provision of hardstand areas, and erosion and sedimentation controls.* *However, site establishment works do not include:* *(a) piling (except for piling required for the erection of noise barriers around construction compounds); or* *(b) the erection of acoustic sheds at construction compounds including the hardstand area on which it will be erected; or* *(c) establishing tunnel shafts/dives.*

2.2. Services / utilities

Site establishment works will require essential services including power, water, communication and sewer to each of the site compounds. John Holland CPB Contractors Joint Venture (JHCPB) will connect to existing services at the nearest suitable location in consultation with the service providers.

Protection, adjustment or removal of existing utility assets to enable site establishment activities will be undertaken during site establishment.

Utilities required to be installed prior to CEMP approval, as defined by the definition of 'low impact' utilities work, will be managed in accordance with the Utilities Management Strategy, developed in accordance with CoA E140.

2.3. Environmental performance outcomes and program for monitoring

The following performance outcomes in Table 2 are related to the management of site establishment works. They have been established to achieve the 'desired performance outcomes' provided in the Secretary's Environmental Assessment Requirements and are adopted from the environmental performance outcomes listed in Appendix A of the EIS. No additional performance outcomes were identified in the SPIR. The project has also established a program for monitoring the performance outcomes as referenced in Table 2.

Table 2: Environmental objectives and targets

No.	Performance outcome	How addressed	Records	Program for monitoring	Source
1	No regulatory infringements (Penalty Infringement Notices (PINs) or prosecutions)	Undertake audits, implement the Compliance Tracking and Environmental Audit Program, adhere to the Project Environment Protection Licence, prepare annual returns, undertake management reviews, and implement the management and mitigation measures in Annexure B.	Compliance Tracking and Environmental Audit (CTEAP) Program, Environment Protection Licence	At all times	CoA A36
2	Minimise impacts to sensitive receivers and ensure they are notified of the works	Implement the management and mitigation measures in Annexure B to minimise the number of complaints received as a result of site establishment activities.	Complaints register, Communication Strategy	At all times	Best Practice
3	Identify and manage risks to, and impacts on, the environment from our work.	Maintain a risk register that includes an assessment of environmental risks. Track environmental compliance against relevant requirements. Implement the management and mitigation measures in Annexure B.	Risk register, construction compliance reporting through CTEAP	At all times	Best Practice
Performance outcomes relevant to site establishment as identified in Appendix A of the EIS					
4	**Transport and Traffic** • Minimise impacts to road network efficiency during site establishment • Maintain pedestrian and cyclist safety • Access to properties to be maintained	Implement environmental safeguards MMTT1-MMTT10.	Inspection records Road Safety Audits Property Access Agreements (if required)	Weekly inspections/ observations	CoA C22 (d)(i) EIS Appendix A
5	**Air Quality** • Effective management of dust, odour and other emissions during site establishment.	Implement the environmental safeguards MMAQ1-MMAQ20.	Inspection records	Weekly inspections/ observations	CoA C22 (d)(i) EIS Appendix A

No.	Performance outcome	How addressed	Records	Program for monitoring	Source
6	**Health and Safety** • Establish ancillary facilities and construction sites to protect road user and public • Hazardous materials within project areas will be managed to protect human health • Minimise incidents and crashes and risks to public safety during site establishment.	Implement the environmental safeguards MMTT1 – MMTT10, MMAQ19, MMC3, and MMHR1 – MMHR3.	Inspection records	Weekly inspections/ observations	CoA C22 (d)(i) EIS Appendix A
7	**Noise and Vibration** • Effective management of construction noise and vibration in accordance with relevant guidelines • No damage to features of heritage conservation significance from vibration.	Implement the environmental safeguards MMNV1-MMNV17.	Inspection records and monitoring records	Noise and vibration monitoring as required.	CoA C22 (d)(i) CoA C10 EIS Appendix A
8	**Biodiversity** • Minimise impact to aquatic biodiversity values.	Implement the environmental safeguardsMMB1-MMB6.	Inspection records Site Environment Plans	Weekly inspections/ observations	CoA C22 (d)(i) EIS Appendix A
9	**Urban Design and Visual Amenity** • Establish ancillary facilities to minimise adverse impacts on the visual amenity of the local community.	Implement the environmental safeguards MMU1-MMU4.	Inspection records	Weekly inspections/ observations	CoA C22 (d)(i) EIS Appendix A
10	**Water - Hydrology and Quality** • Effectively treat water to meet water quality discharge criteria	Implement the environmental safeguards MMSW1, MMSW3, MMSW5, and MMSW6.	Inspection records	Weekly inspections/ observations Discharge Permits	CoA C22 (d)(i) EIS Appendix A
11	**Flooding** • Meet flooding criteria determined during project detailed design	Implement the environmental safeguards MMF1 and MMF2.	Inspection records	At all times	CoA C22 (d)(i) EIS Appendix A
12	**Soils** • Erosion and sediment controls will be implemented in accordance with Managing Urban Stormwater – Soils and Construction, Volume 1 (Landcom 2004) and Volume 2D (DECCW 2008), commonly referred to as the 'Blue Book' • Manage acid sulfate soils in accordance with good practice measures	Implement the environmental safeguards MMSW1-MMSW6, MMC1-MMC3.	Inspection records	At all times	CoA C22 (d)(i) EIS Appendix A

No.	Performance outcome	How addressed	Records	Program for monitoring	Source
	• Manage contamination to protect environmental values and human health.				
13	**Heritage** • Establish archival recording of items of heritage significance that will be demolished	Implement the environmental safeguards MMH1-MMH7.	Inspection records	At all times	CoA C22 (d)(i) EIS Appendix A
14	**Waste** • Recycle or reuse uncontaminated spoil either onsite or off-site • Manage off-site waste re-use in accordance with relevant EPA resource recovery exemptions and requirements • Dispose of waste at appropriately licensed facilities.	Implement the environmental safeguards MMRW1-MMRW6.	Inspection records, waste dockets	At all times	CoA C22 (d)(i) EIS Appendix A

3. Environmental requirements

3.1. Relevant legislation

Key NSW state environmental legislation relevant to the establishment of ancillary facilities upon determination includes:

- *Protection of the Environment Operations Act 1997* (POEO Act) and subordinate regulations,
- *Environmental Planning and Assessment Act 1979* (EP&A Act),
- *Contaminated Lands Management Act 1997* (CLM Act),
- *Biodiversity Conservation Act 2016*
- *Heritage Act 1977,*
- *Local Land Services Act 2013,*
- *Biosecurity Act 2015,*
- *National Parks and Wildlife Act 1974* (NPW Act),
- *Roads Act 1993,*
- *Water Act 1912, and*
- *Water Management Act 2000*.

The impact assessment carried out for the project in the EIS indicate that the M4-M5 Link Project would not be likely to result in a significant impact on any matter of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act), including threatened and migratory species, world heritage properties, national heritage places or Commonwealth land. Accordingly, the M4-M5 Link Project has not been referred to the Australian Government Department of the Environment and Energy for further assessment or approval under the EPBC Act.

3.2. Conditions of approval

The CoA that explicitly relate to this document are provided in Table 3. A cross reference is included to indicate where each condition is addressed in this SEMP or other project management documents. A comprehensive list of all conditions of relevance to work under the SEMP, and where this SEMP addresses the condition, is included in Annexure A.

Table 3: Site Establishment Management Plan requirement as per Condition C22

CoA	Requirement	How addressed	Reference
C22	**Site Establishment Management Plan** Before establishment of any construction ancillary facility as identified in the EIS and SPIR (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:	This Site Establishment Management Plan has been prepared in accordance with this Condition of Approval and describes how JHCPB propose to approach environmental management practices and procedures to be implemented during the site establishment of the construction ancillary facilities.	This document
C22 (a)	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);	Section 4 of the plan describes site establishment activities to be undertaken during establishment of the construction ancillary facilities. Table 4 shows the different stages of the proposed site establishment works.	Section 4.1
C22 (b)	figures illustrating the proposed operational site layout(s);	Annexure C provides the indicative site layout plans for the construction ancillary facilities to be established in accordance with this SEMP.	Annexure C
C22 (c)	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;	The Site Establishment risk assessment outlined in Section 6.1 has been prepared by JHCPB to supplement the Environmental Risk Analysis conducted as part of the EIS and SPIR. Monitoring with regards to continuous improvement is also discussed in Section 7.2.	Section 6.1 Section 7.2

CoA	Requirement	How addressed	Reference
C22 (d)	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 The performance outcomes presented in Table 2 have been established, and are adopted from, the environmental performance outcomes listed in Appendix A of the EIS. There are no additional performance outcomes listed in the SPIR. The Project has also established a program for monitoring to ensure the performance outcomes have been met. ii Section 5.1.1 identifies site access and parking provisions during the site establishment phase, and details the local roads required for heavy vehicle use. iii The risks identified as part of the Site Establishment risk assessment outlined in Section 6.1 will be mitigated and managed in accordance with measures outlined in Annexure B.	i Section 2.3 ii Section 5.1.1 iii Section 6.1
C22 (e)	a program for monitoring the performance outcomes, including a program for construction noise monitoring consistent with the requirements of Conditions C9 and C10.	Section 2.3 outlines the program for monitoring the performance outcomes. An outline of the noise and vibration monitoring program is in Section 6.13.	Section 2.3
C22	Nothing in this condition prevents the Proponent from preparing individual **Site Establishment Management Plans** for each construction ancillary facility.	Noted.	Noted and understood.

3.3. Revised environmental management measures

The REMMs included in the M4-M5 Link Submissions Report applicable to the site establishment of ancillary facilities are included in Annexure A. The Project-wide consolidated management measures are provided in Annexure B.

3.4. Additional approvals, licences, permits and requirements

An EPL will be required for the Project as it will trigger a scheduled activity listed in Schedule 1 (Clause 35: road construction) of the POEO Act. This licence will include a premise boundary that will incorporate ancillary facilities.

Other requirements for site establishment works may include the following:

- Road Occupancy Licence, and
- Utilities Agreements (to be managed in accordance with the Utilities Management Strategy).

3.5. Guidelines

Guidelines, specifications and policy documents relevant to this SEMP include:

- RMS Specification D&C G36 – Environmental Protection,
- RMS Specification D&C G38 – Soil and Water Management,
- RMS Specification D&C G40 – Clearing and Grubbing,
- Standard Management Procedure: Unexpected Heritage Items, RMS (March 2015),
- Environmental Incident Classification and Reporting Procedure, RMS (June 2015),
- Managing Urban Stormwater: Soils and Construction. Volume 2D: Main Road Construction, DECC (2008),
- Managing Urban Stormwater: Soils and Construction. Volume 1: 'Blue Book', Landcom (2004),
- Technical Guideline Environmental Management of Construction Site Dewatering (Roads and Maritime, 2011),
- NSW Office of Water Guidelines for Controlled Activities,
- Interim Construction Noise Guideline (ICNG) (NSW Department of Environment and Climate Change NSW (DECC) 2009), and
- Construction Noise and Vibration Guideline (RMS).

4. Site establishment works

4.1. Site establishment works overview

The WestConnex M4-M5 Link EIS identified four temporary ancillary facilities for the Rozelle Interchange. The EIS provided an assessment of the characteristics, likely activities and potential impacts at each site.

Three of the four ancillary facilities required for the Project will be established in accordance with this SEMP. These ancillary facilities are shown in Annexure C of this plan and include:

- Rozelle civil and tunnel site (C5),
- The Crescent (C6),
- Victoria Road civil site (C7), and
- Iron Cove Link civil site (C8)

The WestConnex M4-M5 Link SPIR identified an additional temporary ancillary facility for the Rozelle Interchange. The SPIR provided an assessment of the characteristics, likely activities and potential impacts for the White Bay civil site (C11) site.

Modification 4 (The Glebe Island Ancillary Facility Modification Report) identified an additional ancillary facility within the Glebe Island area. The Modification Report provided an assessment of the characteristics, likely activities and potential impacts for the Glebe Island Ancillary Facility.

All final site layouts will be incorporated in the CEMP.

The proposed site establishment works and their indicative timeframes are summarised in Section 4.1.1.

4.1.1. Site establishment activities

Site establishment activities are defined within the planning approval as activities undertaken to establish "*a construction ancillary facility so that it is able to be used to support the construction of the CSSI*". Table 4 details the site establishment works proposed, and the indicative timeframes for the activities are provided in Figure 1, Figure 2, Figure 3, Figure 4,Figure 6 and Figure 6 in Section 4.1.2. Activities described in this section may overlap and therefore timeframes should not be considered cumulatively with regards to total time required for works to be completed.

The activities outlined in Table 4, plus associated elements of these activities, form the entire scope of site establishment addressed by this SEMP.

*Table 4: Site establishment activities, with high intensive noise activities in **bold***

Activity	Description

Site preparation works	• Provision of site security such as temporary fencing panels and perimeter fencing
	• Provision of minimum WHS requirements including:
	  ○ Toilet facilities
	  ○ Offices
	  ○ Lunch rooms
	• Signage and pedestrian diversions
	  ○ Installation of traffic barriers

Site survey and site investigation works	• Ground penetrating radar or electromagnetic ground investigation • Utility investigation by potholing with a vacuum truck • Phase 2 contamination investigation

Initial environmental controls	• Erosion and sediment controls, including:
	  ○ Installation of rip rap
	  ○ Drainage sump
	  ○ Diversion of offsite flows
	  ○ Erosion, sediment and water flow controls
	• Delineation of sensitive areas and temporary fencing/hoardings

Remediation	• Remediation of contaminated materials (if required, pending contamination investigation/site contamination report)

Environmental controls	• Noise walls installation, including:
	  ○ Construction of a piling pad for the piling plant to operate on
	  ○ **Installation of piles for the noise wall footings which will involve the use of an auger piling rig**
	  ○ Erection of posts for the noise wall and panel
	  ○ For the Rozelle civil and tunnel site noise wall, running parallel to City West Link: excavation behind piles and installation of ground support between piles for a temporary retaining wall.

Site levelling	• **Clearing and grubbing which will involve the use of chain saws and mulchers** • **Site levelling, grading and compaction (including fill importation) to raise the compounds above the flood plane which will involve the use of vibratory rollers** • Temporary stockpiling of materials for site levelling
Hardstand (excluding for acoustic sheds) and site access	• Formalisation of access and egress points • **Sealing of hard stand areas, which will involve the use of vibratory rollers** • **Internal haul roads installed which will involve the use of bitumen milling or profiling equipment**
Demolition of non-heritage structures	• Removal of hazardous materials • Internal strip out • **Structure disassembly and demolition which will involve the use of a jackhammer**
Utilities (note, these activities will be managed through the project UMS and have been provided	• Protection of existing services (overhead wiring) • Removal of redundant utilities • **Installation of services to the site e.g. Water, sewer, power, communications (this will be managed in accordance with the utilities management strategy).**

Activity	Description
in this table for completeness)	**This work will involve the use of power saws for cutting road pavement and concrete and jackhammers to remove concrete / rock in excavations.**
Installation of offices, workshops, water treatment plants	• Layout, e.g. Blockwork and foundations, completed for office installation • Installation of office buildings and shipping containers • Installation of staff amenities • **Mechanical workshop structures and areas which will involve the use of power saws for cutting timber** • Water treatment plant and water tank including fit out including excavation and concrete works (Rozelle civil and tunnel site only)
Fit out, commissioning and install of remaining site infrastructure including	• Chemical and hazardous material storage • Designated stockpile/laydown areas • Office furniture fit out • Formalisation of on-site car parking (line marking etc) • **Site lighting installed which will involve the use of power saws for cutting steel work**

4.1.2. Site establishment activities program

An indicative program with durations has been described in Figure 1, Figure 2, Figure 3, Figure 4 and Figure 6. These figures show the start and end durations for activities, these activities will not occur continuously.

For additional detail on the tasks which would be completed as part of the below activities refer to Table 4.

Site establishment works are scheduled to commence in May 2019. Site establishment activities will be undertaken in accordance with this SEMP until the CEMP is approved. Once the CEMP is approved the Project will enter the construction phase and the site establishment phase will be concluded. Subsequently, any remaining works for the purpose of establishing the ancillary facilities will be undertaken as part of the construction phase.

An initial risk assessment of each activity has been completed in Section 6.1.

Figure 1: Rozelle civil and tunnel site (C5) indicative program

Activity - Rozelle Civil and Tunnel Site (C5)	Program (Months)									Duration (Weeks)
	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	
Site preparation works	■									2
Site survey and site investigation works	■	■	■	■	■					19
Initial environmental controls	■									1
Remediation			■	■						5
Environmental controls*	■	■	■	■	■					18
Site levelling*	■	■	■	■	■	■				19
Hardstand (excluding for acoustic sheds) and site access*			■	■	■	■	■	■		23
Demolition of non-heritage structures*			■	■	■					12
Utilities*		■	■	■	■	■	■	■		27
Installation of offices, workshops and water treatment plants*			■	■	■	■	■	■	■	22
Fit out, commissioning and install of remaining site infrastructure*							■	■	■	9

*This activity will involve high noise intensive works intermittently

Figure 2: The Crescent civil site (C6) indicative program

Activity – The Crescent Civil Site (C6)	Program (Months)									Duration (Weeks)
	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	
Site preparation works / clearing										4
Site levelling*										9
Hardstand and site access*										13

**This activity will involve high noise intensive works intermittently*

Figure 3: Victoria Road civil site (C7) indicative program

Activity - Victoria Road Civil Site (C7)	Program (Months)									Duration (Weeks)
	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	
Site preparation works	■									2
Site survey and site investigation works	■	■								6
Initial environmental controls	■									1
Remediation			■	■						4
Environmental controls*		■	■	■	■					11
Site levelling*		■	■	■						7
Hardstand (excluding for acoustic sheds) and site access*			■	■	■					9
Demolition of non-heritage structures*	■	■	■	■						12
Utilities*		■	■	■	■	■	■			23
Installation of offices and workshops*					■	■				5
Fit out, commissioning and install of remaining site infrastructure*					■	■				5

*This activity will involve high noise intensive works intermittently

Figure 4: Iron Cove civil site (C8) indicative program

Activity - Iron Cove Civil Site (C8)	Program (Months)									Duration (Weeks)
	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	
Site preparation works	■									2
Site survey and site investigation works	■	■								6
Initial environmental controls	■	■								2
Remediation			■	■						4
Environmental controls*	■	■	■	■	■	■				20
Site levelling*			■							4
Hardstand (excluding for acoustic sheds) and site access*				■						4
Demolition of non-heritage structures*		■								4
Utilities*		■	■	■	■	■	■			23
Installation of offices and workshops*				■	■					5
Fit out, commissioning and install of remaining site infrastructure*					■	■				5

*This activity will involve high noise intensive works intermittently

Figure 5 Glebe Island civil site indicative program

Activity - Glebe Island civil site	Program (Months)			Duration (Weeks)
	Jul-20	Aug-20	Sept-20	
Site preparation works	■			1
Site survey and site investigation works	■	■		1
Environmental controls	■	■		0.5
Installation of offices and workshops	■	■	■	1

*This activity will involve high noise intensive works intermittently

Figure 6: White Bay civil site (C11) indicative program

Activity - Iron Cove Civil Site (C11)	Duration (Weeks)	
	Jun 20	
Site preparation works	[redacted]	2
Site survey and site investigation works		1
Initial environmental controls		1
Environmental controls*		1

Figure 7: Western Harbour Tunnel support site (within the Rozelle Civil and Tunnel site) indicative program

Activity	Program (Months)			Duration (Weeks)
	May-22	Jun-22	Jul-22	
Site preparation works	[redacted]			4
Environmental controls				2
Installation of offices and workshops				3

4.1.3. Construction hours

Except as permitted, the Project will restrict working hours for site establishment to the times listed in CoA E68 and E69:

- 7am – 6pm Monday to Friday, inclusive, and
- 8am – 6pm Saturday,
- At no time on Sundays or public holidays.

Highly noise intensive works (as defined in Section 5.3) that result in an exceedance of the applicable noise management levels at the same receiver must only be undertaken except as permitted by an EPL in accordance with CoA E72:

- 8am to 6pm Monday to Friday,
- 8am to 1pm Saturday, and
- In continuous blocks not exceeding three (3) hours each with a minimum respite from those activities and works of not less than (1) hour between each block

Highly noise intensive works as defined in Section 5.3 will be undertaken intermittently throughout site establishment activities and will be primarily associated with demolition, site levelling, hardstand, utilities, installation offices and fit-out activities.

Some establishment activities, in the circumstances identified in CoA E73 and E75, may need to occur outside of standard construction hours for safety reasons or due to road network restrictions. The following activities, Table 5, are scheduled for site establishment outside standard construction hours. Any activities not listed in Table 5 can only be undertaken outside standard hours in accordance with condition of approval E73 and E75.

Table 5: Scheduled out of hours works

Activity	Indicative Duration
Disassembly of an awning at 242 Victoria Road	1-2 nights
Disassembly of an awning at 32 Victoria Road	1-2 nights
Tree clearing on City West Link (no mulching)	6 nights (over a two-week period)
Oversized deliveries (arrival to site only, unloading during standard hours)	Intermittent
Installation of demolition scaffolding at Victoria Road (32 Victoria Road)	6 nights (over a two-week period)

Any works outside of standard hours will be carried out in accordance with the requirements of the Project EPL, UMS or Project Out of Hours Works Protocol identified in CoA E77.

5. Potential environmental impacts

5.1. Traffic and Transport

5.1.1. Parking and Access

A Road Dilapidation report will 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 as described in CoA E61. Any new or modified local roads, parking, pedestrian and cycle infrastructure will be designed to meet relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Engineering Practice (in accordance with CoA E55). An independent Road Safety Audit will be undertaken to ensure the safety performance is aligned with the relevant design, engineering and safety guidelines, including Austroads Guide to Traffic Management. Site access points will only be implemented once the road safety audit is complete and any identified actions have been implemented. Additionally, site access points will only be installed once a Traffic Management Plan with road safety analysis has been approved by the NSW Transport Management Centre.

To minimise the impacts of on-street parking by site establishment construction workers, on-site worker parking will be available during the site establishment phase at each ancillary facility. On site worker parking is available at the Rozelle civil and tunnel site to accommodate construction workers from both the Rozelle site and the Victoria Road civil site. Demolition activities and hardstand installation at the Iron Cove site will be staged to provide on site worker parking during these and other site establishment activities. Impacts will be minimised through construction traffic management measures until specific parking facilities are established as described in Annexure B.

Parking removal proposed during site establishment activities are identified in Sections 5.1.2.1, 5.1.2.2 and 5.1.2.3.

The proposed site access for both light and heavy vehicles are identified in Table 6 during site establishment of each ancillary facility. Vehicle numbers in Table 6 are the maximum vehicle movements permitted during site establishment works.

Local roads identified in Table 6 will be used by heavy vehicles during site establishment. As required, a spotter will be used to assist HV movements and any movements outside the main entry/exit gates will generally occur under traffic control. The following rules and guidelines will be applied to truck drivers using local roads:

- Compression brakes will only be used in emergencies
- Trucks must give way to pedestrians and other vehicles in the roadway
- Trucks must watch for vehicles exiting from driveways.

Additional information required under CoA E51 has been included in the relevant sub-sections in Section 5.1.2.

Table 6: Indicative site access routes and vehicle movement numbers during establishment

Ancillary facility	Vehicle type	Site establishment access	Road Type	Vehicle numbers per day (Maximum per road)
Rozelle civil and tunnel site (C5)	Light vehicles	Lilyfield Road (left and right in and out)	Unclassified Regional Road	350
		City West Link (left in, left/right out)	State Road	
	Heavy vehicles	City West Link (left in, left/right out)	State Road	430
		James Craig Road & Sommerville Road (left in, right out)	Local Road	380

Ancillary facility	Vehicle type	Site establishment access	Road Type	Vehicle numbers per day (Maximum per road)
		Lilyfield Road (left and right in and out)	Unclassified Regional Road	44
The Crescent civil site (C6)	Light vehicles	The Crescent (left-in, left-out)	State Road	20
	Heavy vehicles	The Crescent (left-in, left-out)	State Road	10
Victoria Road civil site (C7)	Light vehicles	Victoria Road (left-in, left-out)	State Road	42
		Hornsey Street (left and right in and out) Lilyfield Road (left and right in and out)	Local Road Unclassified Regional Road	
	Heavy vehicles	Lilyfield Road (left and right in and out)	Unclassified Regional Road	50
		Hornsey Street (right in and left out)	Local Road	30
		Via the Rozelle civil and tunnel site	Haulage Route (within construction site)	100
Iron Cove Link civil site (C8)	Light vehicles	Victoria Road (left-in, left-out)	State Road	42
		Byrnes Street (left and right in and out) Clubb Street (left and right in and out) Toelle Street (left and right in and out) Callan Street (left and right in and out) Springside Street (left and right in and out) Manning Street (left and right in and out)	Local Road Local Road Local Road Local Road Local Road Local Road	
	Heavy vehicles	Victoria Road (left-in, left-out)	State Road	110
		Clubb Street**(left and right in and out) Toelle Street*** (left and right in and out) Callan Street**** (left and right in and out)	Local Road Local Road Local Road	30 30 30
Glebe Island civil site	Light vehicles	James Craig Road Port Access Road Sommerville Road	Local road Private road Private road / right of carriageway	10
	Heavy vehicles	James Craig Road Port Access Road Sommerville Road	Local road Private road Private road / right of carriageway	5
White Bay civil site (C11)	Light vehicles	Sommerville Road (left in, right out)	Unclassified Regional Road	20
	Heavy vehicles	Sommerville Road (left in, right out)	Unclassified Regional Road	10

* Note: A local road is defined for the Project as any road or street which is unclassified and is not included in the NSW RMS Schedule of Classified Roads and Unclassified Regional Roads (January 2014).
** Clubb Street to be closed permanently, there will be no public access to the portion of the street within the ancillary facility boundary. Heavy vehicles will require access to the portion of the street within the project footprint.
*** Toelle St heavy vehicles will require access to the portion of these streets within the project footprint.
**** Callan St there will be no public access to the portion of the street within the project footprint whilst heavy vehicles are on this street within the project footprint.

5.1.2. Local Road Impacts

5.1.2.1. Rozelle Civil and Tunnel site (C5)

Prior to vehicle site access points being established at the Rozelle Civil and Tunnel site, the existing vehicle access point on City West Link Road (a non-local road) will be used to access the site. Temporary, short-term, lane closures will be required along the City West Link to allow for tree clearing, pavement testing, and construction of piling platforms and contaminated land investigations intermittently for approximately 2-3 weeks.

Heavy vehicle movements will be made via the local roads of James Craig Road and Sommerville Road, which are surrounded by commercial / industrial land uses. A maximum of 380 heavy vehicle movements would use these roads to access and egress the site.

On street parking on Gordon Street (south of Lilyfield Road) would be permanently removed during site establishment, with this section of road closed to allow for construction of the project. This section of street includes approximately 19 parking spaces. Parking removal will be undertaken in accordance with the Project's Construction Parking and Access Strategy, as required by CoA E54.

5.1.2.1.1. Glebe Island Civil Site

Light and heavy vehicle movements will be made via the local roads of James Craig Road and Sommerville Road, which are surrounded by commercial / industrial land uses. A maximum of 10 light vehicle and 5 heavy vehicle movements per day would use these roads to access and egress the site.

5.1.2.1.2. CoA E51 requirement – James Craig Road / Sommerville Road

A traffic and pedestrian impact assessment has been included in Table 7 to address the requirements of CoA E51 for access to the Rozelle civil and tunnel site / Victoria Road civil site via James Craig Road and Sommerville Road. Use of these roads is shown in Figure 8.

Table 7: James Craig Road / Sommerville Road traffic and pedestrian impact assessment

Condition of Approval E51 requirement	Mitigation strategies / approach
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.	▪ Access to these roads is contingent on the Project maintaining a Deed of Licence with NSW Port Authority and the route is specified as the approved access path in the Deed of Licence. ▪ The route is a 26 m B-double RMS-approved route and therefore no swept path analysis has been completed. ▪ James Craig Road is a two lane undivided road providing access for business on Glebe Island to the wider classified road network. Glebe Island contains several bulk good facilities which store refined sugar, gypsum and cement. These facilities use the internal road network of Glebe Island via James Craig Road to distribute these goods by truck to a variety of locations in the Sydney Basin. The route is signed at 50km/h. There is a shared cycling and pedestrian path along the northern footpath. ▪ Sommerville Road is a minor two lane road. Sommerville Road provides access to the internal road network within Glebe Island. It is the main access route between James Craig Road and Glebe Island. There is a ramp that links Sommerville Road to the Anzac Bridge pedestrian and cycling facilities. The ramp provides to Glebe Island and James Craig Road for pedestrian and cyclists. It is signposted at 30km/h for trucks, and a 50km/h speed zoning applies to all other vehicles.
(a) demonstrate that the local road usage will not compromise the safety of the public and have minimal amenity impacts;	▪ A Traffic Management Plan has been reviewed by Port Authority and will be approved by RMS and Transport Management Centre prior to the use of site access points.

Condition of Approval E51 requirement	Mitigation strategies / approach
	▪ Heavy vehicles will be subject to the existing speed limits and road rules. ▪ Amenity impacts are minimised as pedestrian and public vehicle access is maintained. Existing signalised pedestrian crossings will continue to be used at the James Craig Road / The Crescent intersection. ▪ Acoustic amenity is consistent with the environment as a commercial / industrial / ports precinct.
(b) provide details as to the date of completion of the road dilapidation surveys for the subject local roads; and	▪ The road dilapidation survey will be undertaken prior to commencement of use of the road by heavy vehicles for the Project, in accordance with CoA E61.
(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.	▪ No schools, aged care facilities or child care facilities are located along the portion of the roads proposed to be used for heavy vehicle use.

Figure 8: James Craig / Sommerville Road

5.1.2.2. Victoria Road Civil site (C7)

At the Victoria Road Civil site minor impacts from construction vehicles are expected to the eastern end of Hornsey Street. Prior to site vehicle access points being established, the properties at the corner of Hornsey and Lilyfield Road and Victoria Road will be accessed by the existing driveways on both streets.

On street parking along the eastbound carriageway would be temporarily removed on Hornsey and Lilyfield Road, approximately 3-4 car spaces for 3-4 weeks during establishment activities during demolition of the properties. Parking removal will be undertaken in accordance with the Project's Construction Parking and Access Strategy, as required by CoA E54.

5.1.2.2.1. CoA E51 requirement – Hornsey Street

A traffic and pedestrian impact assessment has been included in Table 8 to address the requirements of CoA E51 for the access gate to the Victoria Road civil site (C7) on Hornsey Street. Local road use of Hornsey Street is shown in Figure 9.

Table 8: Hornsey St traffic and pedestrian impact assessment

Condition of Approval E51 requirement	Mitigation strategies / approach
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.	▪ A swept path analysis is presented in Annexure G. This analysis demonstrates sufficient space within the street for a rigid heavy vehicle. ▪ Truck and dogs are not permitted to use the access point. ▪ Hornsey Street is a two-lane two-way local street with a 9-10m wide carriageway. The sign posted speed limit on Hornsey Street is 50km/h. ▪ The width of the existing footpath varies between 1.5 and 2m. ▪ Cycling facilities and bus stops are not provided on Hornsey Street.
(a) demonstrate that the local road usage will not compromise the safety of the public and have minimal amenity impacts;	▪ A Traffic Management Plan will be approved by RMS and Transport Management Centre prior to the use of site access point. ▪ Signage advising of construction traffic conditions will be implemented in accordance with a Traffic Control Plan ▪ Authorised traffic controllers will be placed at the site access. ▪ Traffic controllers are not to stop traffic on the road to allow trucks to enter and leave the site. They must wait until a suitable gap in traffic allows them to assist trucks to exit the site. Motorists already on the road have right-of-way. ▪ Amenity impacts are minimised as pedestrian and public vehicle access is maintained. Acoustic amenity is consistent with the local noise environment adjacent to a major arterial road. ▪ Access is designed to comply with; › Roads and Maritime Traffic Control at Worksites Manual (2018) › Roads and Maritime Delineation Manual (March 2008) › Roads and Maritime Road Safety Audit Technical Direction TD2003/RS03, Version 2 (August 2005) › Roads and Maritime Road Occupancy Manual (2015) › Roads and Maritime Road Design Guide (2015) › Roads and Maritime NSW Bicycle Guidelines › AUSTROADS Guide to Traffic Management - Parts 1-13 › AUSTROADS Guide to Road Design - Parts 1-6 › AUSTROADS Guide Road Safety - Parts 1-9 › Australian Standard 1742.3-2009 Traffic control devices for works on roads › Australian Standard 1742 Parts 1 to 14, Manual of uniform traffic control devices (as required) › Australia Road Rules.
(b) provide details as to the date of completion of the road dilapidation surveys for the subject local roads; and	▪ The road is within the permanent works footprint of the Project. Pavement, curb and gutter and landscaping works are part of the Project scope. Therefore, no road dilapidation survey will be undertaken for this portion of the road.

Condition of Approval E51 requirement	Mitigation strategies / approach
(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.	▪ The heavy vehicle path is within the project footprint. Heavy vehicles on Hornsey St do not pass schools, aged care facilities or child care facilities. ▪ An authorised traffic controller will be in place to guide students travelling to school, children travelling to child care and all other members of the public. The authorised traffic controller will guide trucks to not pass through the site access while pedestrians are crossing the site access.

Figure 9: Hornsey Street

Note: Heavy vehicle access to/from Victoria Road (red arrows) will occur when Hornsey Street is open to the public, in accordance with an approved Traffic Management Plan with authorised traffic controller(s).

A swept path analysis for Hornsey Street is provided in Annexure G.

5.1.2.3. Iron Cove Civil site (C8)

Temporary changes to the local road network would be required to enable establishment of the Iron Cove Link civil site. This includes the permanent closure of the Clubb Street / Victoria Road intersection for the operational project, with the closure expected to commence within a month of site establishment commencing.

Prior to site access points being established, existing driveways along Victoria Road will be utilised to access the site. On street parking along the eastbound carriageway of Callan Street and Toelle Street would be temporarily removed, approximately 2-3 car spaces for 3-4 weeks during demolition of properties at these intersections. Parking removal will be undertaken in accordance with the Project's Construction Parking and Access Strategy, as required by CoA E54.

The Toelle Street and Callan Street intersections with Victoria Road will remain open during site establishment except during demolition of properties at these intersections. The closures would be short term, for around 4-6 weeks for each road. Both roads will not be closed at the same time.

5.1.2.3.1. CoA E51 requirement – Clubb Street

The requirements for CoA E51 apply to heavy vehicle use of local roads that are open to public traffic, including pedestrians. Clubb Street will be closed permanently as a result of the Project, therefore, there will be no public access to the portion of the street within the ancillary facility boundary, which is required by heavy vehicles. This is shown in Figure 10.

Figure 10: Clubb Street

Note: Heavy vehicle access will occur within the Project boundary, once Clubb Street is closed.

5.1.2.3.2. CoA E51 requirement – Callan Street

The requirements for CoA E51 apply to heavy vehicle use of local roads that are open to public traffic, including pedestrians. Callan Street will be closed temporarily (4-6 weeks) as a result of the Project during site establishment due to demolition works. Heavy vehicle access to this portion of the street within the project footprint would only be permitted during these temporary closures. This is shown in Figure 11.

Figure 11: Callan Street

Note: Heavy vehicle access to/from Victoria Road (yellow arrows) will occur within the Project boundary, when Callan Street is closed.

5.1.2.3.3. CoA E51 requirement – Toelle Street

Access gates are proposed to enable heavy vehicles to cross Toelle St whilst the road remains open to the public. A traffic and pedestrian impact assessment has been included in Table 9 to address the requirements of CoA E51. This is shown in Figure 12.

Table 9: Toelle Street traffic and pedestrian impact assessment

Condition of Approval E51 requirement	Mitigation strategies / approach
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.	▪ A swept path analysis is not required as the heavy vehicle path is an 11m straight line. The vehicle does not sweep / turn to use the route. ▪ Toelle Street is a two-way local road adjoining with Victoria Road and has a carriageway width of approximately 7m. ▪ The sign-posted speed limit is 50km/h on Toelle Street. ▪ The existing footpaths on either side of the road are approximately 2m wide.
(a) demonstrate that the local road usage will not compromise the safety of the public and have minimal amenity impacts;	▪ A Traffic Management Plan will be approved by RMS and Transport Management Centre prior to the use of site access points. ▪ Signage advising of altered traffic conditions will be implemented in accordance with a Traffic Control Plan ▪ An authorised traffic controller will direct heavy vehicles across the road and assist pedestrians. ▪ Whilst the gate is in active use the eastern footpath of Toelle St between Victoria Rd and the site gate (approximately 10m in length) will be diverted to the western footpath of Toelle St. This diversion marshals' pedestrians to one site access crossing point reducing

Condition of Approval E51 requirement	Mitigation strategies / approach
	potential interaction between vehicles and people and simplifying traffic control. ▪ Amenity impacts are minimised as pedestrian and public vehicle access is maintained. Acoustic amenity is consistent with the adjacent works / the local environment during construction as the heavy vehicle crossing of Toelle St is limited to 11m, that is the duration is very short. ▪ Access is designed to comply with; › Roads and Maritime Traffic Control at Worksites Manual (2018) › Roads and Maritime Delineation Manual (March 2008) › Roads and Maritime Road Safety Audit Technical Direction TD2003/RS03, Version 2 (August 2005) › Roads and Maritime Road Occupancy Manual (2015) › Roads and Maritime Road Design Guide (2015) › Roads and Maritime NSW Bicycle Guidelines › AUSTROADS Guide to Traffic Management - Parts 1-13 › AUSTROADS Guide to Road Design - Parts 1-6 › AUSTROADS Guide Road Safety - Parts 1-9 › Australian Standard 1742.3-2009 Traffic control devices for works on roads › Australian Standard 1742 Parts 1 to 14, Manual of uniform traffic control devices (as required) › Australia Road Rules.
(b) provide details as to the date of completion of the road dilapidation surveys for the subject local roads; and	▪ The road is within the permanent works footprint of the Project. Pavement, curb and gutter works are part of the Project scope. Therefore, no road dilapidation survey will be undertaken for this portion of the road.
(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.	▪ The heavy vehicle path is within the project footprint. Either side of Toelle St for the heavy vehicle path is the Iron Cove civil site (C8). Heavy vehicles crossing Toelle St do not pass schools, aged care facilities and child care facilities. ▪ An authorised traffic controller will be in place to guide students travelling to school, children travelling to child care and all other members of the public. The authorised traffic controller will direct heavy vehicles across the road.

Figure 12: Toelle Street

Note: Heavy vehicle access to/from Victoria Road (yellow arrows) will occur within the Project boundary, when Toelle Street is closed. Heavy vehicle crossing of Toelle Street (red arrow) will occur when Toelle Street is open to the public in accordance with an approved Traffic Management Plan with authorised traffic controller(s).

5.1.2.4. White Bay civil site (C11)

Light and heavy vehicle movements will be made via the local roads of James Craig Road and Sommerville Road, which are surrounded by commercial / industrial land uses. A maximum of 20 light vehicle and 10 heavy vehicle movements would use these roads to access and egress the site.

5.1.2.4.1. CoA E51 requirement – James Craig Road / Sommerville Road

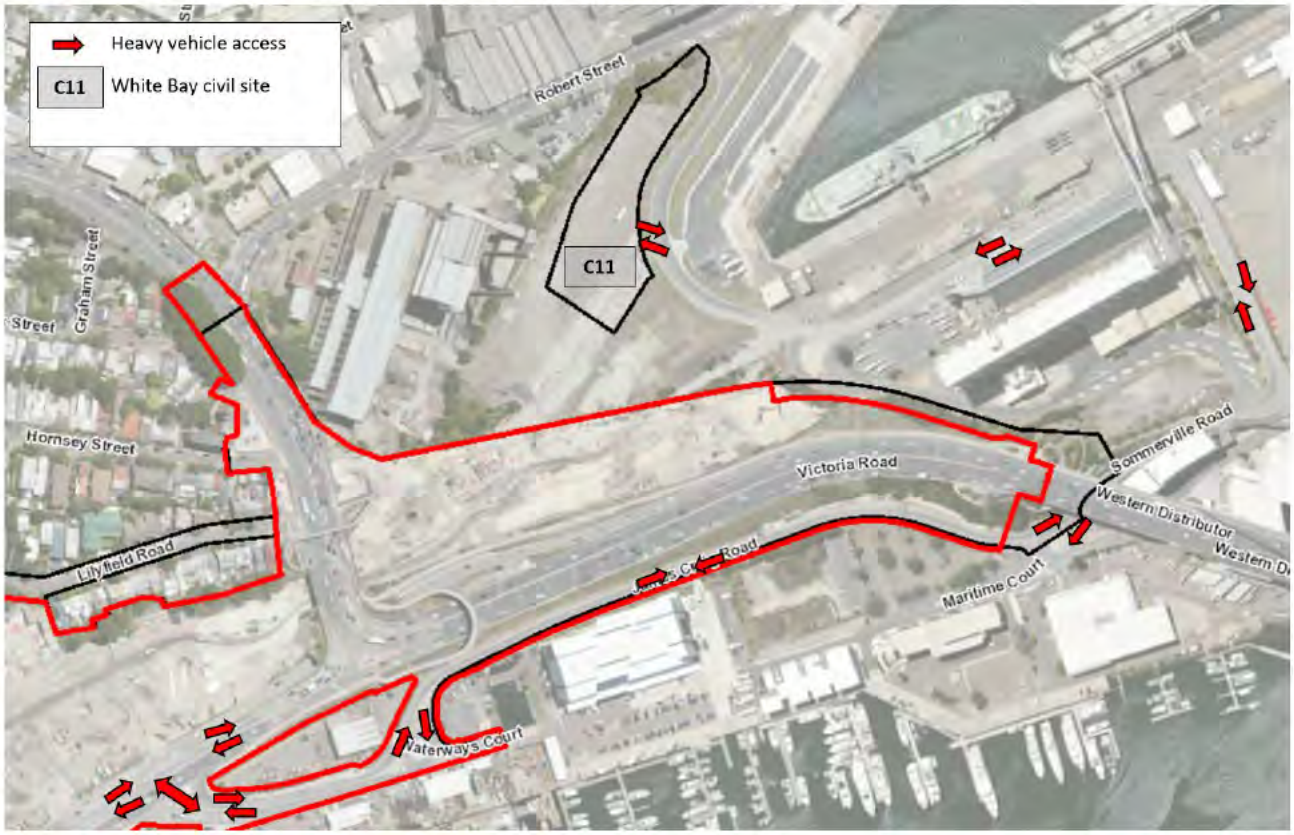
A traffic and pedestrian impact assessment has been included in Table 10 to address the requirements of CoA E51 for access to the White Bay civil site via James Craig Road and Sommerville Road. Use of these roads is shown in Figure 13.

Table 10: James Craig Road / Sommerville Road traffic and pedestrian impact assessment

Condition of Approval E51 requirement	Mitigation strategies / approach
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.	▪ Access to these roads is contingent on the Project maintaining a Deed of Licence with NSW Port Authority and the route is specified as the approved access path in the Deed of Licence. ▪ The route is a 26 m B-double RMS-approved route and therefore no swept path analysis has been completed. ▪ James Craig Road is a two lane undivided road providing access for business on Glebe Island to the wider classified road network. Glebe Island contains several bulk good facilities which store refined sugar, gypsum and cement. These facilities use the internal road network of Glebe Island via James Craig Road to distribute these goods by truck to a variety of locations in the Sydney Basin. The route is signed at 50km/h. There is a shared cycling and pedestrian path along the northern footpath.

Condition of Approval E51 requirement	Mitigation strategies / approach
	▪ Sommerville Road is a minor two lane road. Sommerville Road provides access to the internal road network within Glebe Island. It is the main access route between James Craig Road and Glebe Island. There is a ramp that links Sommerville Road to the Anzac Bridge pedestrian and cycling facilities. The ramp provides to Glebe Island and James Craig Road for pedestrian and cyclists. It is signposted at 30km/h for trucks, and a 50km/h speed zoning applies to all other vehicles.
(a) demonstrate that the local road usage will not compromise the safety of the public and have minimal amenity impacts;	▪ A Traffic Management Plan has been reviewed by Port Authority and will be approved by RMS and Transport Management Centre prior to the use of site access points. ▪ Heavy vehicles will be subject to the existing speed limits and road rules. ▪ Amenity impacts are minimised as pedestrian and public vehicle access is maintained. Existing signalised pedestrian crossings will continue to be used at the James Craig Road / The Crescent intersection. ▪ Acoustic amenity is consistent with the environment as a commercial / industrial / ports precinct.
(b) provide details as to the date of completion of the road dilapidation surveys for the subject local roads; and	▪ The road dilapidation survey will be undertaken prior to commencement of use of the road by heavy vehicles for the Project, in accordance with CoA E61.
(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.	▪ No schools, aged care facilities or child care facilities are located along the portion of the roads proposed to be used for heavy vehicle use.

Figure 13: James Craig / Sommerville Road – White Bay civil site (C11)



5.1.3. Workforce and vehicle movements

Proposed vehicle and personnel numbers for the establishment of each ancillary facility are identified in Table 11. Volumes of construction vehicles and personnel numbers during the operation of the ancillary facilities in the construction phase will be addressed in the TTAMP.

Table 11: Proposed vehicle movements and personnel numbers during site establishment works (per day one way per hour)

Ancillary facility	Light vehicle movements/day (at peak)	Average Light vehicle movements/day	Heavy vehicle movements/day (at peak)	Average Heavy vehicle movements/day
Rozelle civil and tunnel site (C5)	350	210	430	120
The Crescent civil site (C6)	20	5	10	2
Victoria Road civil site (C7)	140	80	42	10
Iron Cove Link civil site (C8)	140	80	42	11
Glebe Island Civil site	10	5	5	3

A wide range of environmental safeguards have been recommended to mitigate the effects of site establishment works on local traffic and transport including scheduling project related transport movements to avoid peak traffic, identifying heavy vehicle routes and communicating these with the drivers. With these environmental safeguards in place traffic and transport is anticipated to have a low impact. Environmental safeguards for traffic and transport are listed in Annexure B of this SEMP.

5.1.4. Public Transport

The following bus stop will be affected during site establishment:

- Victoria Rd bus stop between Clubb Street and Toelle Street (westbound).

This is primarily due to loading/unloading and installation of hoardings and scaffoldings to facilitate demolition activities adjacent to the bus stop. Demolition activities are expected to take approximately 2 to 3 weeks. Once complete, the bus stop will be returned to its original location.

Relocation of the bus stop will be undertaken in accordance with CoA E43, including consultation with Transport for NSW and Inner West Council. Local bus operators will be notified of any bus stop relocations prior to any works.

Table 12 shows a summary of the identified impacts on public transport and the mitigation measures that will be implemented as part of the works.

Table 12: Impacts on public transport and mitigation measures

Identified Impacts	Affected Public Transport Facility	Mitigation Measures
Temporary relocation of existing Victoria Rd bus stop between Clubb Street and Toelle Street (westbound)	▪ Bus Stop	▪ A temporary bus stop will be provided 30m west of the existing. The temporary pedestrian path is only in the vicinity of the particular section of B-type hoarding being installed intermittently at the time. ▪ The marshalling of buses and commuters will be facilitated by traffic controllers and/or bus marshals. Bus operators will be advised of the temporary arrangements prior to undertaking short term closures. ▪ The additional walking distance, 30m, is less than 400m, compliant with CoA E43. ▪ Directional signage will be provided to guide pedestrians to the relocated bus stop.

Due to the realignment of Victoria Road, this bus stop is expected to be relocated again during construction of the Project. This relocation will be identified in the Traffic and Transport and Access Management Plan.

5.2. Air Quality

The EIS identified several site establishment activities have the potential for dust emissions including:

- **Demolition** is any activity that involves the removal of existing structures,
- **Site Levelling** includes works to raise the compounds above flood levels for the erection of demountable buildings and establish site access points.
- **Installation of site offices and workshops** involves the provision of new structures, or modification or refurbishment of existing structures, and
- **Track-out** involves the transport of dust and dirt from the construction/demolition site onto the public road network on construction vehicles. These materials may then be deposited and re-suspended by vehicles using the network.

A wide range of environmental safeguards have been recommended to mitigate the effects of establishment works on local air quality at the nearest receptors, including carrying out inspections, stabilising disturbed ground and exposed soils, and using water to suppress dust. With these environmental safeguards in place air quality is anticipated to have a low impact. Most of the recommended measures are routinely employed as standard practice on construction sites. Environmental safeguards for air quality are listed in Annexure B of this SEMP.

5.3. Noise and vibration

Proposed site establishment works may result in potential noise and vibration impacts due to using heavy machinery, hammering activities on hardstands/slabs/plinths, demolition of buildings and walls and disposal of demolition rubble.

Noise barriers will be progressively installed across all sites. Some noisy works will be required prior to the installation of hoarding which will be managed through the mitigation measures listed in Annexure B.

A CVNIS has been developed for site establishment activities which identifies the potentially affected noise sensitive receivers. Site establishment activities assessed included, site preparation works, erection of temporary fencing / hoardings, demolition, establishment of erosion and sediment controls, minor utility connections, earthworks, installation of site offices, concreting works and installation of access points (refer to Table 4 for full description of works) . The CVNIS concluded that there will be instances where receivers are highly noise affected, however, the same receiver will not be highly noise affected for the duration of the site establishment works as equipment will shift and relocate as the works progress.

Please refer to Section 4.1.3 for the proposed construction hours and Sections 4.1.1 and 4.1.2 for a list of high intensive noise activities for each site.

Activities that result in high noise impacts will be subject to respite periods as outlined in the Site Establishment Construction Noise and Vibration Impact Statement (CNVIS) and CoA E72, which states:

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.

Highly noise intensive works which will be undertaken during establishment and are also defined as annoying under the ICNG include:

a) Use of power saws, such as used for cutting timber, rail lines, masonry, road pavement or steel work,

b) Grinding metal, concrete or masonry,

c) Vibratory rolling,

d) Bitumen milling or profiling, and

e) Jackhammering, rock hammering or rock breaking

Site establishment noise impacts would be managed using measures listed in the CNVIS including:

- Plant and equipment noise verification monitoring,
- Noise control kits,
- Limit equipment use,
- Timing of equipment in use,
- Limit activity duration,
- Use and siting of plant,
- Equipment selection,
- Respite periods,
- Non-tonal reversing alarms,
- Site inductions and toolbox talks,
- Community consultation,
- Behavioural practices, and
- Noise monitoring

Environmental safeguards for noise and vibration are identified in Annexure B and will also be implemented.

5.4. Land use and property

Project activities in the Rozelle civil and tunnel site (C5), including the establishment of an ancillary facility would result in a temporary change in land use from redundant industrial and transport infrastructure to construction infrastructure. This change in land use during site establishment would have a negligible impact on local and regional land use as most of the site is currently inaccessible and disused.

The Crescent civil site (C6) adjacent to The Crescent and White Bay civil site (C11) is temporary and would only be required during construction.

The Glebe Island civil site is located within land owned by the Port Authority of NSW and would only be required during construction. The temporary use of this land is subject to a license agreement.

The establishment Victoria Road civil site (C7) constitutes the first step in the transition of the land from commercial and residential premises to its future use as transport infrastructure. The establishment of the site will result in the permanent loss of commercial and residential premises located on the western side of Victoria Road. This change in land use from commercial to temporary ancillary facility would have a moderate impact on local land use with the full impacts to land use being realised throughout the construction and operation of the project.

The introduction of an ancillary facility at the Iron Cove Link civil site (C8) would result in a temporary change in land use from commercial to construction infrastructure. This change in land use would temporarily remove the development potential of the site for residential purposes.

A detailed land use survey has been undertaken to confirm sensitive receivers prior to the site establishment works commencing. In accordance with CoA E66, results will be included in the NVMP.

Any potential land use and property impacts during site establishment activities would be managed in accordance with the land use and property environmental safeguards listed in Annexure B.

5.5. Urban design and visual amenity

5.5.1. Visual screening and light spill

Ancillary facilities will be constructed in a manner that minimises the visual impacts of the ancillary facilities sites. This includes providing temporary landscaping and vegetative screening of the sites (refer to Annexure C, in accordance with CoA E116, E122 and E123), minimising light spill, and incorporating architectural treatment and finishes within key elements of the temporary structures that reflect the context within which the construction sites are located.

Lighting may be required at night such as for the purposes of illuminating required office buildings, providing security around compounds, or where works that are required to be conducted under a Road Occupancy Licence, including the delivery of oversized materials/plant, or potholing investigations.

Lights will be located as far away as possible and pointed away from neighbours and away from sensitive areas such as bedroom windows. If there is no alternative, shields and baffles to help keep light spill to a minimum will be used. All practical and reasonable steps will be taken to mitigate temporary night lighting impacts for adjoining properties as described in the urban design and visual amenity environmental safeguards listed in Annexure B.

5.5.2. Boundary screening

Boundary screening will be installed within ancillary facilities adjoining or adjacent to residential and/or commercial properties in accordance with CoA C25 and CoA C26. The boundary screening will minimise visual, noise and air quality impacts on adjacent sensitive receivers. Acoustic barriers may be incorporated into the boundary screening, as shown in the site layout plans in Annexure C.

Noise walls will be erected where recommended by the CNVIS for the operational compound. As well as minimising noise impacts, noise walls will minimise visual and air quality impacts by providing a barrier between work sites and receivers. Where noise walls are not required, plywood hoarding or chain wire fencing with cloth shade will be erected. Like the noise walls, plywood hoarding and chain wire fencing with shade cloth will also reduce visual and air quality impacts by providing a barrier between work sites and receivers. In accordance with CoA A45, all signage on hoardings surrounding the construction ancillary facilities must include the CSSI name and application number.

The EIS identified several urban design and visual amenity impacts including the potential for crime at or near ancillary facilities and visual impacts on sensitive receivers. The EIS identifies that

the overall impact rating for the site establishment works at all four sites (C5, C6, C7, C8) is moderate to high for residents, pedestrians, motorists and recreational users.

The noise and vibration, air quality, urban design and visual amenity environmental safeguards provided in Annexure B have been provided to avoid, reduce and managed identified potential visual impacts during site establishment.

5.6. Soil and water quality

The EIS identified the potential for erosion of exposed soils, sedimentation of waterways and exposure of contaminated soils and groundwater during establishment. This would be managed through implementing standard site mitigation measures including stabilising disturbed ground and exposed soils, water to suppress dust and using appropriate storage with secure bunding for chemicals and fuels

There is a high probability of encountering acid sulfate soils around Rozelle, with further testing to be undertaken to confirm the locations of acid sulfate material. If acid sulfate soils are identified, they would be managed in accordance with the *Acid Sulfate Soil Manual* (Acid Sulfate Soil Management Advisory Committee 1998) which includes procedures for the investigation, handling, treatment and management of such soils.

The impacts on soil and water quality will be managed through these controls and the additional soil and water environmental safeguards in Annexure B of this SEMP. With these controls in place, the project would not significantly impact on soils and surface water during establishment.

5.7. Contamination

There is potential for localised areas of contaminated soil, acid sulfate soil, sediment, fill and groundwater associated with historically contaminating land uses to be encountered during establishment, and furthermore detailed investigation may be warranted in some instances. The discovery of contaminated materials is considered most likely to occur during near surface excavation works associated with road and tunnel construction activities.

Rozelle Civil and Tunnel Site (C5)

Previous soil investigations at this site identified metals (lead, arsenic, cadmium and zinc), asbestos, petroleum sourced Light Non-Aqueous Phase Liquid (LNAPL) and polyaromatic hydrocarbons (PAH) exceeding the land use criteria for open space and commercial/industrial.

The previous site management works at the site Rail Yards removed the top 500mm of fill within the area, however contamination is anticipated in the underlying fill, with previous investigations at the site identifying exceedances of contaminants of concern including heavy metals, polycyclic aromatic hydrocarbons and asbestos. Establishment works in this area, including contaminated land investigations, may result in contact with potential contamination associated with historical land uses.

The Glebe Island civil site

Historical land uses within and surrounding the site may have caused soil and potentially groundwater contamination. However, no excavation is required at this site. Therefore, the risk of identifying any contamination is negligible.

The Crescent Civil Site (C6)

Previous investigations have indicated soil, sediment and groundwater contamination associated with historical filling and more recent industrial/commercial maritime operation. Further intrusive investigations are required to assess the risk posed during construction.

Victoria Road Civil Site (C7)

Historical land uses within and surrounding the site may have caused soil and potentially groundwater contamination. Further intrusive investigations are required to assess the risk posed during construction.

Iron Cove Link Civil Site (C8)

Historical land uses within and surrounding the site may have caused soil and potentially groundwater contamination. Further intrusive investigations are required to assess the risk posed during construction of areas of potential concern.

White Bay Civil Site (C11)

Historical land uses within and surrounding the site may have caused soil and potentially groundwater contamination. Any excavation required at this site would be relatively shallow and managed in accordance with the management measures outlined in the EIS.

The contamination environmental safeguards in Annexure B would be implemented during establishment to achieve the desired performance outcome, which is to ensure that risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate soils and site contamination. In addition, in the event of encountering unexpected finds of contamination the Unexpected Contaminated Land and Asbestos Finds in Annexure E must be followed.

5.8. Flooding and Drainage

The project footprint is located within the Sydney Harbour, Parramatta River and Cooks River catchments. The local stormwater drainage systems that control runoff from these catchments are of limited capacity. As a result, the project corridor is presently impacted by both mainstream flooding and overland flows.

Flood modelling was carried out for the project as part of the EIS and considered a range of annual recurrence interval (ARI) design floods, the Probable Maximum Flood (PMF), situations such as a partial blockage of a bridge structure, and impacts predicted due to climate change.

The assessment found that the construction ancillary facilities at Iron Cove civil site and the Rozelle civil and tunnel site would be affected by flooding during relatively frequent storm events. The construction ancillary facility designs have been adjusted, with site layouts developed to recognise the identified flood conditions and minimise the potential for off-site flood impacts. The Rozelle civil and tunnel site is affected by both mainstream flooding from Whites Creek and major overland flows through the site. In accordance with the study, both The Crescent and City West Link have 100 year ARI flood immunity from creek flooding under existing conditions.
Light Rail line and City West Link provide physical barriers to flow. However, during the probable maximum flood event, Whites Creek overtops the structure at The Crescent and flows in an easterly direction along City West Link, merging the floodwaters from the Rozelle Rail Yards and Whites Creek.

Site establishment works have the potential to impact local overland flow paths and existing minor drainage paths. Disruption of existing flow paths could occur as a result of:

- Disruption of existing drainage networks during decommissioning, upgrade or replacement of drainage pits and pipes,
- Interruption of overland flow paths by installation of temporary construction ancillary facilities and surface level alterations,
- Sediment entering drainage assets and causing blockages, and
- Overloading the capacity of the local drainage system.

Flooding and drainage will be managed in accordance with the flooding and drainage environmental safeguards identified in Annexure B of this SEMP.

5.9. Biodiversity

5.9.1. Flora and Fauna

Any work that may adversely affect or potentially adversely affect threatened species or threatened ecological communities (within the meaning of the *Biodiversity Conservation Act 2016*) is construction and cannot be undertaken under this SEMP.

The EIS outlines that the majority of the project footprint and surrounding area is modified and disturbed, and contains exotic species, weeds and planted native or non-indigenous species. The project footprint is considered to be in a poor ecological condition, with little ecological value and unlikely to have any native resilience or recovery potential. No plant community types defined as native vegetation by the Framework for Biodiversity Assessment (NSW Office of Environment and Heritage 2014) were recorded within the project footprint, and therefore no remnant native vegetation is considered to be present.

The Eastern Bentwing-bat (*Miniopterus schreibersii oceanensis*), listed as vulnerable under state legislation, may be roosting intermittently in the cavities under the Victoria Road bridge, however this bridge would not be demolished as part of establishment works. This and other bat species may also be using the area in the vicinity of the Rozelle Rail Yards as foraging habitat. The Grey-headed Flying Fox (*Pteropus poliocephalus*), listed as vulnerable under state and federal legislation, has been recorded adjacent to, and is considered likely to forage within, the project footprint.

There would be no direct impacts to native vegetation communities due to the site establishment activities. Further investigation would be carried out prior to construction in accordance with CoA E175 to confirm whether the Victoria Road bridge is a potential roost site for microbats. Pre-clearing or demolition inspections for microbats and threatened species will be undertaken. No impacts on endangered ecological communities listed under either State of federal legislation are expected.

The project would not directly harm marine vegetation or habitat of threatened species, communities or populations. Works within and adjacent to waterways would be managed to minimise erosion and sedimentation and other potential water quality impacts. Significant impacts on aquatic habitat downstream of the project are not expected. Flora and fauna will be managed in accordance with the biodiversity environmental safeguards in Annexure B of this SEMP.

5.9.2. Trees

The Project will be designed to retain as many trees as possible and to provide a net increase in the number of replacement trees in accordance with CoA E177. Pre-clearance inspections and RMS D&C G40 hold point release will be undertaken prior to any clearing.

An arboricultural assessment has been carried out as part of the EIS based on the concept design to identify trees that would be impacted by site establishment and construction. All trees and vegetation to be removed during site establishment works were identified in this arboricultural assessment. The majority of trees to be removed during establishment are within the Rozelle Rail Yards and Ports Authority land (those remaining following site management works), along City West Link and Lilyfield Road, and areas adjacent to Whites Creek at The Crescent and Brenan Street.

Further on-site investigations will be carried out during site establishment to confirm if any trees can be retained. Compensatory tree planting would be included in the Urban Design and Landscape Plan and the Tree Report respectively.

Biodiversity environmental safeguards to be implemented in the unlikely event that biodiversity impacts occur are included in Annexure B.

5.10. Groundwater

The site establishment activities are mainly proposed above ground, with some shallow excavation which would not impact the hydrogeological regime. As described in the EIS the utility works would involve excavating trenches to varying depths and may intersect the water table. At the Iron Cove Link civil site impact to groundwater is expected to be minimal as the groundwater level is typically below the expected depth of utility trenches. In contrast at the Rozelle civil and tunnel site the water table is shallow and within one metre of the ground surface indicating that utility trenches are likely to intersect the groundwater.

Where groundwater is intersected during trench excavations, emergency measures such as sheet piling may be required to temporarily provide support in the alluvium and to restrict groundwater inflows to the trench. This will be determined by a geotechnical engineer based on site conditions, as required. In instances where sheet piling is required, once removed, groundwater levels would return to pre-excavation levels. The trenches may be encased in concrete or plastic pipes to waterproof the utility service corridors. Deeper trenches or excavations may require temporary dewatering during the construction phase.

Soil and water environmental safeguards for the storage and stockpiling of materials, fuel and wastes during site establishment including spill prevention and response procedures are included in Annexure B.

5.11. Non-Aboriginal heritage

There are no heritage items or potential heritage items that have been identified for full or partial demolition during the site establishment works. Demolition of any heritage item or potential heritage item will not be undertaken prior to the approval of the CEMP and the Non-Aboriginal Heritage Plan. The site establishment works will not adversely affect or knowingly adversely affect any heritage items. Safe working distances or exclusion zones will be established to prevent potential impacts on heritage or potential items.

A Historical Archaeological Research Design and Excavation Report undertaken by the Excavation Director (CoA E168) has been prepared prior to site establishment works which have a direct material impact on Historical Archaeological Management Units. The Historical Archaeological Management Units are shown in Figure 14 and Figure 15. The Historical Archaeological Research Design and Excavation Report includes management options for discovered heritage items, whether known or unexpected finds (including options for avoidance, salvage, relocation and display.

If any unexpected heritage items (including human remains) are encountered, works potentially affecting the find will cease immediately and the RMS Standard Management Procedure – Unexpected Heritage Items March 2015) will be followed. Non-Aboriginal heritage environmental safeguards in Annexure B outline mitigation and management measures to be implemented in regard to non-Aboriginal heritage for the site establishment works.

Works within the vicinity of the find will 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 (CoA E171).

The Excavation Director will be present during excavation works near potential archaeological sites and will be engaged for the project to oversee and advise on matters associated with historic archaeology (CoA E170).

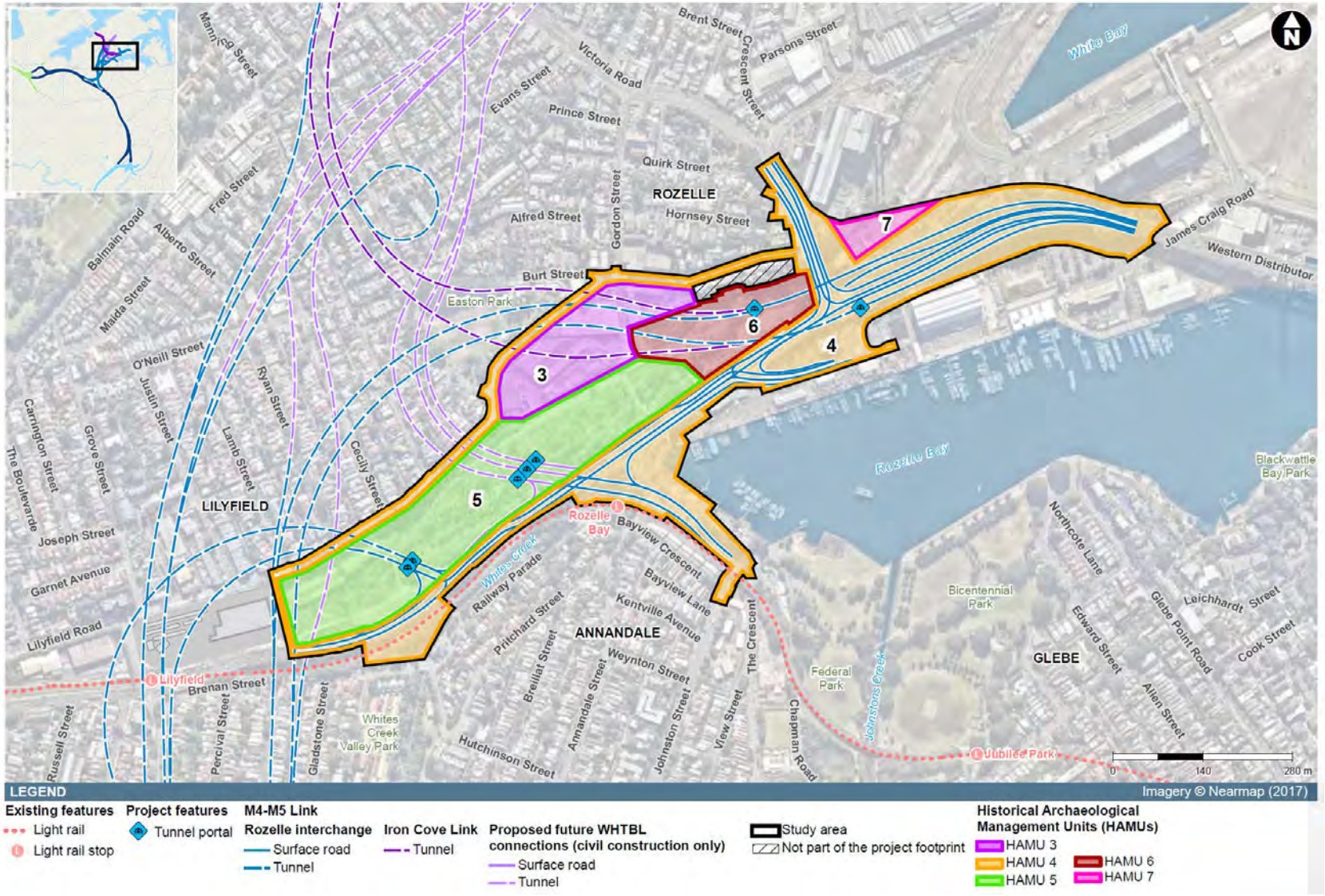


Figure 14: EIS heritage study area 3, within Rozelle, Lilyfield and Annandale, showing the relevant HAMUs

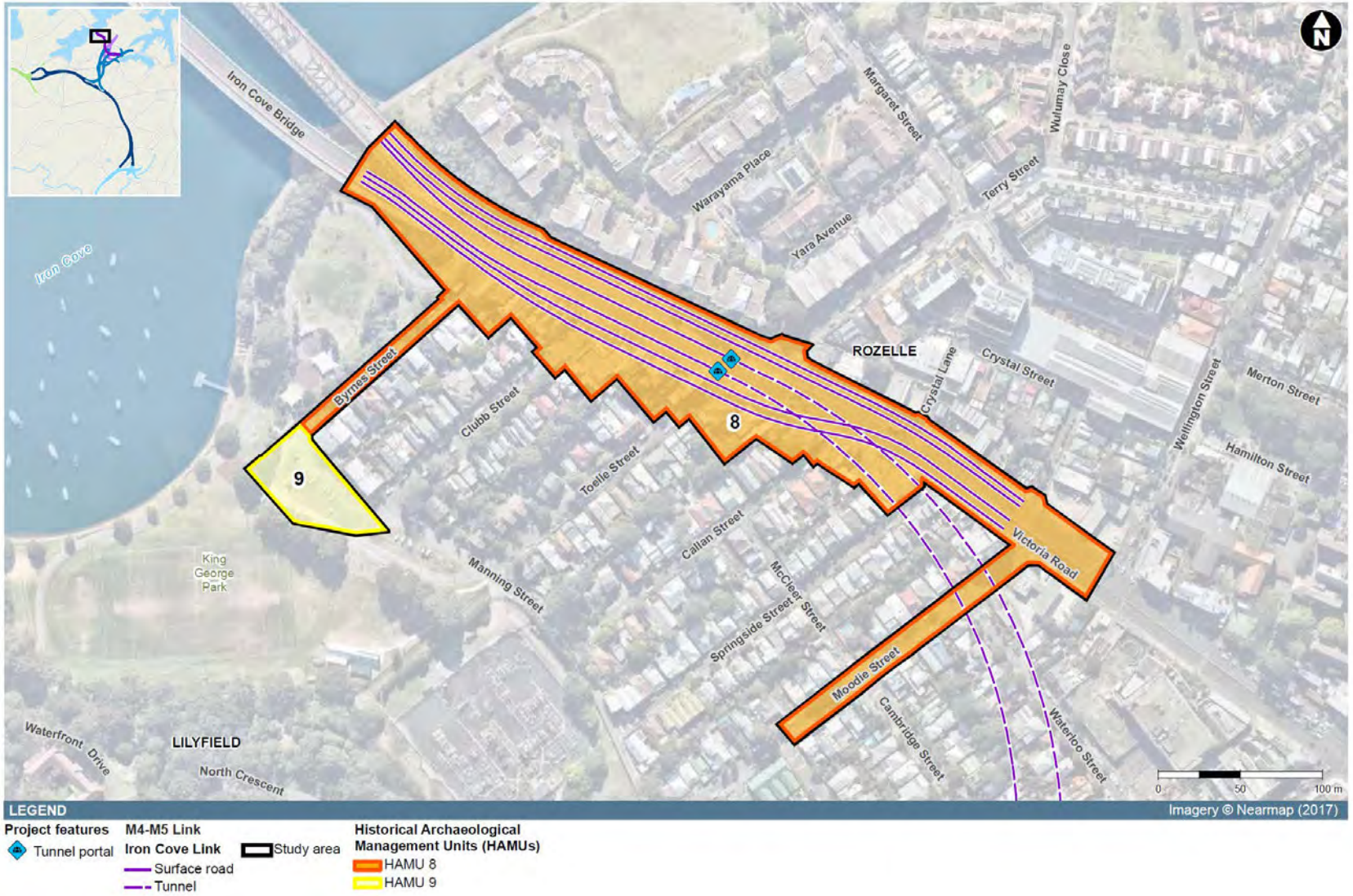


Figure 15: EIS heritage study area 4, within Iron Cove, showing the relevant HAMUs

5.12. Aboriginal heritage

The EIS did not identify any sites or potential sites of Aboriginal heritage within the vicinity of the proposed site establishment works. All sites are located within highly disturbed, urbanised areas, therefore as a result it is unlikely the site establishment works at the sites would impact on Aboriginal heritage. Aboriginal heritage environmental safeguards to avoid, minimise and mitigate impacts to previously unidentified items of Aboriginal heritage are included in Annexure B.

5.13. Greenhouse gas

Greenhouse gases in relation to the site establishment activities at the site would be relatively minor, and typically associated with the use of plant, vehicles and electricity use. Resource use and waste minimisation environmental safeguards are included in Annexure B.

5.14. Resource and waste minimisation

Resources used for site establishment works would largely be made up of construction materials (concrete, asphalt, steel, fuel etc), water and power. The waste generated would largely be made up of unsuitable fill material and demolition waste. Resource use and waste minimisation environmental safeguards are listed in Annexure B.

5.15. Climate change risk and adaption

As identified in the EIS potential climate change risks to project construction, include an increase in the intensity and frequency of extreme rainfall and storm events, which could lead to localised flooding of ancillary facilities and unsuitable conditions for undertaking site establishment works. An increase in frequency and intensity of extreme heat events could also occur, resulting in increased work health and safety risks and potential delays to project program.

5.16. Hazard and risk

Potential hazard and risk impacts at the site would include accidental spills of fuels and/or chemicals which could result in contamination of soils and/or waterways, mismanagement of contaminated material and emission of gasses from contaminated material. It is considered that these potential impacts can be managed by implementing the hazard and risk environmental safeguards listed in Annexure B

6. Site establishment risk assessment and management approach

6.1. Site Establishment Risk Assessment

The initial risk assessment for site establishment works is in Table 16, it identifies the key site establishment activities, potential environmental impacts and risk ratings for that activity. Applicable management measures are nominated within the environmental management plan identified in the table. Ongoing analysis of the key environmental risks arising during the site establishment construction activities and throughout construction will be managed through the CEMP.

The activity specific site controls outlined in the environmental management plans have been developed to comply with the requirements from the Roads and Maritime Services (RMS) Environmental Specifications, Minister's Conditions of Approval (CoA) and Revised Environmental Management Measures (REMMS). Management measures may include physical controls, procedures, forms, checklists, monitoring requirements, permits, etc.

A revised risk rating, assuming the controls nominated within the environmental management plans are implemented, is also included in the table. The risk rating is based on the likelihood and the consequence of the event occurring

Table 13: Likelihood criteria

Likelihood Rating	Probability or Chance	Qualitative Assessment	Recurrence Timeframe
Almost Certain	≥ 90%	Almost certain to occur during the project / contract life	Less than "Monthly"
Likely	51% to 89%	Considered likely to occur during the project / contract life	"Monthly" to "Yearly"
Possible	30% to 50%	Considered a possible occurrence during the project / contract life	Between 2 and 5 years
Unlikely	5% to 29%	Considered unlikely to occur during the project / contract life	Between 5 and 20 years
Rare / Remote	< 5%	Considered a rare occurrence to happen during the project / contract life	Greater than every 20 years

Table 14: Consequence risk criteria

Consequence - Risk					
RATING	**1**	**2**	**3**	**4**	**5**
Environment & Natural Resources	* Low severity environmental impact(s) or impact on natural resources availability that are promptly reversible and affected area is within the site boundary	* Nuisance or low severity environmental impact(s) or impact on natural resources availability that are promptly reversible and affected area is outside the site boundary	* Moderate severity environmental impact(s) or impact on natural resources availability where the affected area is within the site boundary	*Moderate severity environmental impact(s) or impact on natural resources availability where the affected area is outside the site boundary	*High severity environmental impact(s) or impact on natural resources availability at local scale significance
Reputation / Community / Media	* Public concern restricted to local complaints * Lack of contribution to the community	* Minor, adverse local public or media attention and complaints * Employees warned only * Minor change in community amenity values	* Attention from media and/ or heightened concern by local community * Stakeholder action will disrupt planned project activities * Disciplinary action may be taken * Temporary reduced community access to services or employment	* Significant adverse national media / public / NGO attention * Considerable and prolonged adverse community impact and dissatisfaction publicity expressed * Stakeholder action will delay achievement of major elements of the Project * Permanently reduced community access to services or employment	* Serious public or media outcry with international coverage * Significant adverse community impact & condemnation * Stakeholder action will prevent achievement of the project objectives * Reduced cohesion of community
Governance / Legal / Regulatory	* Very minor technical breach of regulation or policy or code of ethics. No fine / penalty	* Minor legal issues, non-compliances and breaches of regulation, policy or code of ethics * Enforceable Undertaking	* Moderate breach of regulation, policy or code with investigation or report to authority * Moderate legal proceedings initiated * Several Improvement Notices	* Significant breach of regulation, policy or code with fine or other regulatory action. Significant litigation / legal action * Shut down of part of a project due to regulatory breach * Prohibition Notice	* Major breach of regulation, policy or code with fine * Major litigation * Major investigation by regulatory body * Prosecution / Accreditation loss

Table 15: Consequence opportunity criteria

Consequence - Opportunity					
RATING	**1**	**2**	**3**	**4**	**5**
Environment & Natural Resources	* Minor positive environmental and natural resource benefits that is within the site boundary	* Minor positive environmental and natural resource benefits that extends outside the site boundary	* Moderate positive environmental and natural resource benefits that within the site boundary	* Moderate positive environmental and natural resource benefits that extends outside the site boundary	* High positive environmental and natural resource benefits that is of local scale significance
Reputation / Community / Media	* No complaints * No negative coverage	* Brief positive local media coverage * Minor stakeholder praise	* Positive local media attention * Sectional community praise publicly expressed * Stakeholder action resulting in enhanced ability to achieve project activities	* Consistent positive local media attention * Community praise and satisfaction expressed publicly * Stakeholder action resulting in enhancements to project key elements	* Consistent, significant positive local media attention * Significant community praise and satisfaction expressed publicly * Stakeholder action resulting in enhancements to project outcomes
Governance / Legal / Regulatory	* Prevents very minor technical breach of regulation or policy or code of ethics	* Prevents minor legal issues, non-compliances and breaches of regulation, policy or code of ethics. * Prevent Enforceable Undertaking	* Prevents moderate breach of regulation, policy or code with investigation or report to authority * Prevents moderate legal proceedings being initiated * Prevent several Improvement Notices	* Prevents significant breach of regulation, policy or code with fine or other regulatory action * Prevent significant litigation / legal action * Prevent shut down of part of a project due to regulatory breach * Prevent Prohibition Notice	* Prevents major breach of regulation, policy or code with fine * Prevents major litigation * Prevents major investigation by regulatory body * Prevent prosecution / Accreditation loss

Figure 16: Overall risk rating

Rating		Consequence				
		1	2	3	4	5
Likelihood	Almost Certain	D	C	B	A	A
	Likely	D	D	C	B	A
	Possible	E	D	C	C	B
	Unlikely	E	E	D	C	B
	Rare/ Remote	E	E	D	D	C

Figure 17: Risk rating

Risk Abbreviation	Risk Rating
A	Catastrophic
B	Critical
C	Moderate
D	Minor
E	Marginal/Negligible

Table 16: Site establishment initial risk assessment

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
Site preparation works: ▪ Provision of site security such as ATF fencing panels, signage ▪ Provision of minimum WHS requirements including: o Toilet facilities o Offices o Lunch rooms ▪ Survey and site investigation works including: o Ground penetrating radar or electromagnetic ground investigation o Phase 2 contamination investigation	Generation of dust as a nuisance to the community	D	▪ Activities with potential to generate dust will be modified or ceased during unfavourable weather ▪ Storage of materials with the potential to result in dust will be minimised and managed appropriately (e.g. Stockpiles will be covered) ▪ Access roads will be maintained and managed to reduce dust generation ▪ During high wind and/or dry conditions, programming of dust generating activities will be considered to reduce impacts to sensitive receivers	E
	Sediment tracking of mud on public roads	D	▪ Site exit points will be fitted with hardstand material, wheel washes and/or rumble grids as soon as possible to limit the amount of material transported off site ▪ Streetsweepers will be used to manage sediment tracking	E
	Inappropriate disposal of waste (including demolition, vegetation and hazardous/ special waste) or disposal at an unlicensed waste facility	B	▪ All on site personnel will undergo a site induction that will detail waste and resource management measures ▪ Additional targeted toolbox talks will be given on waste disposal from time to time ▪ HAZMAT surveys will be undertaken and removal of asbestos will be undertaken prior to demolition activities ▪ Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail commercial wastes and unsuitable fill material 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 ▪ Site inspections undertaken on a regular basis to ensure disposal practices are being adhered to.	C
	Complete or partial loss of an unexpected heritage item while undertaking site establishment works.	B	▪ Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must not be undertaken ▪ Any item of potential Aboriginal archaeological/cultural heritage conservation significance, or human remains discovered during the site establishment works will be managed in accordance with the RMS Standard Management Procedure – Unexpected Heritage Items March 2015) undertaken as required	C

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
	Noise and vibration impacts to sensitive receivers	C	▪ Erection of temporary noise walls where required, other mitigation measures to be implemented until noise walls are installed; ▪ Community updates will be provided throughout the site establishment works ▪ Minimise out of hours works where practicable ▪ Noise mitigation measures identified in the CNVIS to be implemented	D
	Generation of odours due to waste or contaminated soil	D	▪ Staging works to minimise public exposure ▪ Application of water and or/odour suppressants as required.	E
	Traffic and parking impacts on local roads due to site access arrangements	B	▪ Scheduling deliveries outside of peak traffic ▪ Minimise construction vehicle parking on public roads by parking on site where parking is available ▪ Queuing and idling of construction vehicles in residential streets to be minimised ▪ Measurements identified in the Traffic Control Plan (TCP) will be implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network	D
	Contamination of soil or water due to a spill or leak from plant/equipment	B	▪ Hazardous substance handling and use will be conducted away from drainage or stormwater lines and, wherever possible, within defined bunds ▪ Any refuelling undertaken on site will be undertaken in designated areas only, outside riparian areas and well away from drainage or stormwater inlets ▪ Any spills or leakages will be immediately contained and absorbed ▪ Spill kits will be placed at all site locations ▪ Hardstand areas will be placed in workshops to avoid spills leaching into soil	D
	Potential clearing of vegetation outside the project boundary or beyond the project approval	C	▪ Daily pre-start outlining the vegetation areas to be cleared ▪ All site personnel to undertake a site induction outlining that no vegetation or tree removal will be undertaken without prior approval	E
	Spreading of noxious weeds via personnel, plant, equipment, topsoil	C	▪ Targeted toolbox talks regarding the location and treatment of weeds	E

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
Site establishment works: ▪ Site access and environmental controls including: o Erosion and sediment controls, including installation of rip rap and drainage sump at entry o Further site investigations (utility and geotechnical) o Treatment of contaminated materials (if required) o Delineation of sensitive areas and temporary fencing o Noise walls installed o Signage and pedestrian diversions o Installation of traffic barriers o Installation of site perimeter fencing and gates (formalisation of access and egress points)	Potential clearing of vegetation outside the project boundary or beyond the project approval	C	▪ All personnel working on-site must be inducted ▪ Delineation of the project footprint prior to clearing	E
	Generation of dust as a nuisance to the community	C	▪ Activities with potential to generate dust will be modified or ceased during unfavourable weather ▪ Storage of materials with the potential to result in dust will be minimised and managed appropriately (e.g. Stockpiles will be covered) ▪ Access roads will be maintained and managed to reduce dust generation ▪ During high wind and/or dry conditions, programming of dust generating activities will be considered to reduce impacts to sensitive receivers ▪ Adequate dust suppression will be applied during all demolition works	E
	Sediment tracking of mud on public roads	D	▪ Site exit points will be fitted with hardstand material, wheel washes and/or rumble grids as soon as possible to limit the amount of material transported off site ▪ Streetsweepers will be used to manage sediment tracking	E
	Erosion and sedimentation impacting downstream waterways due to exposed land, inadequate controls or control failure	C	▪ Erosion and sediment control plans will be prepared for all work and implemented before and during disturbance. All plans will be approved by an Environmental Advisor ▪ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures ▪ A soil conservation specialist will be engaged if relevant to provide advice regarding erosion and sediment control ▪ Hardstand areas and surrounding public roads will be cleaned as required using methods such as brooms, bobcat attachments or street sweepers	E
	Inappropriate disposal of waste (including demolition, vegetation and hazardous/ special waste) or disposal at an unlicensed waste facility	B	▪ All on site personnel working on-site will undergo a site induction that will detail waste and resource management measures ▪ Additional targeted toolbox talks will be given on waste disposal from time to time ▪ HAZMAT surveys will be undertaken and removal of asbestos will be undertaken prior to demolition activities ▪ 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	C

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
▪ Utilities and ground works: o Demolition of non-heritage structures o Clearing and grubbing o Site levelling, grading and compaction (including fill importation) o Protection of existing services o Removal of redundant utilities o Installation of services to the site eg. Water, sewer, power, communications o Site layout eg. Blockwork and foundations completed for office installation o Sealing of hard stand areas (excluding acoustic sheds) o Internal haul roads installed o Minor stockpiling of materials			waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes	
	Missed opportunities to maximise the beneficial re-use of waste	C	▪ All recyclable solid wastes (paper/ cardboard/ plastic/ glass/timber/metals/fluroscent lighting/printer cartridges/ICT equipment) will be segregated for recycling purposes and volumes to be reported. Wherever possible, packaging should be avoided or minimised to prevent unnecessarily waste.	D
	Complete or partial loss of an unexpected heritage item while undertaking site establishment works.	B	▪ Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must not be undertaken ▪ Any item of potential Aboriginal archaeological/cultural heritage conservation significance, or human remains discovered during the site establishment works will be managed in accordance with the RMS Standard Management Procedure – Unexpected Heritage Items March 2015) undertaken as required	C
	Noise and vibration impacts to sensitive receivers	C	▪ Erection of temporary noise walls where required, other mitigation measures to be implemented until noise walls are installed. ▪ Community updates will be provided throughout the site establishment works ▪ Minimise out of hours works where practicable ▪ Noise mitigation measures identified in the CNVIS to be implemented	D
	Generation of odours due to waste or contaminated soil	D	▪ Staging works to minimise public exposure ▪ Application of water and or/odour suppressants as required	E
	Traffic and parking impacts on local roads due to site access arrangements	B	▪ Designated haul routes for heavy vehicles ▪ Scheduling deliveries outside of peak traffic ▪ Minimise construction vehicle parking on public roads by parking on site where parking is available. ▪ Queuing and idling of construction vehicles in residential streets to be minimised ▪ Measurements identified in the Traffic Control Plan (TCP) will be implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network.	D

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
▪ Installation of offices, workshops and water treatment plants: o Installation of office blocks and shipping containers o Staff amenities o Mechanical workshop structures and areas o Water treatment plant and water tank including fit out including excavation and concrete works o Crane movements for heavy objects including site offices	Spreading of noxious weeds via personnel, plant, equipment, topsoil	C	▪ Targeted toolbox talks regarding the location and treatment of weeds	E
	Contamination of soil or water due to a spill or leak from plant/equipment	B	▪ Hazardous substance handling and use will be conducted away from drainage or stormwater lines and, wherever possible, within defined bunds ▪ Any refuelling undertaken on site will be undertaken in designated areas only, outside riparian areas and well away from drainage or stormwater inlets ▪ Any spills or leakages will be immediately contained and absorbed ▪ Spill kits will be placed at all site locations ▪ Hardstand areas will be placed in workshops to avoid spills leaching into soil	D
Fit out, commissioning and install of remaining site infrastructure including: ▪ Fuel storage ▪ Asphalting of internal haul roads as required, formalising roads and external connections	Generation of dust as a nuisance to the community	C	▪ Activities with potential to generate dust will be modified or ceased during unfavourable weather ▪ Storage of materials with the potential to result in dust will be minimised and managed appropriately (e.g. Stockpiles will be covered) ▪ Access roads will be maintained and managed to reduce dust generation ▪ During high wind and/or dry conditions, programming of dust generating activities will be considered to reduce impacts to sensitive receivers	E
	Sediment tracking of mud on public roads	D	▪ Site exit points will be fitted with hardstand material, wheel washes and/or rumble grids as soon as possible to limit the amount of material transported off site ▪ Streetsweepers will be used to manage sediment tracking	E

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
▪ Chemical and hazardous material storage ▪ Designated stockpile/laydown areas ▪ Office furniture fit out ▪ Formalisation of on-site car parking (line marking etc) ▪ Site lighting installed ▪ Connection of utilities	Inappropriate disposal of waste (including demolition, vegetation and hazardous/ special waste) or disposal at an unlicensed waste facility	B	▪ All on site personnel will undergo a site induction that will detail waste and resource management measures ▪ Additional targeted toolbox talks will be given on waste disposal from time to time ▪ HAZMAT surveys will be undertaken and removal of asbestos will be undertaken prior to demolition activities ▪ 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	C
	Missed opportunities to maximise the beneficial re-use of waste	C	▪ All recyclable solid wastes (paper/cardboard/plastic/ glass/timber/metals/fluorescent lighting/printer cartridges/ICT equipment) will be segregated for recycling purposes and volumes to be reported. Wherever possible, packaging should be avoided or minimised to prevent unnecessarily waste	D
	Complete or partial loss of an unexpected heritage item while undertaking site establishment works.	B	▪ Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must not be undertaken ▪ Any item of potential Aboriginal archaeological/cultural heritage conservation significance, or human remains discovered during the site establishment works will be managed in accordance with the RMS Standard Management Procedure – Unexpected Heritage Items March 2015) ▪ undertaken as required	C
	Noise and vibration impacts to sensitive receivers	C	▪ Erection of temporary acoustic barriers where required ▪ Community updated will be provided throughout the site establishment works ▪ Minimise out of hours works where practicable ▪ Noise mitigation measures identified in the CNVIS to be implemented	D
	Generation of odours due to waste or contaminated soil	D	▪ Staging works to minimise public exposure ▪ Application of water and or/odour suppressants as required.	E

Key establishment activities (note: items may not occur in sequence order)	Key potential impacts	Risk level prior to mitigation	Mitigation measures	Risk level following mitigation
	Erosion and sedimentation impacting downstream waterways due to exposed land, inadequate controls or control failure	C	▪ Erosion and sediment control plans will be prepared for all work and implemented before and during disturbance. All plans will be approved by an Environmental Advisor. ▪ All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures ▪ A soil conservation specialist will be engaged if relevant to provide advice regarding erosion and sediment control ▪ Hardstand areas and surrounding public roads will be cleaned as required using methods such as brooms, bobcat attachments or street sweepers	E
	Traffic and parking impacts on local roads due to site access arrangements	B	▪ Designated haul routes for heavy vehicles ▪ Scheduling deliveries outside of peak traffic ▪ Minimise construction vehicle parking on public roads by parking on site where parking is available ▪ Queuing and idling of construction vehicles in residential streets to be minimised ▪ Measurements identified in the Traffic Control Plan (TCP) will be implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network	D
	Contamination of soil or water due to a spill or leak from plant/equipment	B	▪ Hazardous substance handling and use will be conducted away from drainage or stormwater lines and, wherever possible, within defined bunds ▪ Any refuelling undertaken on site will be undertaken in designated areas only, outside riparian areas and well away from drainage or stormwater inlets ▪ Any spills or leakages will be immediately contained and absorbed ▪ Spill kits will be placed at all site locations ▪ Hardstand areas will be placed in workshops to avoid spills leaching into soil	D
	Potential clearing of vegetation outside the project boundary or beyond the project approval	C	▪ Daily pre-start outlining the vegetation areas to be cleared ▪ All site personnel to undertake a site induction outlining that no vegetation or tree removal will be undertaken without prior approval	E
	Spreading of noxious weeds via personnel, plant, equipment, topsoil	C	▪ Targeted toolbox talks regarding the location and treatment of weeds	E

6.2. Environmental Management System overview

The Environmental Management System (EMS) provides a framework to define how JHCPB will minimise impacts to the environment. It comprises a combination of governance documentation, Project-specific management plans (such as this SEMP), procedures and tools. The JHCPB EMS is based on the John Holland EMS (which is accredited to ISO:14001) but tailored to satisfy Project-specific requirements. It comprises the following structure:

- Global mandatory requirements applied across all John Holland projects,
- John Holland Environment Management Manual,
- JHCPB Environmental Policy,
- Project Construction Environment Management Plan, sub-plans, and the SEMP, and
- John Holland and project environmental procedures, tools and knowledge.

6.3. Site Establishment Management Plan

This SEMP has been prepared for the Project to outline the environmental management practices and procedures that are to be followed during the ancillary facility site establishment phase of the Project. The SEMP outlines specific environmental management and mitigation measures identified to address potential impacts for a range of environmental factors in accordance with CoA C22.

The SEMP must be submitted to the Secretary of DPE for approval prior to commencement of site establishment works. Operation and decommission of the ancillary facilities would be managed in accordance with the approved CEMP and sub-plans as per CoA C23.

6.4. Site Environment Plans

A Site Environment Plan (SEP) is an internal construction document prepared to assist in the planning and management of specific areas. Environmental and socially sensitive areas including vegetation, heritage, sensitive receivers, waterways, contamination etc. may be included in a SEP.

A series of SEPs will be prepared prior to the establishment of ancillary facilities. These SEPs will be used to inform construction planning and will be included in applicable Work Packs, which consist of relevant construction documents to assist supervisors to manage specific packages of work. The SEP provides a simple but effective tool to identify key risk areas and to promote ongoing communication to construction personnel throughout the Project.

The SEP's will be used in conjunction with Environmental Work Method Statement (EWMS) to help identify key risk areas and promote ongoing communication to construction personnel during the Project. The SEP's are considered live documents and they will be regularly reviewed to reflect the true ground conditions and identify any new environmentally sensitive areas.

6.5. Environmental Work Method Statements

Environmental Work Method Statements (EWMS) will be prepared for activities within or near environmentally sensitive areas and will include protection measures that minimise the risk of impacting the sensitive areas. The requirement for EWMS' is directed by RMS Specification D&C G36 – Environmental Protection and by the Planning and Environment Manager for those activities deemed to carry an inherent level of environmental risk.

Appropriate EWMS' will be prepared prior to the establishment of ancillary facilities and will incorporate relevant mitigation measures and controls from this document. As a minimum, EWMS' will include (D&C G36):

- Description of the work activity, including any plant and equipment to be used,
- Outline of the sequence of tasks for the activity, including interfaces with other construction activities,
- Identification of any environmental and/or socially sensitive areas, sites or places,
- Identification of potential environmental risks/impacts due to the work activity,

- Mitigation measures to reduce the identified environmental risk, including assigned responsibilities to site management personnel, and
- Process for assessing the performance of the implemented mitigation measures.

The EWMS' will be reviewed by the relevant Project Manager and then approved by the Planning and Environment Manager. Relevant conditions of the EWMS will be incorporated into Work Packs as required.

6.6. C22 Utilities Management Strategy

A Utilities Management Strategy (UMS) will be developed in accordance with CoA E140 and approved by DPE, identifying how utility works will be defined and managed and will include:

- 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,
- The functions of the Utility Coordination Manager as required by Condition E141,
- A description of all utility works to be undertaken, including low impact utility works and how they meet the definition in subclause (a), and
- The management measures that will be implemented to manage dust, noise, traffic, access and lighting impacts associated with low impact utility works. Utilities works to be undertaken prior to the commencement of construction will be managed in accordance with the UMS and this SEMP.

Where low impact utilities works are required during the site establishment period, these will be undertaken in accordance with the UMS. All other utilities works will occur during the construction period (i.e. following CEMP approval). Minor connections and disconnections will be undertaken in accordance with this SEMP.

6.7. Progressive Erosion and Sediment Control Plans

Initial site establishment preliminary erosion and sediment control plans (ESCPs) will be prepared for all ancillary facilities prior to site establishment activities. The preliminary ESCPs contain site-specific details including identifying indicative locations for sediment basins, clean and dirty water flow paths, critical drainage infrastructure, site boundary and compound areas. These plans will be developed as the Project progresses and as the site conditions evolve to meet construction and permanent facilities requirements

The progressive ESCPs will incorporate the following:

- Location of erosion, sedimentation and water quality control measures proposed to treat stormwater before disposal,
- Layout of the site cleared and protected areas and stockpiling areas, and
- Construction period and staging.

Information relevant to the preparation of the progressive ESCPs is obtained from Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom 2006) (the Blue Book) and Volume 2D Main Roads Construction (DECCW 2008) and site-specific soil data.

Environmental personnel, at times in consultation with the Project's Soil Conservationist, Superintendent/Foreman and Planning and Environment Manager, would prepare and update the progressive ESCPs.

6.8. Construction noise and vibration impact statements

In accordance with CoA E79 works associated with the establishment of each ancillary facility will be assessed within a site establishment noise and vibration impact statement (CNVIS), which will be developed before any works that result in noise and vibration impacts commence. The CNVIS will include specific mitigation measures identified through consultation with affected sensitive receivers.

A noise model has been prepared by suitably qualified acoustic consultants to predict the extent of noise and vibration impacts on surrounding receivers during the site establishment phase. Based on the predicted impacts, appropriate mitigation measures will be implemented on a site-specific basis. The predictions have been prepared considering the anticipated establishment scenarios (including size and type of equipment and operating times) and existing environment to predict the noise and vibration levels.

The specific mitigation measures detailed within the CNVIS would be implemented, along with Project-wide measures identified in Annexure B.

CNVIS will be a document controlled separately to this SEMP or other applicable sub-plans. Therefore, an update to the CNVIS will not require this SEMP to be updated.

6.9. Traffic Control Plans

Where required, TCPs will be prepared in accordance with the principles and measures outlined in the Traffic Management and Safety Plan (TMSP), AS1742.3-2009 and RMS' Traffic Control at Worksites Manual Version 4. TCPs and ROL's required during ancillary facility establishment may be required to facilitate the delivery of oversized items (such as site sheds) and may also be required to facilitate demolition activities.

A Traffic Control Plan (TCP) is a diagram identifying signs and devices in specific locations to allow the public and workers at the work site to be safely separated from traffic, while minimising disruption and risk to road users. A TCP generally details:

- Traffic control signage and traffic flow arrangement,
- Site establishment boundary,
- Speed limits,
- Direction of construction traffic and sometimes reversing arrangements,
- Parking locations for both construction workers and the public, and
- ROL conditions (if applicable).

A TCP can only be prepared by a person who has undertaken and passed TCWS training course and holds a current certification (Orange card).

Pedestrian and cyclist access will be maintained however some detours may be required to improve safety and amenity of pedestrians and cyclist or the accessibility of trucks entering and exiting ancillary facilities. Alternate routes will aim to minimise inconvenience to pedestrians and cyclists and will be clearly signed and marked. Additionally, the traffic and transport environmental safeguards within Annexure B will be implemented for the duration of the site establishment works.

6.10. Construction Parking and Access Strategy

A Construction Parking and Access Strategy will be prepared prior to removal of any on street parking in accordance with CoA E54. The Construction Parking and Access Strategy will be submitted to the Secretary 1 month before the commencement of any works that impact parking.

To minimise the impacts of on-street parking by site establishment construction workers, on-site worker parking will be available during the site establishment phase at each ancillary facility, except where this is not acceptable for safety reasons (e.g. during demolition works).

The specific mitigation measures detailed within the Construction Parking and Access Strategy will be implemented, along with Project-wide measures identified in Annexure B.

6.11. Site Contamination Reports

Condition E181 requires the preparation of a Site Contamination Report for sites that are suspected or known to be contaminated. Site Contamination Reports document findings of Phase 1 and Phase 2 contamination assessments. If the site or part of the site establishment sites are identified as requiring remediation, a Remediation Action Plan (RAP) will be prepared and implemented.

On completion of remediation a Site Audit Statement and Site Audit Report will be prepared by a NSW Environment Protection Authority (EPA) Accredited Site Auditor to declare that the site is suitable for purposed as per CoA E182 and E183.

An Unexpected Contaminated Land and Asbestos Finds Procedure has been prepared for use at all sites and is included in Annexure E.

6.12. Flood mitigation strategy

A Flood Mitigation Strategy (FMS) will be prepared for flood prone or flood affected land within the project footprint prior to construction, to demonstrate that the existing flooding characteristics will not be exacerbated as a consequence of the project. The strategy will be prepared by a suitably qualified and experienced person in consultation with directly affected landowners, the NSW Office of Water, OEH, Sydney Water and relevant councils in accordance with REMM FD01.

It is not anticipated that the FMS will demonstrate exacerbated flooding characteristics as a result of the project. However, should it be identified, appropriate mitigation measures will be included in the relevant EWMS. The strategy will provide measures to be implemented to minimise soil erosion and scour as a result of the project and to protect project works/operations from potential flooding.

Any potential flooding and drainage impacts would be managed in accordance with the Flood Mitigation Strategy and the management and mitigation measures listed in Annexure B. All relevant flooding information from the Project will be provided to the NSW Department of Industry – Water, NSW State Emergency Service, Sydney Water and Inner West Council.

Flood Review Report(s) would be prepared after the first defined flood event, as defined in CoA E153 to assess actual flood impact against those predicted in documents referred to in CoA A1.

6.13. Noise and Vibration Monitoring Program

6.13.1. Noise Monitoring during Site Establishment

During site establishment, monitoring of noise levels will be undertaken as follows:

- 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,
- Where a change in methodology, plant or equipment is anticipated to result in a significant increase in noise impact,
- Where appropriate in response to a noise related complaint(s) (determined on a case-by-case basis),
- As otherwise required by the CNVIS or Out of Hours Works (OOHW) Protocol,
- Following the implementation of mitigation measures or noise attenuation as a result of exceedance of predicted noise levels, and
- Ongoing spot checks for noise intensive plant and equipment will be undertaken during Site Establishment to ensure compliance with the maximum noise level goals for plant and equipment.

Noise monitoring locations will vary and be determined on a case-by-case basis by a CNVIS, the Project's noise predictive noise and vibration tool or where in response to complaints.

In accordance with the ICNG the duration and amount of noise monitoring will depend on the scale of the activities and extent of expected noise impacts. Noise monitoring will cover a representative period of the activity.

Where possible, monitoring will be undertaken at the most affected noise sensitive receiver/s location in proximity to the activities.

Noise monitoring locations will consider factors including:

- The location of previous monitoring sites
- The proximity of the receiver to a Project worksite
- The sensitivity of the receiver to noise
- Background noise levels
- The expected duration of the impact.

All environmental noise monitoring will be taken with the following meter settings:

- Time Constant: Fast (i.e. 125 milliseconds)
- Frequency Weightings: A-weighting
- Sample period: 15 minutes.

Environmental noise monitoring will be recorded over 15-minute sample intervals, where every 15 minutes the data is to be processed statistically and stored in memory. The minimum range of noise metrics to be stored in the memory for later retrieval include the following A-weighted noise levels: L_{A90}, L_{Aeq}, L_{A10}, L_{A1} and $L_{A\,(max)}$.

For spot checks of noise intensive plant and equipment, duration of monitoring will depend on the source of noise being monitored. Sources of continuous noise (such as generators), measurements will be monitored over one to two-minute intervals. For dynamic plant, such as front-end loaders, spot checks will capture a representative activity, such as one truck-and-dog load cycle.

6.13.2. Vibration Monitoring during site establishment

Attended vibration monitoring is to be undertaken as follows:

- At the commencement of operation for each plant or activity on site, which has the potential to generate significant vibration levels, where the vibration screening criteria is likely to be exceeded or as determined by a CNVIS,
- At the commencement of vibration generating activities that have the potential to impact on heritage items to confirm the minimum working distances to prevent cosmetic damage,
- Where vibration sensitive locations are determined to fall within the ‘safe working distances’ established for each item of plant, so to refine the indicative minimum working distances,
- Where deemed to be relevant to Site Establishment activities in response to a vibration related complaint, and
- As otherwise required by the CNVIS or OOHW Protocol.

Any work that is required to be undertaken within the safe working distance of heritage items will not be undertaken as part of this SEMP.

Where human comfort is a concern, vibration monitoring results will be assessed and reported against the values set out in Tables 2.2 and 2.4 of the EPA’s Assessing Vibration – a technical guideline.

Where property damage is a concern, vibration monitoring results will be assessed and reported against the German Standard DIN4150-1999 Structural vibration Part 3: Effects of vibration on Structures.

Vibration monitoring equipment will be mounted directly to the buildings’ foundation using bees wax or other suitable means, where possible. Selected monitoring location will be solid and rigid to best represent the vibration entering the structure of the building under investigation. Any

alternative mounting techniques will be determined by an appropriately experienced person in accordance the relevant standards and guidelines.

Where attended vibration monitoring is not feasible, due to extended periods of vibration intensive civil works, unattended vibration monitoring system could be installed to warn plant operators (via flashing light etc.) that there is potential cosmetic damage to buildings and structures.

Where unattended vibration monitors are left in place on a private property they will be picked up at a mutually agreed time with the resident.

The following vibration metrics will be stored in memory and reported:

- Vibration Dose Values (VDVs) – for the assessment of human comfort concerns, and
- Peak-Particle Velocity (PPV) – for the assessment of cosmetic damage concerns.

All short term attended vibration monitoring will be recorded over a representative sampling interval where the worst-case vibration levels can be captured. Where unattended vibration monitoring is proposed, monitoring will be undertaken continuously whilst the vibrating plant is operational to capture the worst-case vibration levels within the pre-determined ‘safe working distance’ from the potentially affected building.

7. Ancillary facility approval, review and improvement

7.1. Ancillary facilities approval pathways

Two approval pathways streams for ancillary facilities were identified in the Planning Approval:

- Ancillary facilities identified in the EIS and/or SPIR: Establishment of these ancillary facilities (listed in Section 4) will commence following approval of this SEMP (as per CoA C22) and prior to approval of the CEMP. The SEMP will be submitted to DPE for review and approval. Where site establishment works are to commence after CEMP approval, these will be included within the CEMP and managed under this process, and
- Minor ancillary facilities not detailed in the EIS or SPIR: Minor ancillary facilities not detailed in the EIS or SPIR which would be of minimal environmental impact may be approved by the Environmental Representative (ER) under CoA C24. Minor ancillary facilities are defined as:

  Lunch sheds, office sheds, and portable toilet facilities, that are not identified as a construction ancillary facility in the EIS and SPIR which 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 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.

7.2. Continuous improvement

Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of this SEMP. This will be through regular compliance activities, such as inspections, observations and monitoring will be undertaken throughout the site establishment of the ancillary facilities. Subcontractors' works would also be monitored through regular inspections, observations, monitoring and audits as appropriate. This will be implemented through the program for monitoring the performance outcomes in Section 2.3

Environmental controls will be inspected regularly to ensure their ongoing suitability and effectiveness. Environmental monitoring is carried out to establish pre-construction benchmarks, confirm compliance with the conditions of environmental Approvals, licences and laws and to provide early indication of potential adverse impacts to the environment or community.

7.3. SEMP update and amendment

Monthly reports will be undertaken by the Environmental Representative in accordance with Condition A21.This will help identify specific opportunities for improvements in the environmental management system and/or this SEMP. This plan will also be updated:

- To add / amend ancillary facilities identified in the EIS,
- To take into account changes to the environment or generally accepted environmental management practices, new risks to the environment, any hazardous substances, contamination or changes in law,

- Where requested or required by DPE or any other Authority, and
- In response to internal or external audits or quarterly management reviews.

The updated plan must be endorsed by the Planning and Environmental Manager and approved internally by the Project Director.

Any amendment to this SEMP must be approved by either the Environmental Representative or DPE.

7.4. Document approval

This SEMP will be prepared in consultation with Inner West Council and the EPA in accordance with CoA C22. This plan has been prepared with the review of Roads and Maritime Services, and the JHCPB Project Director and Environment and Sustainability Manager prior to submission to the DPE. Submission to DPE is required no later than one month prior to commencement of works or as otherwise agreed.

A suitably qualified and experienced Acoustics Advisor (AA), who is independent of the design and construction personnel, has been nominated and engaged for the duration of the works. The AA will review the noise impacts of minor construction ancillary facilities and consider minor amendments made to the CEMP.

The SEMP must be approved by the Secretary of DPE prior to the commencement of site establishment activities. Approval of changes to the SEMP will be determined on a case-by-case basis in consultation with the ER and where required will be endorsed by the ER or approved by DPE.

7.5. Training and awareness

All personnel, including employees, contractors and sub-contractors, are required to complete an induction containing relevant environmental information before they are authorised to work on the Project. The induction addresses general and Project-specific environmental issues including:

- JHCPB Environmental Policy,
- JHCPB Sustainability Policy,
- Purpose and objectives of the EMS,
- Requirements of due diligence and duty of care,
- Conditions of environmental licences, permits and approvals,
- Potential environmental emergencies on-site and the emergency response procedures,
- Reporting and notification requirements for pollution and other environmental incident,
- High-risk activities and associated environmental safeguards, e.g. earthworks, vegetation clearing, night works, operation and maintenance of concrete washouts, and washing, refuelling and maintenance of plant and equipment,
- Awareness and procedures for handling potential asbestos containing materials and/or contaminated fill material and procedures for unexpected finds,
- Potential and procedures for unexpected heritage finds, and
- Working in or near environmentally sensitive areas.

An assessment will be conducted upon completion of the induction. Records of all training activities, including inductions, will be maintained. Records will include the name and role of the attendee, the name of the course and, where applicable, reference to the document controlled version of the material presented, and a copy of the assessment completed.

Key staff will undertake targeted training relevant to their position and/or responsibility. Ongoing training and awareness will enable Project personnel to competently perform their duties and meet environmental obligations. Training and awareness activities include:

- General inductions,
- Daily pre-start or activity specific pre-start briefings,
- Regular toolbox talks,

- Targeted environmental training, appropriate to personnel role and/or responsibility,
- Meetings or forums either dedicated to training and awareness activities or included as an agenda item, and
- Emergency drills.

7.6. Community engagement

Prior to establishment of ancillary facilities, the community relations team will engage with residential and commercial properties that adjoin or are adjacent to the ancillary facilities. Engagement methods will include door knocking residents impacted by the ancillary facilities, letter box drops and community updates as applicable. Any comments/feedback regarding boundary screening and noise walls will be considered by JHCPB. The site design plan will detail the type and height of the boundary screens for each location.

During the site establishment phase, any comments, feedback or complaints relating to noise, air quality and other amenity issues will be addressed in accordance with the Communication Strategy and Complaints Management System. A public liaison officer will be appointed for the construction ancillary facility(s) in accordance with CoA B6 and the communications strategy to assist the public with questions and complaints they have at any time during site establishment.

In accordance with CoA B11, the following avenues will be available throughout the site establishment phase for the public to communicate with the Project:

- A 24-hour toll-free telephone number for the registration of complaints and enquires about the CSSI,
- A postal address to which written complaints and enquires may be sent,
- An email address to which electronic complaints and enquires may be transmitted,
- A mediation system for complaints unable to be resolved, and
- A mechanism for community members to make enquires in common community languages of the area.

The telephone number, postal address and email address, as well as relevant Project information as required by CoA B17 would be included on designated pages of www.westconnex.com.au.

7.7. Incident reporting

In the event of an environmental incident, RMS' Environmental Incident Classification and Reporting Procedure will be implemented. The Environmental Incident Classification and Reporting Procedure (the Procedure) aims to ensure Roads and Maritime Services workers and contractors understand how to classify, respond to and report environmental incidents that occur as a result of Roads and Maritime managed activities.

In the event of a pollution incident on or around the site, in accordance with Part 5.7 of the POEO Act and the Project Pollution Incident Response Management Plan, the relevant authorities will be notified, as determined by the Environment and Sustainability Manager (or delegate). The circumstances where this will take place include:

i. it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or
ii. it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations).

Where an incident involves a potential impact to an Aboriginal site, the OEH and relevant Registered Aboriginal Parties will be notified, and their input sought in closing out the incident.

All other environmental incidents, reportable events and regulatory action would be reported to RMS as outlined in the RMS Environmental Incident Classification and Reporting Procedure.

JHCPB will provide all records of the environmental incidents and regulatory action to RMS Project team.

In accordance with CoA A40, JHCPB will notify the Secretary as soon as possible and in any event within 24 hours of any incident (other than those relating to the POEO Act) with actual or potential significant off-site impacts on people or the biophysical environment immediately (on weekdays, or by the following business day for weekends, public holidays and site shutdown periods) of becoming aware of the incident.

In accordance with the requirements of CoA A27, the Compliance Tracking Program will document:

- Mechanisms for reporting and recording incidents and actions taken in response to those incidents,
- Provisions for reporting environmental incidents to the Minister during construction and operation, and
- Procedures for rectifying any non-compliance identified during review of incident management.

Annexure A Relevant Conditions of Approval and Revised Environmental Management Measures

Conditions of Approval

Table 17: Relevant Conditions of Approval

CoA	Requirement	Reference
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).	Section 1.1
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.	Section 1.1
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.	Table 19 – MMG1
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;	Section 7.3

CoA	Requirement	Reference
	(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; (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 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.	
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.	Section 7.4
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.	Section 7.4
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;	Section 7.4

CoA	Requirement	Reference
	(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; (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.	
A40	The Secretary must be notified as soon as possible and in any event within 24 hours of any incident.	Section 7.7
A45	Signage on hoardings surrounding construction ancillary facilities must include the CSSI name and application number.	Section 5.5.2 Annexure B – MMU4
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.	Section 7.6 Communication Strategy (CCS) Annexure B – MMSE1

CoA	Requirement	Reference
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.	Annexure B – MMG4
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.	Annexure B – MMG4
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.	Section 7.6
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, 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.	Section 7.6

<table>
<tr><th>CoA</th><th>Requirement</th><th>Reference</th></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 each 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>
<tr><td>e)</td><td>Dust Deposition Monitoring Program</td><td>EPA</td></tr>
</table></td><td>Section 6.13</td></tr>
<tr><td>C10</td><td>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.</td><td>Section 6.13</td></tr>
<tr><td>C23</td><td>Operation of Construction Ancillary Facilities
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.</td><td>Section 6.3</td></tr>
<tr><td>C24</td><td>Minor Construction Ancillary Facilities
Lunch sheds, office sheds, and portable toilet facilities, that are not identified as a construction ancillary facility in the EIS and SPIR can be established, where they satisfy the following criteria:</td><td>Section 7.1</td></tr>
</table>

CoA	Requirement	Reference
	(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 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 and Screening** 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.	Section 7.1 and 5.5.2 Annexure B – MMU1
C26	Boundary fencing required under **Condition C25** of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.	Section 5.5.2 Annexure B – MMU1, MMU4
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.	Annexure B – MMAQ1
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.	Section 6.9 Traffic Control Plans
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.	Section 6.10 and 5.1.2 Annexure B – MMTT7

CoA	Requirement	Reference
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**.	Annexure B – MMTT3, MMTT4 and MMNV8
E55	The CSSI (including new or modified local roads, parking, pedestrian and cycle infrastructure) must be designed to meet relevant design, engineering and safety guidelines, including the Austroads Guide to Traffic Management.	Section 5.1.1 Annexure B – MMTT5
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.	Section 5.1.1
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.	Annexure B – MMTT1
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.	Section 5.1.1 Annexure B – MMTT7
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.	Section 5.4 Annexure B – MML1
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.	Annexure B – MMCI1
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.	Section 4 Table 19 – MMNV3, MMNV11

CoA	Requirement	Reference
E69	Notwithstanding **Condition E68**, works may be undertaken between 1:00 pm to 6:00 pm on Saturday.	Annexure B –MMNV3
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 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**.	Annexure B –MMNV3
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.	Section 5.3 Annexure B – MMNV11
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 (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 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	Section 5.3 Section 4 Annexure B – MMNV3

CoA	Requirement	Reference
	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. For example, an EPL cannot authorise spoil movements at the Darley Road construction ancillary facility outside of the hours specified in Conditions E68 and E69. Out of Hours Works considered under Conditions E73(c) and (d) must be justified and include an assessment of mitigation measures.*	
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.	Section 5.3 Annexure B – MMNV10
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: (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.	Section 4 Annexure B – MMNV 5 and REMM NV5
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.	Section 4 Section 5.3

CoA	Requirement	Reference
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 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: (e) identify Department, EPA and community notification arrangements for approved out of hours works, which maybe detailed in the Communication Strategy. i (i) low risk activities can be approved by the **ER** in consultation with the **AA**, and ii (ii) high risk activities that are approved by the Secretary; and	Section 4 Section 5.3
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.	Section 4 Section 5.3
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.	Section 6.8
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	Annexure B – MMNV1 - MMNV14

CoA	Requirement	Reference
	(e) the vibration limits set out in the German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage). 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**. 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.	
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.	Section 5.5.1 Annexure B - MMU2
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.	Section 5.5.1 Annexure B - MMU2
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.	Section 5.5.1 Annexure B - MMU2
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.	Section 6.12

CoA	Requirement	Reference
	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).	
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.*	Annexure B – MMH6
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.	Annexure B – MMH2
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.	Annexure B – MMH4
E160	The Proponent must investigate the feasibility of retaining Cadden Le Messurier (84 Lilyfield Road), Former Hotel (78 Lilyfield Road) and the facade of the former Bank of NSW building (164 Parramatta Road) during detailed design.	Section 5.11 Annexure B – MMH7
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.	Section 5.11
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.	Section 5.9.1
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	Section 5.9.2 Annexure B – MMB6

CoA	Requirement	Reference
	CSSI approval applies if no more plantings are practicable within and up to 500 metres from the CSSI boundary. The location of the trees must be determined in consultation with the relevant authority(s).	
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.	Annexure B – MMSW1
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).	Section 6.11
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.	Section 6.11
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.	Section 6.11
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	Section 5.7 Annexure B – MMC2 Annexure E
E185	The **Unexpected Contaminated Land and Asbestos Finds Procedure** must be implemented throughout construction.	Section 5.7 Annexure B – MMC2
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.	Annexure B – MMRW5
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.	Annexure B – MMRW6

CoA	Requirement	Reference
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.	Annexure B – MMRW3

Relevant Revised Environmental Management Measures

Table 18: Relevant Revised Environmental Management Measures

Impact	Ref. No.	Mitigation Measure	Reference
Traffic and Transport			
Impacts on road network performance (delays) and safety	TT05	Isolate work areas from general traffic through the implementation of appropriate traffic and access controls.	Annexure B - MMG5, MMTT1, MMTT2
Impacts on road network performance (delays) and safety	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.	Annexure B - MMTT5, MMG5
Impacts on road network performance (delays) and safety	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.	Annexure B - MMG4 CoA B8,B9 Section 7.7
Impacts on road network performance (delays) and safety	TT10	Schedule construction-related transport movements to avoid peak traffic periods and minimise project-related congestion, where possible.	Annexure B - MMTT10
Impacts on road network performance (delays) and safety	TT11	Develop and adopt robust community and stakeholder communication protocols regarding altered traffic conditions.	Communication Strategy (CS)
Impacts on pedestrian and cycle paths	TT12	Minimise impacts on the pedestrian paths and cycle lanes, and provide timely alternatives during construction where practical and safe to do so.	Annexure B - MMTT1 CoA E57
Impact on property access	TT14	Manage local road closures and maintain adequate property access. This will be undertaken in consultation with RMS, local councils and property owners likely to be impacted.	Annexure B - MML3
Impacts on road infrastructure	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.	Section 5.1.1 Annexure B - MMTT7
Air Quality			
Impacts on ambient air quality and human health from dust generation and plant emissions during construction	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.	Annexure B - MMCI1
	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.	Annexure B - MMAQ3
	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.	Annexure B - MMAQ1, MMAQ2
	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.	Annexure B - MMAQ1
	AQ6	Access roads within project sites will be maintained and managed to reduce dust generation.	Annexure B - MMAQ5

Impact	Ref. No.	Mitigation Measure	Reference
	AQ7	Where reasonable and feasible, appropriate control methods will be implemented to minimise dust emissions from the Project site.	Annexure B - MMAQ1, MMAQ4
	AQ8	Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times.	Annexure B - MMAQ11
	AQ9	All construction vehicles and plant will be inspected regularly and maintained to ensure that they comply with relevant emission standards.	Annexure B - MMAQ12
	AQ10	Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions.	Annexure B - MMAQ13
	AQ11	The use of mains electricity will be favoured over diesel or petrol-powered generators where practicable to reduce site emissions.	Annexure B - MMAQ14
	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.	Annexure B - MMAQ15
	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.	Annexure B - MMAQ2, MMAQ4, MMAQ8
	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.	Annexure B - MMAQ4
	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	Annexure B - MMAQ16
	AQ16	Demolition activities will be planned and carried out to minimise the potential for dust generation.	Annexure B - MMAQ17
	AQ17	Adequate dust suppression will be applied during all demolition works required to facilitate the Project.	Annexure B - MMAQ18
	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.	Annexure B - MMAQ19
	AQ19	Areas of soil exposed during construction will be minimised at all times to reduce the potential for dust generation.	Annexure B - MMAQ4
	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.	Annexure B - MMAQ20
	AQ21	Exposed soils will be permanently stabilised as soon as practicable following disturbance to minimise the potential for ongoing dust generation.	Annexure B - MMAQ6
	AQ22	Ensure that stockpiles of materials with the potential to result in dust emissions are adequately protected and managed to reduce potential dust generation.	Annexure B - MMAQ6

Impact	Ref. No.	Mitigation Measure	Reference
	AQ23	Ensure fine materials are stored and handled to minimise dust.	Annexure B - MMAQ11
	AQ24	All sealed surfaces within sites and site accesses will be managed to reduce dust generation and sediment tracking onto roads.	Annexure B - MMAQ10
	AQ25	At the commencement of establishment of Project ancillary facilities, controls such as wheel washing systems and rumble grids will be installed at site exits to prevent deposition of loose material on sealed surfaces outside Project sites to reduce potential dust generation.	Annexure B – MMAQ9
Noise and Vibration			
Impacts from the generation of construction noise and vibration	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.	Annexure B - MMNV12 CoA E79
Noise monitoring	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.	Annexure B - MMNV2
Land Use and Property			
Impacts on property access	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.	Annexure B - MML3
	PL14	The Utilities Management Strategy (Appendix F of the EIS) will be implemented.	Section 6.6 Appendix B - MML6
Urban Design and Visual Amenity			
General impacts to landscape and visual amenity	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.	Annexure B - MMU1

Impact	Ref. No.	Mitigation Measure	Reference
	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.	Annexure B - MMU2
	LV3	Regular maintenance of site hoarding and perimeter site areas should be undertaken, including the prompt removal of graffiti and litter.	Annexure B - MMU3
	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.	Annexure B - MMB4
	LV5	Hoardings and temporary noise walls will be erected as early as possible within the site establishment phase to provide visual screening.	Annexure B - MMU4
	LV7	Where necessary, construction lighting will comply with the requirements of the Civil Aviation Safety Authority (CASA) and Sydney Airport at all times.	Annexure B - MMU2
	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.	Annexure B - MMU1
Social and Economic			
Changes to community access and connectivity	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.	Annexure B - MMSE1
Soil and Water Quality			
Sedimentation of waterways	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.	Annexure B - MMSW3
	SW04	A soil conservation specialist will be engaged for the duration of construction to provide advice regarding erosion and sediment control.	Annexure B - MMSW4
	SW05	The extent of ground disturbance and exposed soil will be minimised to the greatest extent practicable to minimise the potential for erosion.	Annexure B - MMSW2
	SW06	Disturbed ground and exposed soils will be temporarily stabilised prior to extended periods of site inactivity to minimise the potential for erosion.	Annexure B - MMSW2

Impact	Ref. No.	Mitigation Measure	Reference
	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.	Annexure B - MMSW2
Contamination			
Impacts on human and / or ecological receptors through disturbance and mobilisation of contaminated material	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). 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 (RAP) will be prepared.	Annexure B - MMC1
	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.	Annexure B - MMC2
	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).	Annexure B - MMC3
	CM04	Stockpile management procedures will be implemented to control dust, odour and cross contamination.	Annexure B - MMAQ6
	CM05	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.	Annexure B - MMC2
Flooding and Drainage			
Impacts on flood behaviour from construction and operation	FD01	A Flood Mitigation Strategy will be prepared by a suitably qualified and experienced person in consultation with directly affected landowners, DPI-Water, 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	Section 6.12 Annexure B - MMF1

Impact	Ref. No.	Mitigation Measure	Reference
		▪ 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 o No inundation of floor levels which are currently not inundated in a 100 year ARI rainfall event o A maximum increase of 10 mm in inundation at properties where floor levels are currently exceeded in a 100 year ARI rainfall event o A maximum increase of 50 mm in inundation at properties where floor levels will not be exceeded in a 100 year ARI rainfall event o Or else provide alternative flood mitigation solutions consistent with the intent of these limits o 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.	Annexure B - MMF1
	FD09	The permanent surface water conveyance solution within the Rozelle Rail Yards will be implemented as soon as possible.	Annexure B - MMF2
Impacts on stormwater drainage systems	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.	Annexure B - MMSW1
	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.	Annexure B -MMSW1
Biodiversity			
Loss of trees	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	Annexure B - MMB4

Impact	Ref. No.	Mitigation Measure	Reference
		included in the relevant UDLP. Opportunities for the provision of replacement trees outside the project boundary will be investigated in consultation with local councils.	
Non-Aboriginal Heritage			
General heritage impacts	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 ▪ 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 will include the identification of appropriate stakeholders to receive copies of the documentation.	Annexure B - MMH7
Impacts to unexpected items of potential heritage conservation significance or human remains	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 Unexpected Archaeological Finds (Roads and Maritime 2015a). The procedure will detail requirements regarding notification of relevant agencies and the NSW Police and will be implemented for the duration of construction.	Annexure B - MMH1
Potential impact to White Bay Power Station	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.	Annexure B - MMH4
	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.	Annexure B - MMH5

Impact	Ref. No.	Mitigation Measure	Reference
Aboriginal Heritage			
Impacts on unexpected finds of Aboriginal objects	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.	Annexure B - MMH1
Resource Use and Waste Minimisation			
Waste generation and disposal	RW2	Wastes will be managed and disposed of in accordance with relevant NSW legislation and government policies.	Annexure B - MMRW1
	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 ▪ 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.	Annexure B - MMRW1, MMRW5
	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.	Annexure B – MMRW4
Dust generation, erosion and sedimentation of stockpiles	RW11	Spoil stockpiles will be provided with appropriate environmental controls and managed to reduce potential impacts associated with dust generation, erosion and sedimentation.	Annexure B – MMAQ6
Generation of general waste	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.	Annexure B - MMRW1

Impact	Ref. No.	Mitigation Measure	Reference
Hazard and Risk			
Spills and leaks from the storage and transport of dangerous goods and hazardous substances during construction	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.	Annexure B - MMHR1
	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.	Annexure B - MMHR1
	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, washdown, where there is a potential for spills and contamination.	Annexure B - MMHR1
	HR4	Safety Data Sheets for dangerous goods and hazardous substances will be stored on site prior to their arrival.	Annexure B - MMHR1
	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.	Annexure B - MMU2

Annexure B Environmental Safeguards

Project Wide Environmental Safeguards

This section contains general requirements that will be applied to all ancillary facilities. The environmental safeguards provided here are applicable to the establishment of all ancillary facilities established under this Site Establishment Management Plan (SEMP). Safeguards from this table will be incorporated into Work Packs (WP) or environmental work method statements (EWMS). Site personnel will be required to undertake all works in accordance with the safeguards identified in the relevant documents.

The SEMP and EWMS form a management guide that clearly identifies the required environmental management actions to be undertaken at each site.

Table 19: Project wide environmental safeguards

No.	Environmental safeguards	Responsibility	Timing	Reference
General Requirements				

No.	Environmental safeguards	Responsibility	Timing	Reference
MMG1	All licences, permits and approvals will be obtained as required by law and maintained as required throughout the establishment of the ancillary facilities.	EM	Prior to Site Establishment/ Site Establishment	CoA A1
MMG2	Ancillary facilities would be established in accordance with this SEMP.	EM, CM	Site Establishment	CoA C22
MMG3	Training will be provided to all project personnel, including relevant sub-contractors with a focus on: ▪ Ancillary facility management ▪ Air quality control ▪ Noise and vibration ▪ Flora and Fauna ▪ Non-Aboriginal and Aboriginal heritage The project will meet these requirements through inductions, toolboxes and targeted training.	EA/SS	Prior to Site Establishment/ Site Establishment	G36, G38 Section 7.5
MMG4	All complaints, including those related to property damage, are managed (including recording and response) in accordance with the Construction Complaints Management System and the Community Communication Strategy. The following are available for community enquires and complaints: ▪ A toll-free 24-hour telephone number ▪ A postal address ▪ An email address ▪ A mediation system for complaints unable to be resolved ▪ A mechanism for community members to make enquiries in common community languages of the area. The telephone number, postal and email addresses, as well as relevant project documents, are provided on distributed project documentation (e.g. newsletters or notification letters) and is available on the WestConnex website: www.westconnex.com.au. Community complaints will be recorded and actioned in accordance with the Construction Complaints Management System.	CRM	Prior to Site Establishment/ Site Establishment	CoA B8, B9, REMM TT09, G36
MMG5	The project will be designed and constructed with the objective of minimising impacts to, and interference with, third party property and infrastructure.	CM/EM	Site Establishment	CoA E106 REMM TT05, TT06
MMG6	A weekly environmental inspection checklist will be completed and will record ancillary facility management related issues.	EM	Site Establishment	Good practice
Traffic and Transport				

No.	Environmental safeguards	Responsibility	Timing	Reference
MMTT1	Provide safe routes and minimise impacts for pedestrians and cyclists during site establishment works.	All	Site Establishment	CoA E57, REMM TT12
MMTT2	Limit vehicle movements to designated entries and exits and haulage routes. Site exits will be fitted with hardstand material or other appropriate measures to limit the amount of material transported off-site (where required).	CM/SS	Site Establishment	REMM TT05
MMTT3	Minimise construction vehicle parking on public roads by parking on site where practicable.	CM/SS	Site Establishment	CoA E52
MMTT4	The queuing and idling of construction vehicles in residential streets will be minimised through on site parking and queuing arrangements	CM/SS	Site Establishment	CoA E52
MMTT5	New/modified local road, parking, pedestrian and cycle infrastructure shall be designed to meet relevant design, engineering and safety guidelines.	CM	Prior to Site Establishment/ Site Establishment	CoA E55, TT06
MMTT6	A Traffic Control Plan (TCP) should be developed and implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network.	TM/PE/CM	Prior to Site Establishment/ Site Establishment	RMS Traffic Control at Worksites Manual
MMTT7	Road dilapidation reports to be prepared for potentially impacted road infrastructure. Mechanisms to repair damage to the road networks caused by the project will be identified.	TM/PE/CM	Prior to Site Establishment/ Site Establishment	REMM TT18, CoAE61
MMTT8	A Construction Parking and Access Strategy must be prepared and implemented to identify and mitigate impacts resulting from on- and off-street parking changes. The Construction Parking and Access Strategy must be submitted to the Secretary at least one (1) month prior to the commencement of any works that impact parking.	TM/EM/CM	Prior to Site Establishment/ Site Establishment	CoA E54
MMTT9	Drivers will be advised of designated vehicle routes, parking locations, acceptable delivery hours specific to the site and other relevant practices (i.e. minimising the use of engine brakes, no compression brakes, and no extended periods of engine idling).	SS/PE/EA	Prior to Site Establishment/ Site Establishment	REMM TT10
MMTT10	Construction-related transport movements will be scheduled to avoid peak traffic periods and minimise project related congestion, where possible.	CM, PE, SS Traffic Manager	Site Establishment	REMM TT10
Air Quality				
MMAQ1	Where reasonable and feasible, appropriate control methods will be implemented to minimise dust emissions from the project site especially on high wind days.	EA/SS	Site Establishment	CoA E1, REMM AQ4, AQ5, and AQ7
MMAQ2	Construction activities will be modified, reduced or controlled during high or unfavourable wind conditions if they have a potential to increase the generation or emission of dust.	EA/SS	Site Establishment	REMM AQ4, AQ13

No.	Environmental safeguards	Responsibility	Timing	Reference
MMAQ3	Regular site inspections will be conducted to monitor for potential dust issues. Required actions and ongoing issues from the site inspection will be recorded and actioned appropriately within agreed timeframes by relevant project personnel.	EM/EA/SS	Site Establishment	AQ3
MMAQ4	Control measures including water carts, sprinklers, sprays/suppressants, dust screens or the application of geo-binding agents will be utilised where applicable to control dust and/or odour emissions. The frequency of use will be modified to accommodate prevailing conditions.	EA/SS	Site Establishment	REMM AQ7, AQ13, AQ14 and AQ19
MMAQ5	Access roads within project sites will be maintained and managed to reduce dust generation	EA/SS	Site Establishment	REMM AQ6
MMAQ6	Ensure that stockpiles are of materials with the potential to result in dust emissions are adequately protected and managed to reduce potential dust generation and cross contamination	EA/SS	Site Establishment	REMM AQ21, CM05, AQ22, RW11
MMAQ7	The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides outside of the defined treatment area.	EM/SS	Site Establishment	G36
MMAQ8	Dust suppression techniques will be used when cutting materials such as concrete or bricks will be undertaken in a manner that minimises the generation of dust, such as the wetting of the cutting face.	SS	Site Establishment	REMM AQ13
MMAQ9	A wheel washing system or rumble grid will be installed at all the site exits	EM/CM	Site Establishment	REMM AQ25
MMAQ10	All sealed surfaces within sites and site accesses will be managed to reduce dust generation and sediment tracking onto roads	EM/CM	Establishment	REMM AQ24
MMAQ11	Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times.	SS, PE	Site Establishment	REMM AQ8, AQ23
MMAQ12	All construction vehicles and plant will be inspected regularly and maintained to ensure that they comply with relevant emission standards.	SS, PE	Site Establishment	REMM AQ9
MMAQ13	Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions.	SS, PE	Site Establishment	REMM AQ10
MMAQ14	The use of mains electricity will be favoured over diesel or petrol-powered generators where practicable to reduce site emissions.	CM	Site Establishment	REMM AQ11
MMAQ15	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	EA, EM, SS	Site Establishment	REMM AQ12
MMAQ16	All loaded unsuitable fill material 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.	SS, PE	Site Establishment	REMM AQ15
MMAQ17	Demolition activities will be planned and carried out to minimise the potential for dust generation.	SS, PE	Prior to Site Establishment / Site Establishment	REMM AQ16

No.	Environmental safeguards	Responsibility	Timing	Reference
MMAQ18	Adequate dust suppression will be applied during all demolition works.	CM, SS, PE	Site Establishment	REMM AQ17
MMAQ19	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.	CM, SS, PE, Safety Manager	Site Establishment	REMM AQ18
MMAQ20	Exposed soils will be temporarily stabilised during weather conditions conducive to dust generation and prior to extended periods of inactivity to prevent dust generation.	CM, SS, PE	Site Establishment	REMM AQ20
Noise and Vibration				
MMNV1	Reasonable and feasible noise mitigation measures (such as those listed within this table and those within the CNVIS) will be implemented with the aim of achieving the noise and vibration objectives specified in the CoA and the relevant conditions of the project's EPL.	CM/EM/SS	Prior to Site Establishment/ Site Establishment	CoA E81
MMNV2	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	SS/EA	Site Establishment	REMM NV6 CoA C22(e) CoA E84 Section 6.13
MMNV3	The establishment of approved ancillary facilities will be undertaken during the following standard construction hours: ▪ 7am to 6pm Mondays to Fridays, inclusive ▪ 8am to 6pm Saturdays ▪ At no time on Sundays or public holidays. Unless otherwise assessed and approved in accordance with the Project Out of Hours Works Protocol, EPL or CoA E73.	EM/CM	Site Establishment	CoA E68, E73 and G36
MMNV4	Site access and egress points will be located as far as feasible and reasonable from noise sensitive receivers.	CM/EM	Site Establishment	Best practice
MMNV5	Neighbours, potentially noise affected sensitive receivers, local councils, EPA and key stakeholders will be notified of planned site establishment works at least five days and no longer than 10 days prior to commencement. Information provided will include: ▪ The hours establishment works will be carried out ▪ The types of activities to be undertaken ▪ The location of activities. Details of the community information line and how to make an enquiry and/or complaint will be included in the notifications.	EM/CRM/CM	Site Establishment	G36
MMNV6	Community updates will be provided throughout the site establishment works, in accordance with the Community Communication Strategy.	EM/CRM/CM	Site Establishment	G36

No.	Environmental safeguards	Responsibility	Timing	Reference
MMNV7	Non-tonal movement alarms will be used in place of tonal reversing alarms.	CM/SS	Site Establishment	Best practice
MMNV8	Deliveries and removal of materials and wastes associated with site establishment works will be planned to minimise parking or queuing on public roads and particularly in local residential streets unless required by a road authority for community and motorist safety.	SS/PE/EA	Site Establishment	CoA E52
MMNV9	The safe working distances for vibration intensive plant will be complied with as specified by CNVIS where feasible and reasonable. This will include the consideration of smaller equipment when working in close proximity to existing heritage items and other structures. Where the safe working distance cannot be achieved vibration monitoring will be carried out to determine the actual vibration levels and the vibration guidelines will be followed. Safe working distances will be maintained for all listed heritage items during site establishment.	PE/SS	Site Establishment	G36
MMNV10	Where emergency works (those required to avoid injury or the loss of life, to avoid damage to property or to prevent environmental harm) are required to be undertaken outside of standard construction hours, the Project Acoustic Advisor, Environmental Representative and the EPA will be informed of the need for the works. In addition, noise and/or vibration affected receivers will also be informed of the likely impact and duration of the works where practicable.	EM/CM	Site Establishment	CoA E74
MMNV11	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.	EM/CM/PE/SS	Site Establishment	REMM NV10
MMNV12	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 Noise and Vibration Management Sub-plan or Site Establishment Management Plan and are to be implemented for the duration of the works. Any noise barriers with acoustic matting recommended by the CNVIS will be subject to a monthly inspection to ensure they remain effective. 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.	EM	Prior to Site Establishment/ Site Establishment	CoA E79, E67 REMM NV3
MMNV13	Highly noise intensive works that result in an exceedance of the applicable noise management levels at the same receiver must only be undertaken except as permitted by an EPL in accordance with CoA E72: ▪ 8am to 6pm Monday to Friday; ▪ 8am to 1pm Saturday; and	EM/CRM/CM	Site Establishment	CoA E72

No.	Environmental safeguards	Responsibility	Timing	Reference
	▪ In continuous blocks not exceeding three (3) hours each with a minimum respite from those activities and works of not less than (1) hour between each block			
MMNV14	Plant and equipment will be chosen that meets sound power limits or be fitted with additional noise control measures such as mufflers, air intake and discharge silencers or sound absorbent industrial-grade foams where reasonable and feasible.	EM/CRM/CM	Prior to Site Establishment/ Site Establishment	CNVIS
MMNV15	Any equipment not in use for extended periods shall be switched off. For example, heavy vehicles should switch engines off when not in use.	EM/CRM/CM	Site Establishment	CNVIS
MMNV16	Only use equipment necessary during each stage of the work and avoid simultaneous operation of noisy plant and equipment within discernible range of a sensitive receiver where practicable.	EM/CRM/CM	Site Establishment	CNVIS
MMNV17	Respite periods are to be confirmed following receipt of the EPL and consultation with the surrounding sensitive receivers. In the absence of the EPL, plant and equipment generating noise levels above 75 dB(A) at the nearest residential receiver have been considered as high noise impact. **Minimum distances to residential receivers have been determined for these activities to quantify where construction activity will need to adopt respite periods.**	EM/CRM/CM	Site Establishment	CNVIS
Land Use and Property				
MML1	The land use survey will identify sensitive properties prior to the commencement of works.	EM/CM	Prior to Site Establishment	CoA E66
MML2	A preconstruction land condition assessment report will be completed in accordance with RMS specification G36 prior to taking possession of the sites.	EM/CM	Prior to Site Establishment	G36
MML3	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	EM/CM/PE/SS	Site Establishment	REMM PL2, TT14
MML4	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	EM/CM/PE/SS	Prior to Site Establishment	REMM PL10, CoA E105
MML5	In the event that damage occurs to a property as a result 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 for resolution	EM/CM/PE/SS	Site Establishment	REMM PL11, PL13

No.	Environmental safeguards	Responsibility	Timing	Reference
MML6	The Utilities Management Strategy will be implemented	EM/CM/PE/SS	Prior to Site Establishment/ Site Establishment	REMM PL14
Social and economic				
MMSE1	A 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	CRM/EM	Prior to Site Establishment/ Site Establishment	REMM SE2, CoA B6
Urban design and visual amenity				
MMU1	Site establishment works will be conducted to minimise visual impacts where reasonable and feasible on nearby sensitive receivers. Where there is no noise wall or hoarding in place, boundary fencing must be installed to minimise visual, noise and / or air quality impacts on adjacent sensitive receivers. Other measures may include retention of existing vegetation or treatment of key temporary structures. Measures will be implemented as early as possible.	EM/EA	Prior to Site Establishment/ Site Establishment	CoA C25, C26, REMM LV1 and LV10
MMU2	Minimise light spill from the project into adjacent visually sensitive properties and areas by directing construction lighting into the construction areas and ensuring the site is not over-lit. This includes the sensitive placement and specification of lighting to minimise any potential increase in light pollution. Where necessary, construction lighting will comply with the requirements of the Civil Aviation Safety Authority (CASA) and Sydney Airport at all times. Regular site inspections will be undertaken to inspect light spill from walkways, offices and workshops and its ability to impact on local residential properties. Where light spill which has the potential to impact on residential properties is identified, the following options will be investigated: o Installing motion sensors, o Installing timers on certain lights, o Switching from 'cool lighting' to 'warm lighting', o Angling lights away from residential properties, and o Covering the top of lights to direct the illumination down.	CM/EM	Prior to Site Establishment/ Site Establishment	CoA E116, E122, REMM LV2, HR6

No.	Environmental safeguards	Responsibility	Timing	Reference
	The installation of blinds and the frosting of the windows facing into residential properties will be undertaken during the site establishment phase. This will assist with softening any lighting that needs to remain on during the night (e.g. for night shift crews). The performance of each site will be monitored by undertaking light spill inspections with each noise monitoring session undertaken in the vicinity.			
MMU3	Graffiti on site hoarding and construction litter around site perimeters will be removed throughout site establishment.	CM/EM	Site Establishment	REMM LV3
MMU4	Where noise walls or hoarding is not required, sites will be screened, with shade cloth (or similar material) (where necessary) as early as possible to minimise visual impacts. Screening must include CSSI name and number.	CM/EM	Site Establishment	CoA A45, C25, C26, REMM LV5
Soil and Water				
MMSW1	Soil and water management measures consistent with Managing Urban Stormwater – Soils and Construction Vols 1 and 2, 4th Edition (Landcom, 2004), including those listed in this table will be designed, installed and managed during the construction of the project to minimise soil erosion and the discharge of sediment and other pollutants to land and/or waters.	SS/EA	Site Establishment	CoA E180, FD13, FD14
MMSW2	Prevent soil erosion through minimising ground disturbance and sealing ground surfaces as soon as is practicable.	SS/EA	Prior to Site Establishment/ Site Establishment	REMM SW05, SW06and SW07
MMSW3	An Erosion and Sediment Control Plan (ESCP) will be developed and implemented for all sites. The ESCPs will be updated where changes to site use, storage and conditions change.	SS/EA	Prior to Site Establishment/ Site Establishment	REMM SW03
MMSW4	A soil conservation specialist will be engaged if relevant to provide advice regarding erosion and sediment control and review the initial ESCPs.	SS/EA	Prior to Site Establishment/ Site Establishment	REMM SW04
MMSW5	Environmental Work Method Statements (EWMS) will be prepared for high risk activities.	SS/EA	Prior to Site Establishment/ Site Establishment	G36
MMSW6	During construction planning, the project will seek to minimise the use of potable water and to identify any potential alternate water sources, including recycled water.	SS/EA	Prior to Site Establishment/ Site Establishment	CoA E198
MMSW7	All activities taking place in, on or under waterfront land, as defined in the Water Management Act 2000 will be conducted in accordance with the DoI Water's Guidelines for Controlled Activities.	EM	Prior to Site Establishment/ Site Establishment	Water Management Act 2000

No.	Environmental safeguards	Responsibility	Timing	Reference
MMSW8	ESCPs are to dictate the specific controls to be used in and around works on watercourses or on live stormwater lines. Typical measures might include but are not limited to: ▪ Timing in-stream works for lower-risk periods wherever practicable; ▪ Monitoring weather forecasts and taking appropriate action prior to forecast rainfall; ▪ Minimising the extent of work and the amount of time of disturbance where possible; ▪ Isolating work areas from natural flows where possible using diversion structures, pumps, temporary dams or similar; ▪ Use of temporary ground covers in areas of concentrated flow to minimise erosion of exposed soils during rainfall; and Stabilising flow paths as quickly as possible after works are completed.	EM	Prior to Site Establishment/ Site Establishment	G38
MMSW9	Watercourses and waterfront land will be left undisturbed as much as possible. Where watercourses and waterfront land are to be disturbed, EWMS will be prepared before construction commences.	EM	Prior to Site Establishment/ Site Establishment	G38
MMSW10	Prior to forecast rainfall events of more than 10mm in 24 hours (>50% chance), end of day controls will be implemented throughout the worksite to help reduce erosion and control sediment. These are to be detailed on ESCPs for each area.	EM	Prior to Site Establishment/ Site Establishment	G38
Contamination				
MMC1	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). 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 and implemented.	EM/CM	Prior to Site Establishment/ Site Establishment	CoA E181, E182, E183, REMM CM01
MMC2	An Unexpected Contaminated Land and Asbestos Finds Procedure will be implemented to manage any potentially contaminated materials that may be encountered during site establishment works.	EM/CM	Prior to Site Establishment/ Site Establishment	CoA E184, E185 REMM CM02, CM05
MMC3	A hazardous materials assessment will be carried out prior to and during the demolition of buildings.	EM/CM	Prior to Site Establishment/ Site Establishment	REMM CM03
Flooding and drainage				
MMF1	A Flood Mitigation Strategy will be prepared using hydrologic and hydraulic assessments. Flooding and drainage will be managed in accordance with this strategy.	EM/CM	Prior to Site Establishment/ Site Establishment	REMM FD01, FD02
MMF2	Flood management and mitigation measures to be implemented at the site as early as possible:	EM/CM	Prior to Site Establishment/ Site Establishment	REMM FD09

No.	Environmental safeguards	Responsibility	Timing	Reference
	▪ The Rozelle civil and tunnel site (C5) will convey flood water from the Lilyfield Rail Depot at the western end of the site to the existing low point (via a clean water pipe) as early as possible ▪ Raise site levels above the PMF flood level. The indicative site layout has taken into consideration flood risk and the requirements for the conveyance of flood water through the site. Construction of the permanent conveyance system will be as early as possible during construction to enable flood risk to the project to be managed and to mitigate impacts on surrounding properties. Temporary drainage measures will be in place whilst installing the permanent arrangement.			
Biodiversity				
MMB1	Any works required outside the construction footprint will be referred to the Planning and Environment Manager for advice on further assessment and approval requirements.	CM/EM	Prior to Site Establishment/ Site Establishment	Best practice
MMB2	In the event that a newly discovered threatened species or Endangered Ecological Community (EEC) are unexpectedly encountered during site establishment works, the JHCPB Threatened Species Unexpected Finds Procedure will be followed.	EM/PE/SS	Prior to Site Establishment/ Site Establishment	G36
MMB3	Weeds management during the site establishment works will be in accordance with the project weed management protocols, which will be part of the Construction Flora and Fauna Management Plan. Prior to commencement of clearing, weeds located within the approved footprint of the site establishment works will be 'tagged' to ensure weed material is kept separated from mulch during the clearing process, potentially transferring weeds throughout the site and offsite. Weed material will be disposed of at an appropriately licensed waste receiving facility or managed in accordance with *Biosecurity Act 2015* or local council requirements.	CM/PE/SS	Prior to Site Establishment/ Site Establishment	REMM B1, G40
MMB4	Works will be programmed to minimise the extent and duration of disturbance to vegetation where possible. This will include leaving clearing (unless undertaken manually or by other means that cause minimal disturbance (i.e. felling trees and leaving the stump in situ) and initial earthworks in intermittent and permanent watercourses until subsequent works are about to commence.	PE/SS/EM	Prior to Site Establishment/ Site Establishment	CoA E174, REMM LV3, B6
MMB5	Areas disturbed during the site establishment works will, where reasonable and feasible, be progressively stabilised as a temporary environmental management measure at the earliest opportunity. Where practicable, local indigenous plant species will be utilised during temporary re-vegetation to maintain and enhance habitat, particularly in key habitat areas.	PE/SS	Prior to Site Establishment/ Site Establishment	Best practice

No.	Environmental safeguards	Responsibility	Timing	Reference
MMB6	Trees requiring protection will be protected 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.	EM/EA/SS	Prior to Site Establishment/ Site Establishment	REMM B7
Non-Aboriginal and Aboriginal heritage				
MMH1	If any unexpected heritage items (including human remains) are encountered, works potentially affecting the find will cease immediately and the RMS Standard Management Procedure – Unexpected Heritage Items March 2015a) will be followed.	PE/SS	Prior to Site Establishment/ Site Establishment	REMM NAH08, AH1 CoA E155
MMH2	No heritage or Aboriginal items will be destroyed, modified or otherwise physically affected outside the CSSI boundary.	PE/SS	Site Establishment	CoA E154, E173
MMH3	Do 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.	EM/CM	Prior to Site Establishment/ Site Establishment	CoA E158
MMH4	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	EM/CM	Prior to Site Establishment/ Site Establishment	REMM NAH12, CoA E159
MMH5	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.	EM/CM	Prior to Site Establishment/ Site Establishment	REMM NAH16
MMH6	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 Unexpected Archaeological Finds (Roads and Maritime 2015a). The procedure will detail requirements regarding notification of relevant agencies and the NSW Police and will be implemented for the duration of construction.	EM, SS	Site Establishment	REMM NAH08, CoA E157

No.	Environmental safeguards	Responsibility	Timing	Reference
MMH7	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 ▪ Victoria Road overbridge ▪ Each house at 260–266 Victoria Road ▪ Each house at 248–250 Victoria 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 will include the identification of appropriate stakeholders to receive copies of the documentation.	EM	Prior to Site Establishment	REMM NAH03
Resource use and waste minimisation				
MMRW1	Installation of segregated bins for recyclable materials and provision of this material to be recycled and reused where possible.	EM/CM	Prior to Site Establishment/ Site Establishment	REMM RW2, RW4, RW5, RW9 and RW12
MMRW2	All waste generated during site establishment must be classified in accordance with the Waste Classification Guidelines Part 1: Classifying waste (EPA 2014).	EM/CM	Prior to Site Establishment / Site Establishment	REMM RW2
MMRW3	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.	EM/CM	Prior to Site Establishment/ Site Establishment	CoA E204
MMRW4	All waste materials removed from the sites must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	EM/CM	Prior to Site Establishment/ Site Establishment	REMM RW5
MMRW5	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	CM, PE, SS	Site Establishment	REMM RW4 CoA E202

No.	Environmental safeguards	Responsibility	Timing	Reference
	▪ 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.			
MMRW6	Unless permitted by a license or waste exemption, waste generated outside the site will not be received at the site for storage, treatment, processing, reprocessing, or disposal on the site.	CM/EM	Prior to Site Establishment/ Site Establishment	CoA E203
Hazard and risk				
MMHR1	All fuels, chemicals and hazardous liquids will be stored within bunded areas in accordance with Australian Standards and EPA Guidelines.	EA/SS	Prior to Site Establishment/ Site Establishment	REMM HR1, HR2, HR3 and HR4
MMHR2	Emergency spill kits will be kept on-site at all times. Staff will be made aware of the location of the spill kits.	EA/SS	Prior to Site Establishment/ Site Establishment	REMM HR3
MMHR3	Equipment storage, stockpiling of resources and vehicle access will be placed in designated areas, where practicable.	EA/SS	Prior to Site Establishment/ Site Establishment	Best Practice
Cumulative Impacts				
MMCI1	Regular communication will be carried out with other WestConnex projects in close proximity to ensure measures are in place for cumulative impacts.	EM	Site Establishment	REMM AQ2, CoA E67

Annexure C Indicative Site Layouts

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DRAWING FILE LOCATION / NAME	DESIGN LOT CODE	DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING
C:\hg_partans jenkins\dms27497R C TEK-SKT-GN00-0121.dwg	XXXXXXX	FILE NAME FILE NAME

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
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	-	-	-		-
	E	21/02/20	GENERAL UPDATE		-
	D	14/02/20	GENERAL UPDATE		-
	C	11/02/20	GENERAL UPDATE		-
	B	07/02/20	GENERAL UPDATE		-
	A	31/01/20	FIRST ISSUE		-

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM: MGA ZONE 56 | HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: WestConnex Rozelle Interchange, JOHN HOLLAND, CPB

PLOT DATE: 21-02-20 | PLOT BY

TITLE	NAME	DATE
DRAWN		11.02.20
DRG CHECK		-
DESIGN		-
DESIGN CHECK	-	-
DESIGN MNGR	-	-
PROJECT MNGR	-	-

CLIENT: NSW Government Transport Roads & Maritime Services

PREPARED FOR

INNER WEST COUNCIL
M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD
ROZELLE INTERCHANGE
METHODS ENGINEERING & TEMPORARY WORKS
SITE ACCESS GENERAL ARRANGEMENT
SITE WIDE 1 OF 4

A3

JHCPB DOCUMENT NAME: RIC-TEK-SKT-GN00-0121 | PART

ISSUE STATUS	EDMS No	SHEET No	ISSUE
NOT FOR CONSTRUCTION	-	TEK-0121	E

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EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
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	E	21/02/20	GENERAL UPDATE		-
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SCALES ON A3 SIZE DRAWING: 1:10 FULL SIZE A3

CO-ORDINATE SYSTEM: MGA ZONE 56 HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: WestConnex Rozelle Interchange; John Holland; CPB

TITLE	NAME	DATE
DRAWN		11 02 20
DRG CHECK		-
DESIGN		-
DESIGN CHECK	-	-
DESIGN MNGR	-	-
PROJECT MNGR	-	-

CLIENT: NSW Government Transport Roads & Maritime Services

PREPARED FOR

INNER WEST COUNCIL
M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD
ROZELLE INTERCHANGE
METHODS ENGINEERING & TEMPORARY WORKS
SITE ACCESS GENERAL ARRANGEMENT
SITE WIDE 1 OF 4

A3

JHCPB DOCUMENT NAME: RIC-TEK-SKT-GN00-0121 PART

ISSUE STATUS	EDMS No	SHEET No	ISSUE
NOT FOR CONSTRUCTION	-	TEK-0121	E

PLAN VIEW

SCALE: 1:1000 (A3)

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REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
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E	21/02/20	GENERAL UPDATE		-
D	14/02/20	GENERAL UPDATE		-
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A	31/01/20	FIRST ISSUE		-

EXTERNAL REFERENCE FILES

SCALES ON A3 SIZE DRAWING: 1:10 FULL SIZE A3

CO-ORDINATE SYSTEM: MGA ZONE 56 — HEIGHT DATUM: AHD

DRAWINGS / DESIGN PREPARED BY: WestConnex Rozelle Interchange — JOHN HOLLAND CPB

TITLE	NAME	DATE
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DRG CHECK		-
DESIGN		-
DESIGN CHECK	-	-
DESIGN MNGR	-	-
PROJECT MNGR	-	-

CLIENT: NSW Government — Transport Roads & Maritime Services

PREPARED FOR

INNER WEST COUNCIL
M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD
ROZELLE INTERCHANGE
METHODS ENGINEERING & TEMPORARY WORKS
SITE ACCESS GENERAL ARRANGEMENT
SITE WIDE 3 OF 4

A3

JHCPB DOCUMENT NAME			PART
RIC-TEK-SKT-GN00-0121			
ISSUE STATUS	EDMS No	SHEET No	ISSUE
NOT FOR CONSTRUCTION	-	TEK-0121	E

PLAN VIEW

SCALE: 1:1000 (A3)

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DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING	FILE NAME FILE NAME
PLOT DATE	21-02-20
PLOT BY	
CLIENT	NSW Government Transport Roads & Maritime Services
PREPARED FOR	
SCALES ON A3 SIZE DRAWING	1:10 FULL SIZE A3
CO-ORDINATE SYSTEM	MGA ZONE 56
HEIGHT DATUM	AHD
DRAWINGS / DESIGN PREPARED BY	WestConnex Rozelle Interchange; John Holland; CPB Contractors

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No	APPROVAL
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PROJECT MNGR	-	-

INNER WEST COUNCIL
M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD
ROZELLE INTERCHANGE
METHODS ENGINEERING & TEMPORARY WORKS
SITE ACCESS GENERAL ARRANGEMENT
SITE WIDE 4 OF 4

A3

JHCPB DOCUMENT NAME	PART
RIC-TEK-SKT-GN00-0121	

ISSUE STATUS	EDMS No	SHEET No	ISSUE
NOT FOR CONSTRUCTION	-	TEK-0121	E

Legend

- Project Boundary
- Heavy and light vehicle movements
- Construction site facilities

57.3 0 28.66 57.3 Meters

1: 1,128 @A4

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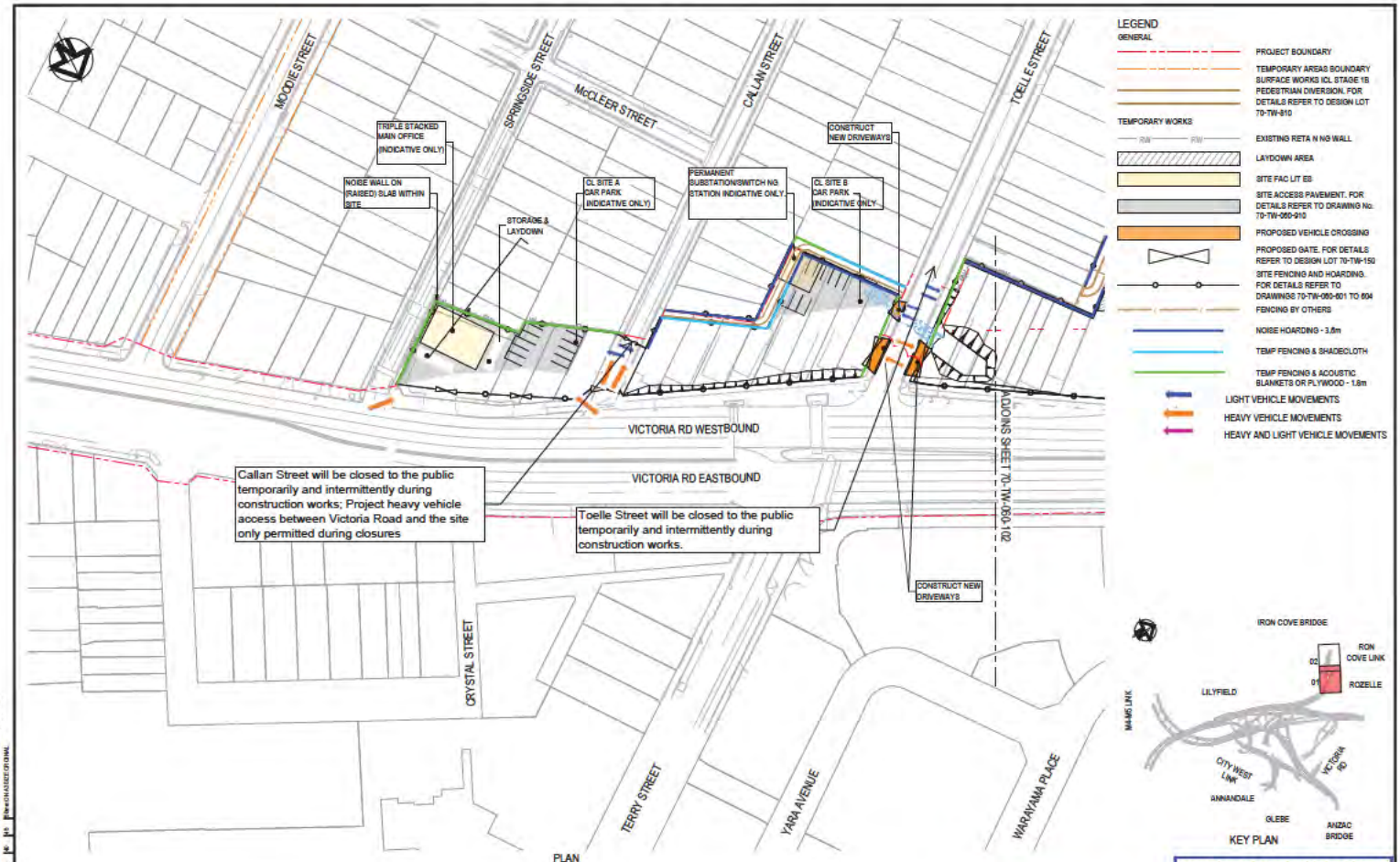
WestConnex
Rozelle Interchange
JOHN HOLLAND
CPB CONTRACTORS



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DESIGN PHASE: IFC
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DRG CHECK	F. BATHAN	09-07-2019
DESIGN	C. STANFORD	09-07-2019
DESIGN CHECK	R. VO	09-07-2019
DESIGN MNGR	C. LAWTON	09-07-2019
PROJECT MNGR	M. BAO	09-07-2019

WestConnex Rozelle Interchange
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WESTCONNEX M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD — A3

ROZELLE INTERCHANGE & WESTERN HARBOUR TUNNEL
TEMPORARY WORKS
SITE ESTABLISHMENT - IRON COVE LINK
WORK USE GENERAL ARRANGEMENT PLAN
SHEET 1

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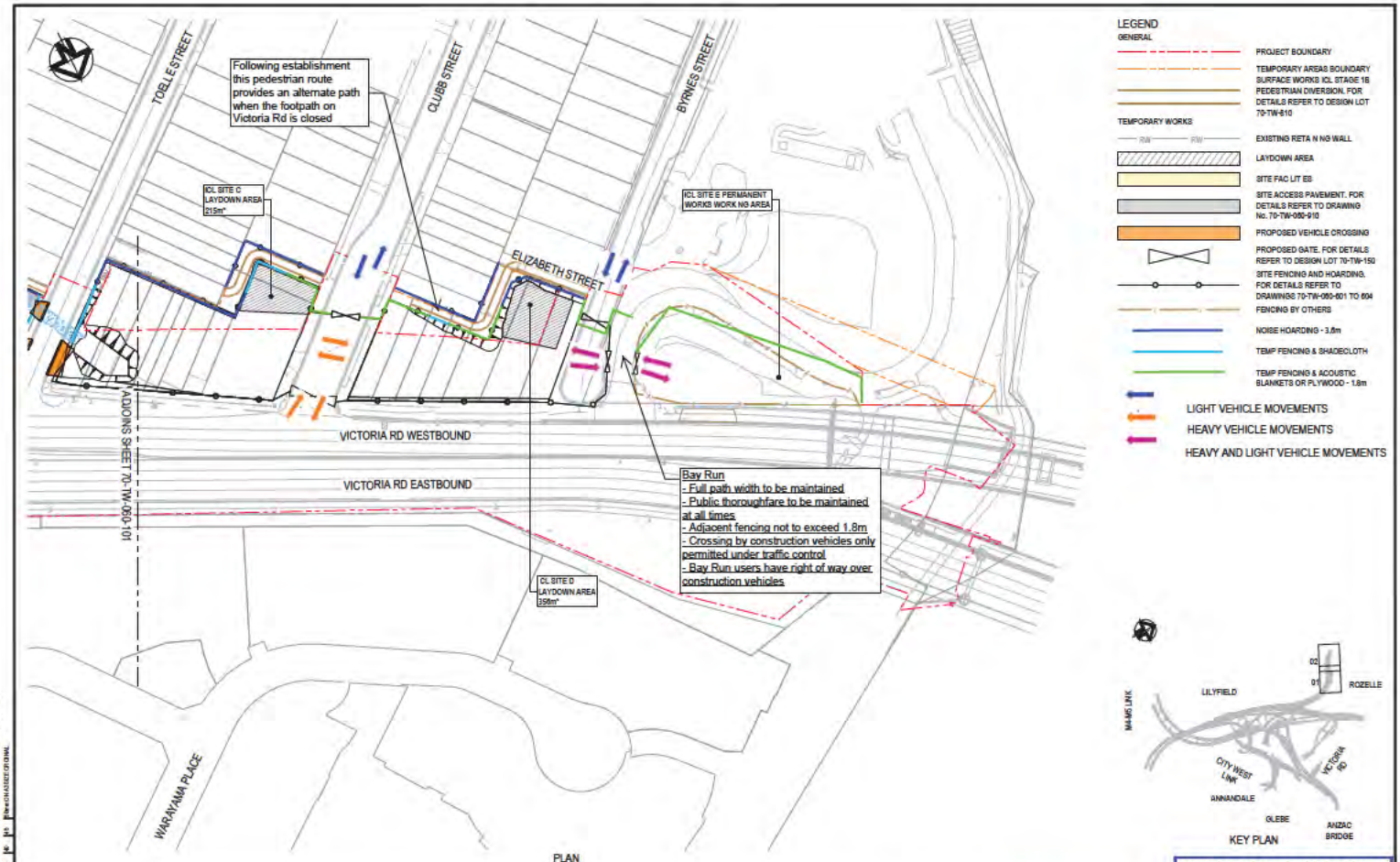

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CLIENT: NSW Government — Transport Roads & Maritime Services

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DESIGN CHECK	R. VO	09-07-2019
DESIGN MNGR	C. LAWTON	09-07-2019
PROJECT MNGR	M. BAO	09-07-2019

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WESTCONNEX M4 / M5 LINK CITY WEST LINK & VICTORIA ROAD — A3

ROZELLE INTERCHANGE & WESTERN HARBOUR TUNNEL
TEMPORARY WORKS
SITE ESTABLISHMENT - IRON COVE LINK
WORK USE GENERAL ARRANGEMENT PLAN
SHEET 2

PACKAGE NO.	DOCUMENT NUMBER	REV
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SPIR boundary
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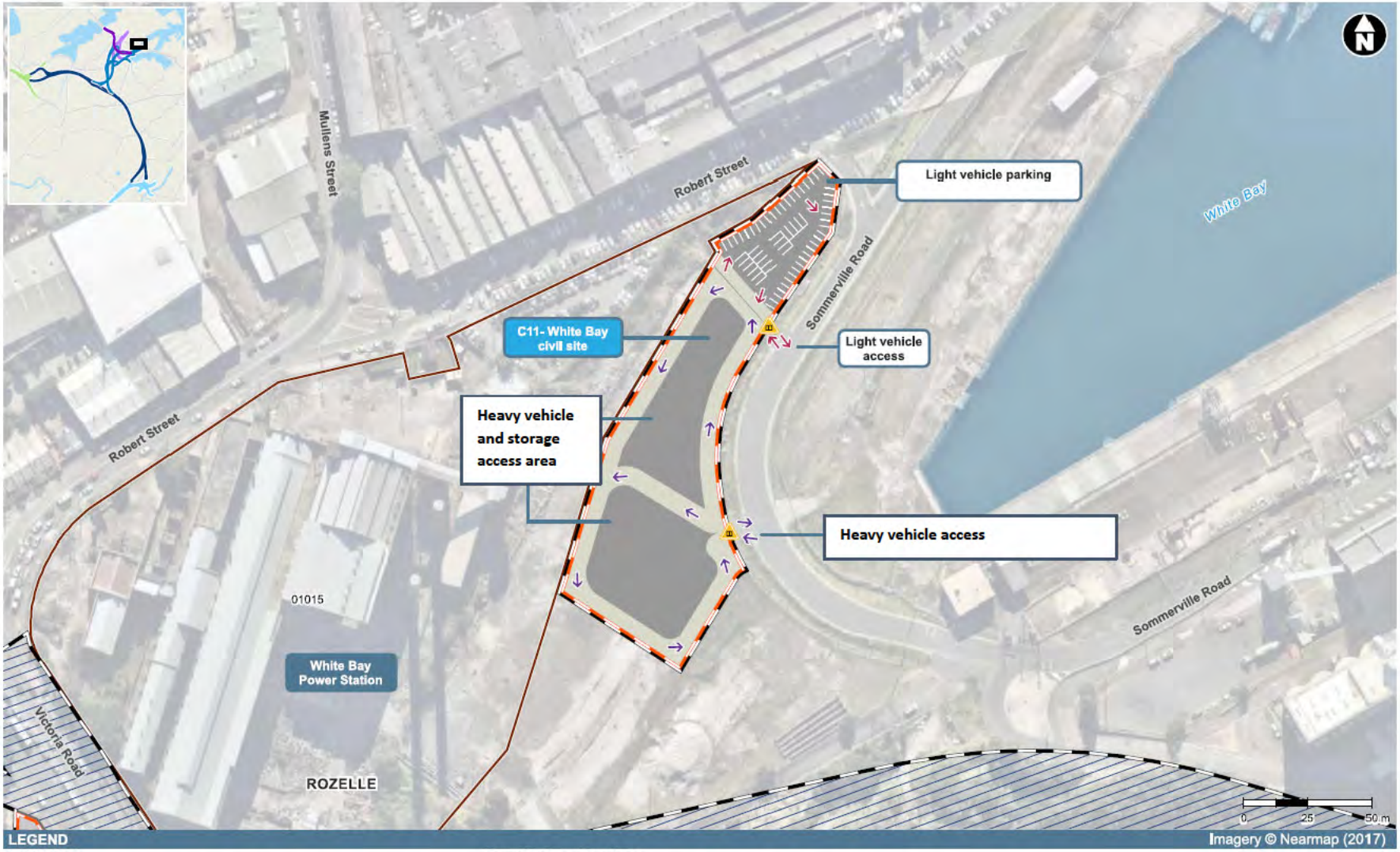
Toilet block
Victoria Road
Terry Street
Victoria Road
Callan Street
Springside Street
McIver Street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C11- White Bay civil site
Light vehicle access
Heavy vehicle and storage access area
Heavy vehicle access
White Bay
Mullens Street
Robert Street
Sommerville Road
Victoria Road
01015
White Bay Power Station
ROZELLE
0
25
50 m
LEGEND
Imagery © Nearmap (2017)
M4-M5 Link
Boundaries
Project footprint
Ancillary facility
Surface works
Vehicle movements
Light vehicle
Heavy vehicle
Access and egress
Site gate
State Heritage Register
White Bay Power Station heritage curtilage

NOT FOR CONSTRUCTION

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CLIENT: NSW GOVERNMENT Transport Roads & Maritime Services

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DESIGN CHECK	-	-
DESIGN MNGR	-	-
PROJECT MNGR	-	-

WestConnex Rozelle Interchange
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WESTCONNEX M4 / M5 LINK, CITY WEST LINK & VICTORIA ROAD
INNER WEST COUNCIL
A1

ROZELLE INTERCHANGE
CWL CONSTRUCTION TEAM
FOR INFORMATION ONLY
PROPOSED LAYOUT AT WHITES BAY

PACKAGE No	JHC DOCUMENT NAME	REV
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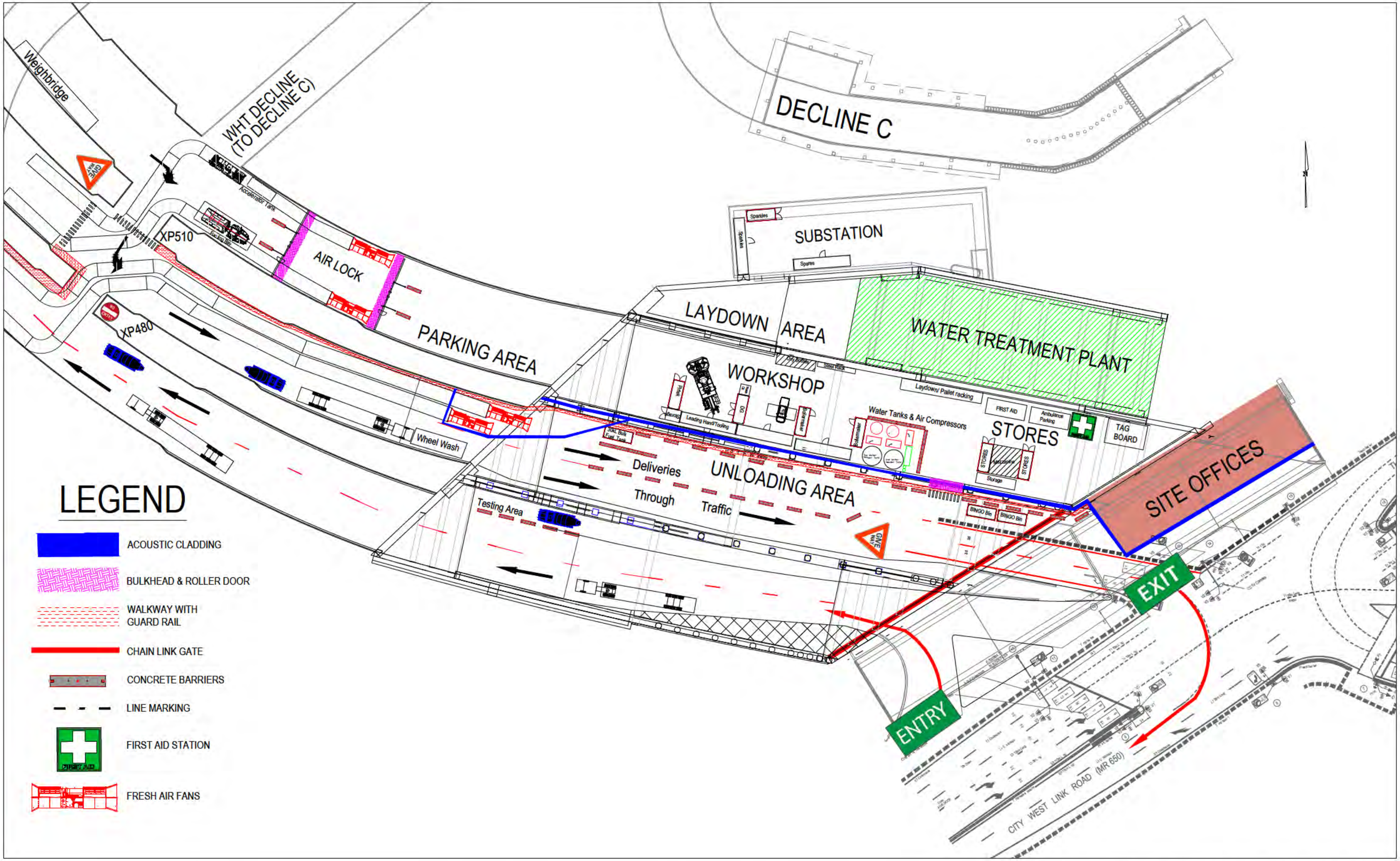

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PLOT BY: Joe Del Rio-W3B

CLIENT

EXTERNAL REFERENCE FILES	REV	DATE	AMENDMENT / REVISION DESCRIPTION	WVR No.	APPROVAL
XXXXX			FOR REVIEW		

SCALES ON A3 SIZE DRAWING

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CO-ORDINATE SYSTEM: MGA ZONE 56

HEIGHT DATUM: AHD

TITLE	NAME	DATE
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DRG CHECK	X	x
DESIGN	X	x
DESIGN CHECK	X	x
DESIGN MNGR	X	x
PROJECT MNGR	X	x

FDD

FINAL DESIGN DOCUMENTATION

A3

WESTERN HARBOUR TUNNEL - SOUTHERN

SITE LAYOUT Indicative- WHT C&C

RMS REGISTRATION No.

PART

ISSUE STATUS: SKETCH

EDMS No.

SHEET No.

ISSUE: A

Annexure D Sensitive Area Plans

Legend

- Project boundary
- EIS 'Areas of Interest' Boundary
- State Heritage Item
- SREP 26 Heritage Register - Item (DPE, 1997/09/23)
- S170 RTA Item (RMS, 2016/01/27)
- S170 RTA Item (RMS, 2016/01/27)

Heritage (LEP)

- Conservation Area - General
- Item - General

Potential Heritage Item

- Item

Sensitive receivers

- Residential
- Commercial
- Other sensitive
- Outdoor area
- High Retention Value Trees
- Areas of trees to retain
- Areas of trees to be removed

Sydney Metro Native Vegetation (OEH)

- Urban Native and Exotic Cover

Metres
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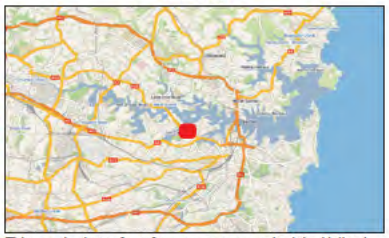

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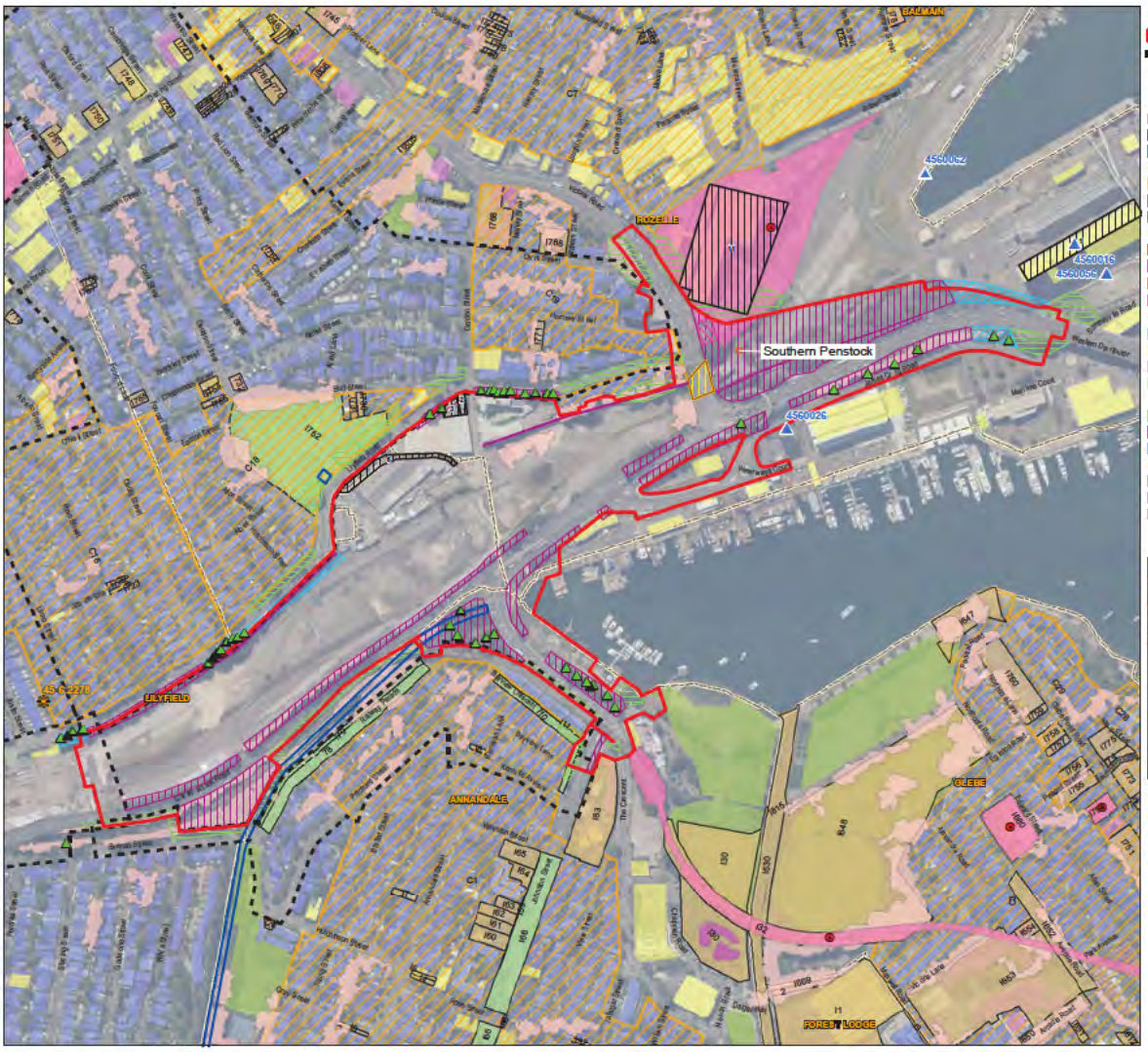

Legend

- Project boundary
- EIS 'Areas of Interest' Boundary
- Aboriginal Heritage S te (AHIMS)
- S170 Port Authority Item
- State Heritage Item - centroid
- State Heritage Item
- SREP 26 Heritage Register - Item (DPE, 1997/09/23)
- S170 Sydney Water (SW, 2016/06/30)

Heritage (LEP)

- Conservation Area - General
- Item - General
- Item - Landscape

Potential Heritage Item

- Item
- Sandstone cutting
- Southern Penstock
- Former White Bay Hotel s te foundations (plinth and archaeology)

Sensitive receivers

- Residential
- Commercial
- Other sensitive
- Outdoor area

- High Retention Value Trees
- Areas of trees to retain
- Areas of trees to be removed
- Areas of trees to investigate for retention

Sydney Metro Native Vegetation (OEH)

- Estuarine Mangrove Forest
- Estuarine Saltmarsh
- Urban Native and Exotic Cover

Metres: 0, 55, 110, 220, 330, 0

1:5,000 @ A3

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Rozelle Interchange
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Legend

- Project boundary
- EIS 'Areas of Interest' Boundary
- Aboriginal Heritage Site (AHIMS)
- State Heritage Item - centroid
- State Heritage Item
- SREP 26 Heritage Register - Item (DPE, 1997/09/23)
- S170 RailCorp Item (TfNSW, 2016/04/07)
- S170 Sydney Water (SW, 2016/06/30)

Heritage (LEP)
- Conservation Area - General
- Item - General
- Item - Landscape

Potential Heritage Item
- Item
- Sandstone cutting

Sensitive receivers
- Residential
- Commercial
- Other sensitive
- Outdoor area
- High Retention Value Trees
- Areas of trees to retain
- Areas of trees to be removed
- Areas of trees to investigate for retention

Sydney Metro Native Vegetation (OEH)
- Urban Native and Exotic Cover

Metres 0 55 110 220 330

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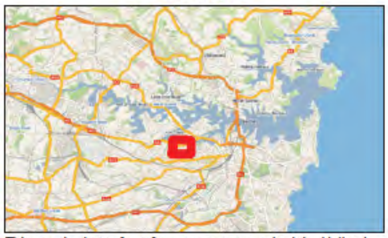

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Legend

- 🟥 Project boundary
- EIS 'Areas of Interest' Boundary
- ✱ Aboriginal Heritage Site (AHIMS)
- ● State Heritage Item - centroid
- State Heritage Item
- ▥ SREP 26 Heritage Register - Item (DPE, 1997/09/23)
- ● S170 RTA Item (RMS, 2016/01/27)
- 🟩 S170 RTA Item (RMS, 2016/01/27)

Heritage (LEP)

- ▨ Conservation Area - General
- Item - General
- Item - Archaeological
- Item - Landscape

Potential Heritage Item

- Item
- ▨ Former White Bay Hotel site foundations (plinth and archaeology)

Sensitive receivers

- Residential
- Commercial
- Other sensitive
- Outdoor area
- Areas of trees to retain
- ▨ Areas of trees to investigate for retention

Sydney Metro Native Vegetation (OEH)

- 🟩 Estuarine Mangrove Forest
- Seagrass Meadows
- Urban Native and Exotic Cover

Metres
0 80 160 320 480 640

1:7,500 @ A3

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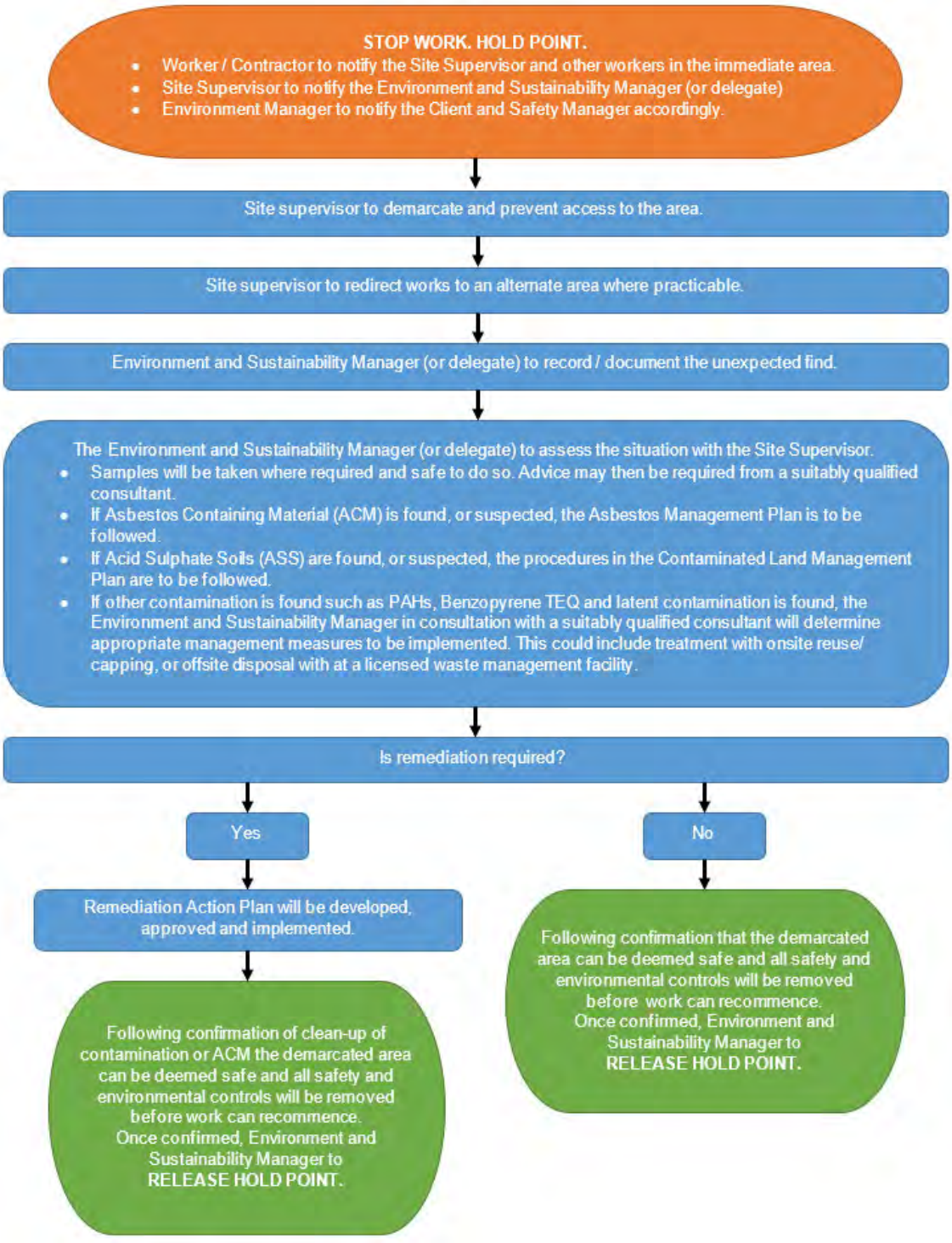
Annexure E Unexpected Contaminated Land and Asbestos Finds Procedure

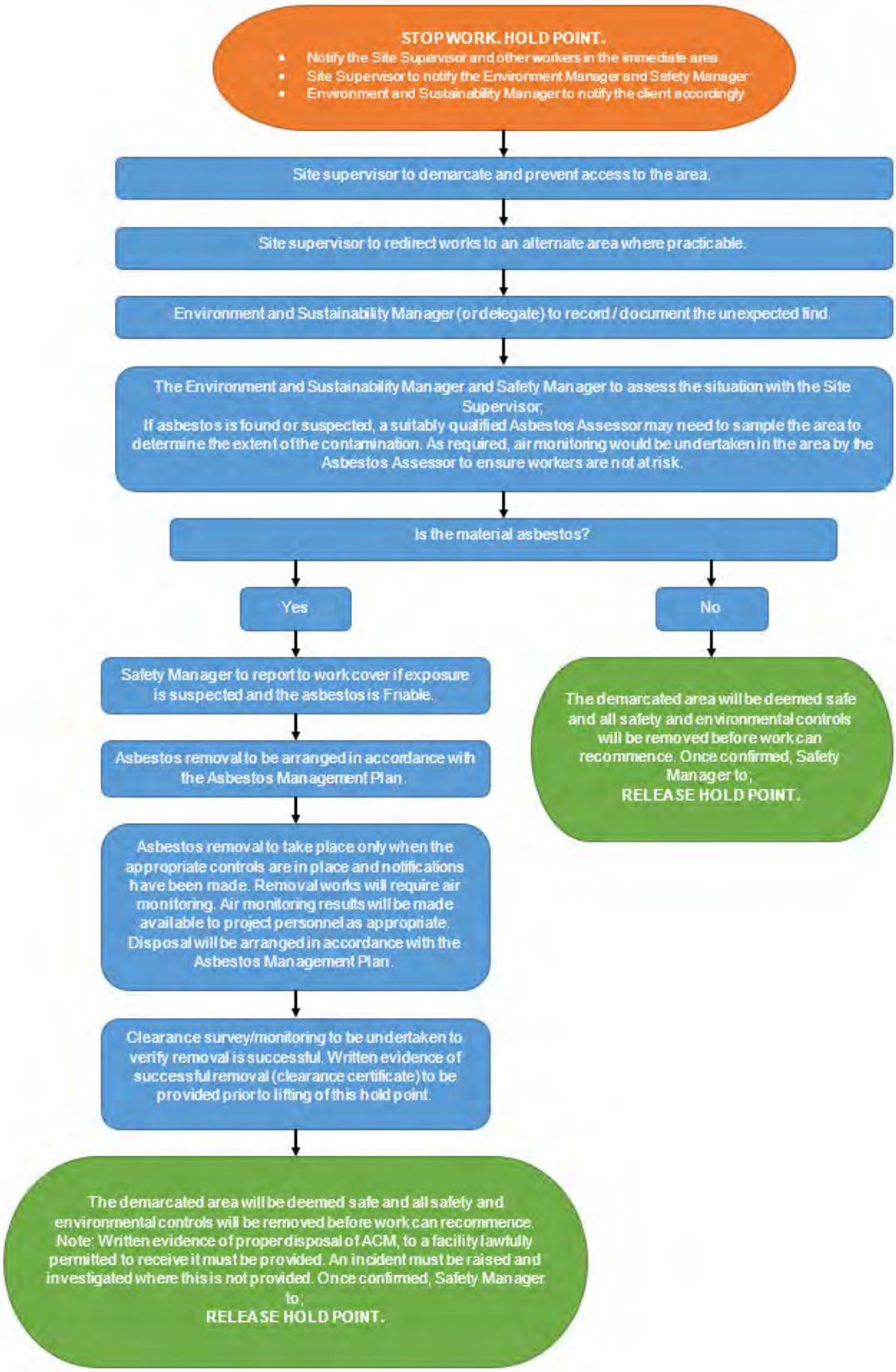
In the event unexpected contamination find is encountered during site works, the following procedure must be followed.

Figure 18: Unexpected Contamination Find Procedure Flow Chart



In the event an unexpected asbestos find is suspected during site works, the following procedure must be followed.

Figure 19: Unexpected Asbestos Find Procedure Flow Chart



Annexure F RMS Environmental Incident Classification and Reporting Procedure

Transport
Roads & Maritime
Services

Environmental Incident Classification and Reporting Procedure

September 2017

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About this release

Title	Environmental Incident Classification and Reporting Procedure

Approval		
Prepared by	[redacted]	[redacted]
Reviewed by	[redacted]	[redacted]
Approved by	[redacted]	[redacted]

Document Control			
Version	5.0	Release date	September 2017
Publication Number	[redacted]	ISBN	[redacted]

Contents

Acronyms and definitions	
Acronym	**Definition**
DE	(Roads and Maritime Services) Director Environment
DEO	(Roads and Maritime Services) Director Environment Operations
DPE	Department of Planning and Environment
Environmental harm	Any act that degrades or pollutes the environment
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1997*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
POEO Act	*Protection of the Environment Operations Act 1997*
REF	Review of Environmental Factors
Roads and Maritime	NSW Roads and Maritime Services
SEQC	(Roads and Maritime Services) Safety Environment and Quality Co-ordinator
SEQO	(Roads and Maritime Services) Safety Environment and Quality Officer

1. Introduction

1.1 Aim

The Environmental Incident Classification and Reporting Procedure (the Procedure) aims to ensure Roads and Maritime Services workers and contractors understand how to classify, respond to and report environmental incidents that occur as a result of Roads and Maritime managed activities.

1.2 Objectives

The objectives of the Procedure are to:

- Ensure all relevant Roads and Maritime workers, managers and contractors are made aware of environmental incidents promptly and can respond accordingly
- Ensure site workers understand the immediate environmental incident reporting requirements
- Ensure all workers understand reporting timeframes, including statutory requirements
- Ensure incidents are reported to enable monitoring, sharing of lessons learnt and response to emerging environmental incident trends
- Comply with statutory obligations to report certain environmental incidents to regulators and other relevant government agencies (see section 5.1).

1.3 Scope and coverage

This Procedure is applicable to all Roads and Maritime activities where environmental incidents may occur. This includes (but is not limited to):

- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys) and the construction and maintenance of Roads and Maritime assets
- Activities at Roads and Maritime properties and facilities
- Vessels operated by Maritime division
- Activities undertaken by contractors on behalf of Roads and Maritime.

The requirements of this Procedure must be communicated to all Roads and Maritime workers and contractors (e.g. during inductions) who are undertaking activities where incidents may occur.

The Procedure is for internal reporting processes, except where incidents are identified that need to be notified to regulators, and other relevant authorities (see section 5.1).

The procedure does NOT cover environmental incidents caused by:

- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts)
- Boating accidents (except those involving Roads and Maritime vessels)
- Dumping of materials by members of the public on Roads and Maritime roadsides or land (except where hazardous materials are unexpectedly found during road construction or maintenance activities). Illegal dumping should be reported to the NSW Environment Protection Authority (EPA)
- Marine oil and chemical spills covered by the National Plan for Maritime Environmental Emergencies (Australian Maritime Safety Authority, 2014).

2. Environmental incident classification

There are three categories of environmental incidents, as detailed in Table 2.

Table 2: Environmental incident classification

Category	Description	Examples	
Category 1	Potential breaches of legislation or failures of process that result in actual off-site environmental harm, or residual on-site environmental harm or Works undertaken outside approved areas, without required approval or without environmental assessment or Any Material Harm pollution incident as defined by Part 5.7 of the *Protection of the Environment Operations Act 1997* (POEO Act).	Pollution Incidents	Discharge of waters from site not in accordance with any approval requirements (e.g. discharge criteria in an Review of Environmental Factors (REF) safeguard or Environment Protection Licence (EPL) condition)
			Pollution, or potential pollution, of waters
			Unmanaged vehicle tracking of materials or emissions of dust, offensive odours or noise beyond the site boundary that are not managed in accordance with approval requirements and/or might impact on nearby land users
			Pollution incidents that threaten harm to the health or safety of people (e.g. odours)
			Unauthorised or illegal disposal or transport of waste
			A spill or other incident that causes pollution to land
		Conservation Breaches	Unauthorised harm or damage to native flora and fauna (terrestrial or aquatic/marine)
			Unauthorised dredging or reclamation works within a watercourse
			A fire caused by Roads and Maritime activities that travels beyond the boundary causing or potentially causing harm to the environment or community
		Heritage Breaches	Unauthorised harm to Aboriginal objects and Aboriginal places
			Unauthorised damage to any State or locally significant relic or Heritage item, or item listed on the Roads and Maritime Section 170 register

Table 2: Environmental incident classification			
Category	**Description**	**Examples**	
		Planning and compliance breaches	Failure to comply with the requirements of: • The *Environmental Planning and Assessment Act 1997* (EP&A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals • An *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval • An EPL • A CEMP or environmental work method statement • A permit from a regulator (e.g. under the *Fisheries Management Act 1994*)
Category 2	Failures of process or events that do not result in off-site environmental harm, or residual on-site environmental harm. These incidents may result in temporary on-site environmental harm that can be rectified to pre-existing conditions.	A procedural, administra ive or technical breach of environmental requirements, including: • Failure to prepare or submit required documents, reports or other correspondence • Failure to comply with the requirements of: o The *Environmental Planning and Assessment Act 1997* (EP&A Act), including exempt activities, Part 5 determinations and Part 5.1 approvals o An *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) approval o An EPL o A CEMP or environmental work me hod statement o A permit from a regulator (e.g. under the *Fisheries Management Act 1994*).	
		Spills and discharges that do not leave a site boundary and are cleaned up without residual on-site environmental harm, and the area of temporary impact can be restored to pre-exis ing conditions	
		A fire that is contained on site and does not cause or potentially cause adverse impact to the environment or community	
Reportable Event	An event or unexpected find that occurs outside the scope of reasonable environmental controls and mitigation measures	Sediment or site water travelling beyond a site boundary, and where it can be demonstrated that: • Erosion and sediment controls were installed and maintained in accordance with an erosion and sediment control plan, and • The cause of he incident was reasonably unforeseen or the weather (rain, wind etc) event exceeded the design capacity of controls. Note these events are considered to have occurred (and the response should commence in accordance with Section 3) when sediment or site water first travels beyond the site boundary (e.g. when an appropriately sized and maintained sediment basin commences overtopping)	
		An unexpected archaeological find that is being managed in accordance with the "Roads and Maritime	

Table 2: Environmental incident classification		
Category	**Description**	**Examples**
		Standard Management Procedure - Unexpected Archaeological Finds"
		An unexpected threatened species find that is being managed in accordance with the "Roads and Maritime Biodiversity Guidelines – unexpected threatened species finds procedure"
		An unexpected find of contaminated soils, asbestos or other potentially hazardous substances during construction or maintenance works. Note that once a particular contaminant is identified or found for the first time (either during project planning or construction phases) it is then reasonably expected to be found, so additional finds need not be reported in this category.
Regulatory Action	Formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident)	Formal regulatory action from an environmental regulator includes, but is not limited to: • Penalty infringement notices (PINs) • Clean up notices • Prevention notices • Official cautions / warnings • EPA show cause notifications.

Note: For any incident where there is associated formal regulatory action from an environmental regulator, copies of this correspondence must be forwarded to envops@rms.nsw.gov.au in addition to the Environmental Incident Report (see section 4).

3. Environmental incident response

3.1 Considerations and steps for environmental incident response

The step-by-step response for Category 1 incidents, Category 2 incidents and Reportable Events is detailed in Table 3.1a (activities undertaken by contractors) and Table 3.1b (activities undertaken by Roads and Maritime Regional Maintenance). However, some key points apply throughout all stages of the response to any environmental incident:

- If in doubt, treat all incidents as Category 1 to ensure reporting timeframes can be met
- Strong consideration should be given to notifying:
    - Roads and Maritime Corporate Communications for any incidents that have potential for community or media attention (see section 4.4)
    - Roads and Maritime Work Health and Safety Branch for any incidents that involve actual or potential risks to worker health and safety (see section 4.4).
- The person responsible for operational management of the site/activity shall assume responsibility for the response to the incident and direct actions as necessary and in accordance with this Procedure
- A Roads and Maritime Environment Manager can consult with the Director Environment Operations (DEO) to reclassify the category of an incident where appropriate.

Any Regulatory Action received (that has not already been reported in conjunction with another incident) should be immediately forwarded to the envops@rms.nsw.gov.au mailbox, and followed by an immediate phone call to the relevant Roads and Maritime Environment Manager, who will immediately advise the DEO. Consideration should then be given as to whether an environmental incident has occurred (see section 2) that should be reported in accordance with this section.

Table 3.1a: Environmental incident response activities undertaken by contractors				
Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who identifies incident	Immediate	Immediate
2	Advise the contractor site management team.	Person who identifies incident	Immediate	Immediate
3	Advise the Roads and Maritime project management team and the relevant Roads and Mari ime Environment Manager.	Contractor	Immediate	Day of the incident
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see sec ion 5.2). Sites wi h an EPL should implement their Pollution Incident Response Management Plan.	Contractor	Immediate	Immediate
5	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The following Roads and Maritime managers should also be notified by phone as relevant: • Director Environment (Major Projects) • Director Environment (Motorways).	Roads and Maritime Environment Manager	Immediately following advice of the incident	N/A
6	Where relevant, notify incident to appropriate regulatory agency (see section 5.1). Note this does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Contractor	As required by legislation	As required by legislation
7	Complete the incident report form (see section 4 2), including sign-off from Roads and Maritime Project Manager, and submit to Roads and Maritime Environment Manager* (see sec ions 4.3 and 4.4).	Contractor	Within 3 business days of he incident	Within 3 business days of the incident
8	Sign and submit incident report form to envops@rms.nsw.gov.au.	Roads and Maritime Environment Manager	On the day of receipt of he form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see section 5.2).	Contractor	Within 7 days of he incident	N/A
10	Undertake incident investiga ion (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary correc ive actions. Summarise findings in 'Incident Lessons Learnt' template and submit to Environment Manager for review.	Contractor	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to envops@rms.nsw.gov.au.	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A
12	Consider the need for any required correc ive actions to be addressed through a management system (e.g. corrective ac ion request).	Roads and Maritime Environment Manager and project team	As appropriate	As appropriate

*Alternate workflow / signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

Table 3.1b: Environmental incident response activities undertaken by Regional Maintenance (including contractors or RMCC on behalf of Regional Maintenance)

Step	Action	Responsibility for completing action	Timeframe	
			Category 1 Incidents	Category 2 Incidents / Reportable Events
1	Stop work in relevant area (if necessary) and take actions to prevent adverse impact to human health or the environment. Note human health and safety is the primary concern, and no action should be taken if it is not safe to do so.	Person who iden ifies incident	Immediate	Immediate
2	Advise the Roads and Maritime site management team and he relevant Roads and Maritime Environment Manager and Safety Environment Quality Officer (SEQO) / Safety Environment Quality Co-ordinator (SEQC).	Person who iden ifies incident	Immediate	Immediate
3	Advise DEO by phone. The DEO may request photographs and a brief summary of known information via email. The relevant Regional Maintenance Manager must also be notified.	Environment Manager	Immediate	N/A
4	Consider if the incident is a pollution incident that constitutes Material Harm in accordance with Part 5.7 of the POEO Act. For Material Harm pollution incidents, notify relevant agencies (see sec ion 5.2). Sites wi h an EPL should implement their Pollution Incident Response Management Plan.	DEO	Immediately following advice of the incident	N/A
5	Where relevant, notify incident to appropriate regulatory agency (see section 5.1). Note his does not refer to the requirement to notify Material Harm pollutions incidents (see Step 4).	Environment Manager	As required by legislation	As required by legislation
6	Complete the incident report form (see section 4 2), including sign-off from Roads and Maritime Project Manager, and submit to SEQC (see section 4.3).	Relevant Roads and Maritime site representative	Within 3 business days of the incident	Within 3 business days of the incident
7	SEQC to sign and submit incident report form to relevant Environment Manager (see section 4.4).	SEQC	On the day of receipt of the form	On the day of receipt of the form
8	Sign and submit incident report form to envops@rms.nsw.gov.au.	Environment Manager	On the day of receipt of the form	On the day of receipt of the form
9	For Material Harm pollution incidents, provide a written report to each relevant authority (see section 5.2).	DEO	Within 7 days of the incident	N/A
10	Undertake incident investiga ion (level of investigation to be appropriate to the severity of the incident) to determine root cause and any necessary corrective actions. Summarise findings in 'Incident Lessons Learnt' template and submit both to Environment Manager for review. Consider the need for any required corrective actions to be addressed through a management system (e.g. corrective action request).	SEQC	Within 1 month of incident	N/A
11	Submit final Incident Lessons Learnt to envops@rms.nsw.gov.au.	Roads and Maritime Environment Manager	Within 1 week of receipt	N/A

Copies of formal regulatory action from an environmental regulator (that has not already been reported in conjunction with another incident) must be forwarded to the relevant Roads and Maritime Environment Manager (and SEQC/SEQO for Regional Maintenance projects) and envops@rms.nsw.gov.au immediately upon receipt.

3.2 Critical incidents

Some Category 1 incidents require escalation so relevant members of the Roads and Maritime Executive are aware of the incident and ready to respond as necessary. Category 1 incidents will be deemed 'Critical Incidents' for escalation to the Executive when they have the potential for:

- Regulatory action (e.g. EPA Penalty Infringement Notice) and/or
- Reputational damage (e.g. media coverage) and/or
- Significant environmental harm.

Guiding factors that will be considered when determining whether there has been 'significant' environmental harm include:

- When there has been actual or potential harm to the health or safety of people or to the environment that is not trivial
- Actions required to prevent, mitigate or make good the actual or potential environmental harm are likely to exceed $10,000

When a potential 'Critical Incident' is reported, the DEO will immediately brief the Director Environment (DE) who will make a determination on whether it will be considered a 'Critical Incident'. The DE will then brief the Roads and Maritime Chief Executive and relevant Executive Director, as well as any other members of the Executive as appropriate. When the DE cannot be contacted, the DEO will make the determination and make the relevant Executive briefings.

4. Environmental incident reporting

4.1 Environmental incident report form

The Environmental Incident Report Form should be completed for Category 1 incidents, Category 2 incidents and Reportable Events, and is available on the Roads and Maritime website.

4.2 Completing the incident report form

All parts of the Incident Report Form must be completed in accordance with this procedure and following the instructions within the form. The Form (and any subsequent reports) must only include factual information. Speculation about the causes and outcomes of incidents are not to be included.

The Form must be signed by the following:

Signatory	Reason
The person making the report	The person witnessed the incident or has the most knowledge of the incident, and can provide sufficient factual information.
The Roads and Maritime Project Manager	To ensure all relevant Roads and Maritime parties can be made aware of the incident, and appropriate resources can be allocated and/or approved to respond to the incident. This also ensures the project management team are aware of any environmental performance trends if multiple incidents occur.
Safety Environment and Quality Co-ordinator (Roads and Maritime Regional Maintenance only)	To ensure Regional Maintenance management system staff are aware of the incident, and any necessary management system changes can be made once corrective actions and lessons learnt are finalised.
The relevant Roads and Maritime Environment Manager	Concurrence that the incident is adequately described, and the immediate actions and corrective actions are appropriate.

As noted in Table 3.1a, alternate signatory arrangements may be required for projects where a third party is involved (e.g. a delivery authority). These arrangements can be confirmed with the relevant Roads and Maritime Environment Manager.

4.3 Submitting the incident report form

All Incident Report Forms must be populated, signed and submitted electronically (never printed / signed / scanned etc.) to enable Roads and Maritime to electronically capture the information entered in the form.

Completed Incident Report Forms should be submitted by the Roads and Maritime Environment Manager to the Environment Operations mailbox:

- envops@rms.nsw.gov.au

It is essential that a clear and consistent subject line convention is used to allow tracking of correspondence about each incident. All emails about an incident between all parties should structure the subject line as follows:

- Category X - project name / incident location - date
- For example, Category 1 – Main Road Upgrade – dd/mm/yy.

Where information cannot be gathered within the timeframes set out in this Procedure, the incident form should be submitted to the mailbox as a ‘draft’, whether or not the information contained is fully completed.

- For example, Category 1 – Main Road Upgrade – dd/mm/yy (DRAFT).

The Environment Manager should then request further information from the person making the report, and the final report should be submitted within the next 24 hours.

4.4 Roads and Maritime contacts

The relevant Environment Manager for each region and Project Office is the first point of contact for enquiries relating to environmental incidents. Current contacts for all Roads and Maritime Environment Managers can be found on the Roads and Maritime website.

Environment Managers can also provide contact details for other relevant contacts during an incident, such as Communications or Work, Health and Safety.

The DEO oversees the application of this Procedure, and can be contacted in the absence of the relevant Environment Manager for Category 1 incidents:

- Phone - (02) 8843 3048

5. Regulatory agency notification

5.1 Notification of Material Harm pollution incidents

5.1.1 Definition of Material Harm pollution incidents

Under Part 5.7 of the POEO Act, there is a duty to immediately notify (i.e. promptly and without delay) each relevant authority (see section 5.1.3) of a pollution incident where material harm to the environment is caused or threatened.

The POEO Act states that a pollution incident should be considered Material Harm if:

> *"(i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or*
>
> *(ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000"*

Material Harm only relates to pollution incidents. Other environmental incidents, such as conservation, heritage and planning breaches, are not included in the definition of a pollution incident.

5.1.2 Determining if an incident should be considered Material Harm

As soon as a person becomes aware of a pollution incident that has the potential to cause Material Harm, the Category 1 incident response should be followed (see Table 3.1a and Table 3.1b above). The determination on whether a pollution incident should be considered Material Harm should be made in accordance with Table 5.1.2.

Table 5.1.2: Determination of Material Harm pollution incidents

Project delivery	Material Harm determination
Activities undertaken by Regional Maintenance	The DEO should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm. If the DEO is not available, the relevant Environment Manager should seek advice from other Roads and Maritime Environment Branch Directors, or make the material harm determination themselves. If no assistance can be obtained and it is suspected that a pollution incident should be considered Material Harm, the project should notify the relevant authorities in accordance with Table 5.1.3a or Table 5.1.3b (as relevant).
Activities undertaken by contractors	The contractor project team should make the determination (and any associated notifications) on whether a pollution incident should be considered Material Harm. The relevant Roads and Maritime Environment Manager or Environment Branch Director may contact the DEO to assist in making an assessment of the incident, to aid the contractor in determining if the pollution incident should be considered Material Harm. Where Roads and Maritime believes a pollution incident should be considered Material Harm but the contractor disagrees, Roads and Maritime is required by law to notify EPA and other relevant authorities. In this instance the DEO or DE would make a determination on whether the incident should be notified by Roads and Maritime as Material Harm. Roads and Maritime would provide details of any notifications made to the contractor.

Even if only limited information is available for a pollution incident being considered Material Harm, each relevant authority must be immediately notified with the information available and updates provided as soon as further relevant information becomes available.

In circumstances where there is doubt about the need to notify a pollution incident as Material Harm, Roads and Maritime and its contractors should always err on the side of notification.

When in doubt, communicate!

Note: Roads and Maritime is not responsible for notifying a Material Harm pollution incident caused by a traffic or vehicle accident where notification has already occurred by someone at the scene. However, if it is believed notification has not been undertaken, Roads and Maritime should undertake notification in accordance with section 5.1.3. Environment Branch can provide advice in this instance (see section 4.4).

5.1.3 Relevant authorities to notify

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables 5.1.3a and 5.1.3b below. It is important to note the order of notification and phone numbers to use can vary depending on the nature of the pollution incident, as detailed in the two tables.

All of the authorities listed (whether considered relevant or not) must be contacted for each Material Harm pollution incident to satisfy POEO Act requirements. Serious penalties apply to both individuals and corporations for failing to notify Material Harm pollution incidents:

- Maximum penalty for individuals - $500,000
- Maximum penalty for corporations - $2,000,000.

Table 5.1.3a: Authorities to notify for Material Harm pollution incidents that present an immediate threat to human health or property

Order	Authority	Contact Number
1	Fire and Rescue NSW	000
2	NSW EPA environment line	131 555
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website
4	SafeWork NSW	131 050
5	The Appropriate Regulatory Authority*, being either: • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400

Table 5.1.3b: Authorities to notify for Material Harm pollution incidents that do NOT present an immediate threat to human health or property

Order	Authority	Contact Number
1	NSW EPA environment line	131 555
2	The Appropriate Regulatory Authority*, being either: • Local council • Western Lands Commissioner for the Western Division (except any part of the Western Division within the area of a local council).	Local council - contact Office of Local Government on 4428 4100, or visit the Office of Local Government website Western Lands Commissioner – phone 6883 5400
3	Ministry of Health (via the local Public Health Unit)*	Contact 1300 066 055 to be directed to the local Public Health Unit, or visit the NSW Health Website

4	SafeWork NSW	131 050
5	Fire and Rescue NSW	1300 729 579

* The appropriate contact for the Appropriate Regulatory Authority and Public Health Unit will vary according to the geographic location of the activity. These contact numbers should be found in advance and stored for immediate access (e.g. in a project's Construction Environmental Management Plan and/or on site notice boards) should a pollution incident need to be notified.

5.1.4 The relevant information to provide

It is important to avoid speculation on origin, causes or outcomes of a pollution incident in discussions with the authorities. Section 150 of the POEO Act provides the information that needs to be notified, being:

a) The time, date, nature, duration and location of the incident

b) The location of the place where pollution is occurring or is likely to occur, the nature, the estimated quantity or volume and the concentration of any pollutants involved, if known

c) The circumstances in which the incident occurred (including the cause of the incident, if known)

d) The action taken or proposed to be taken to deal with the incident and any resulting pollution or threatened pollution, if known

e) Other information prescribed by the regulations.

Only known information should be provided when notifying of a Material Harm pollution incident. If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 (see above). The immediate verbal notification is to be followed by written notification to each relevant authority within seven days of the date on which the incident occurred.

Complying with these notification requirements does not remove the need to comply with any other legislative requirements for incident notification (e.g. requirements under EPL conditions or the Work Health and Safety Act 2011).

5.2 Summary of other regulatory agency notification requirements

Specific statutory requirements relating to the notification of environmental incidents to relevant regulatory agencies are summarised in Table 5.2. Additional requirements adopted by Roads and Maritime are indicated in *italics*. Any notification to regulatory agencies should be indicated in the Environmental Incident Report Form to confirm that any required notifications have been initiated.

Table 5.2: Regulatory agency notification requirements

Legislation / issue	Regulating authority	Section / requirement
Commonwealth Aboriginal and Torres Strait Islanders Heritage Protection Act 1984	Department of the Environment and Energy	Section 20 – requirement to notify the Minister of the discovery of Aboriginal remains.
Contaminated Land Management Act 1997	EPA	Section 60 – requirement to notify if Roads and Maritime activities have contaminated land or if Roads and Maritime owns land that has been contaminated.
Heritage Act 1977	Office of Environment and Heritage	Section 146 – requirement to notify the Heritage Council of the location of the relic once a relic has been discovered or located.
National Parks and Wildlife Act 1974	Office of Environment and Heritage	Section 89A – requirement to notify the location of an Aboriginal object that is the property of the Crown.
Protection of the Environment Operations Act 1997	EPA and other relevant authorities	Section 148 – requirement to immediately notify pollution incidents that cause or threaten Material Harm to the environment (see Section 5.1)

	EPA	*Pro-active reporting to the local EPA officer of offsite pollution incidents that occur as a result of Roads and Maritime activities is encouraged as soon as practicable after the pollution incident occurs.*
Rural Fires Act 1997	NSW Rural Fire Service	Section 64 – requirement to notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Breach of Conditions of Approval (projects approved under Part 5.1 of the EP&A Act)	Department of Planning and Environment (DPE)	DPE should be notified by the project proponent when there has been a breach of a Condition of Approval (CoA). There may also be other notification requirements included in the CoA.
Water supply catchment areas	*Local water supply authority*	*If an environmental incident has the potential for unapproved impacts on a drinking water supply, the relevant water supply authority must be advised.*

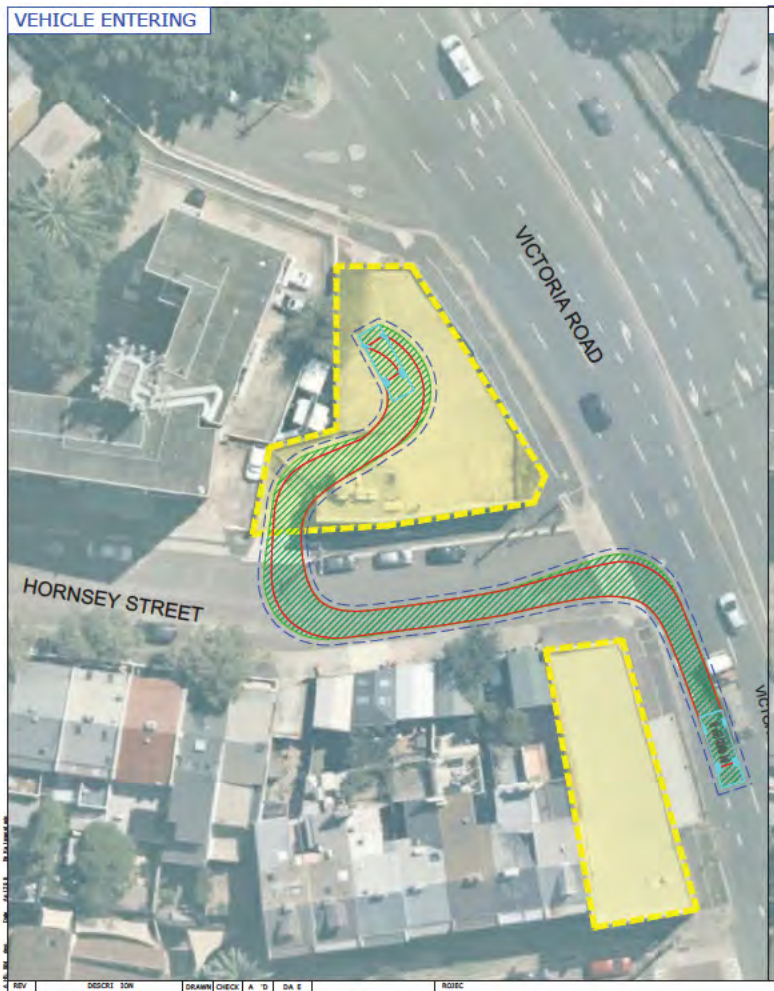
5.3 Requests for written reports from regulatory authorities (activities delivered internally by Roads and Maritime)

Should Roads and Maritime directly receive a request from a regulatory authority for a written report regarding an environmental incident, Environment Branch and Legal Branch must be immediately contacted for advice. No further correspondence (including email) about the incident should be distributed either internally or externally until advice is received. Environment Branch will coordinate with Legal Branch to:

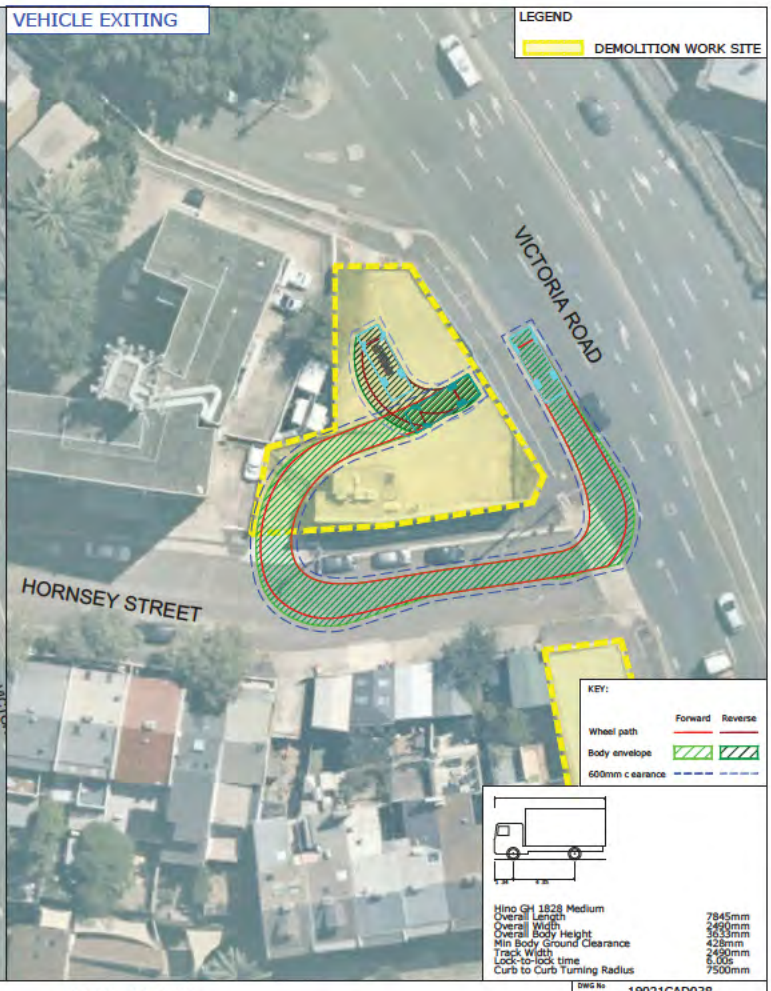
- Assist in the investigation of the incident
- Provide legal advice to the project
- Co-ordinate the preparation of the written response to the regulatory authority.

Annexure G Swept path analysis – Hornsey Street

VEHICLE ENTERING



VEHICLE EXITING



LEGEND

DEMOLITION WORK SITE

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
600mm c earance		

Hino GH 1828 Medium	
Overall Length	7845mm
Overall Width	2490mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2490mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	7500mm

REV	DESCRI ION	DRAWN	CHECK	A 'D	DA E
A	ISSUE OR DISCUSSION	KM	CH/D	D	11/04/19

WestConnex Rozelle Interchange

JOHN HOLLAND | CPB

ROJEC: WESTCONNEX 3B

I E: 7.845M TRUCK SWEPT PATH ANALYSIS
HORNSEY STREET - VICTORIA ROAD

DWG No: 19021CAD038
FIGURE 1

DA E S AM: 11 APRIL 2019

ROJEC No	SCA E	REV
19021	1:400 @ A3	A