Transport Roads & Maritime Services

Construction Environmental Management Plan

M4-M5 Link Mainline Tunnels

SSI_7485

February 2023

WestConnex M4-M5 Link Tunnels

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Document control

Approval and authorisation

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Revision	Date	Description
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19	30 April 2020	Update to PREW Layout – for ER approval
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23	May 2021	Update to SPI layout – for ER approval

Revision	Date	Description
24	March 2022	Update to SPI layout and minor updates – for ER approval
25	June 2022	Update to the SPI layout and minor edits
26	September 2022	Update to the PBR and Northcote layouts
27	October 2022	Update to the PREW layout
28	February 2023	Minor updates to ancillary facilities following tunnel opening – for ER approval

Internal review

Note:

From Revision 01 Document Number has changed from M4M5-LSBJ-PRW-GEN-EV01-PLN-0001 (previous revisions) to M4M5-LSBJ-PRW-GEN-MP01-PLN-0003.

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Glossary/Abbreviations

Abbreviation	Expanded text
AA	The Acoustics Advisor for the CSSI
ACHMP	Aboriginal Cultural Heritage Management Sub-plan
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.
ASBJV	Acciona Samsung Bouygues Joint Venture
AQMP	Air Quality Management Sub-plan
ASS	Acid Sulfate Soils
AS/NZS	Australia/New Zealand Standards
CCM	Community Complaints Mediator
CCS	Community Communications Strategy
CEMP	Construction Environmental Management Plan
CNVIS	Construction Noise and Vibration Impact Statement
CoA	NSW Minister for Planning's Conditions of Approval
Compliance audit	Verification of how implementation is proceeding with respect to a CEMP (which incorporates the relevant CoAs).
Consistency assessment	An assessment of whether a proposed activity for the purpose of the CSSI is consistent with the terms of this approval.
Construction	Includes all physical work required to construct the CSSI, other than the following low impact work: (a) survey works including carrying out general alignment survey, installing survey controls (including installation of global positioning system (GPS)), installing repeater stations, carrying out survey of existing and future utilities and building and road dilapidation surveys; (b) investigations including investigative drilling and excavation; (c) the erection or removal of demountable buildings at ancillary facilities in approved locations; (d) treatment of contaminated sites subject to the recommendations of a Site Contamination Report prepared in accordance with CoA E181; (e) clearing of vegetation, as identified in the EIS and Submissions and Preferred Infrastructure Report; (f) installation of mitigation measures including noise (excluding acoustic sheds), erosion and sediment controls and temporary exclusion fencing for sensitive areas;

Abbreviation	Expanded text
	(g) property acquisition adjustment works including installation of property fencing; (h) low impact utility works defined and undertaken, in accordance with the approved Utility Management Strategy required under CoA E140; (i) establishing minor construction ancillary facilities in accordance with CoA C24; (j) archaeological testing under the Code of practice for archaeological investigation of Aboriginal objects in NSW (DECCW, 2010) or archaeological monitoring undertaken in association with [a]-[i] above to ensure that there is no impact on heritage items; (k) other activities determined by the ER to have minimal environmental impact which may include construction of minor access roads, temporary relocation of pedestrian and cycle paths and the provision of property access including access and egress to construction ancillary facilities; and (l) maintenance of existing buildings and structures required to facilitate the carrying out of the CSSI. Where heritage items, or threatened species, or threatened ecological communities (within the meaning of the Biodiversity Conservation Act 2016) are adversely affected or potentially adversely affected by any low impact work as defined in (a) to (l) above, that work is construction, unless otherwise determined by the Secretary in consultation with OEH or DPI Fisheries (in the case of impact upon fish, aquatic invertebrates or marine vegetation). Construction does not include site establishment works where such works are included as part of a Site Establishment Management Plan approved under CoA C22
CNVIS	Construction Noise and Vibration Impact Statement
CPAS	Construction Parking and Access Strategy
Contractor	Acciona Samsung Bouygues Joint Venture
CSSI	The Critical State Significant Infrastructure, as described in Schedule 1, the carrying out of which is approved under the terms of the SSI 7485 approval
CTEAP	Compliance Tracking and Environmental Audit Program
D&C	Design and Construct
DEC	Former Department of Environment and Conservation
DECC	Former NSW Department of Environment and Climate Change
DECCW	Former NSW Department of Environment, Climate Change and Water
DoI Water	NSW Department of Industry Water including the Natural Resource Access Regulator
DIPNR	Former NSW Department of Infrastructure, Planning and Natural Resources

Abbreviation	Expanded text
DPE	Department of Planning and Environment
DPI Water	Former NSW Department of Industry Water including the Natural Resource Access Regulator
EIN	Environmental Improvement Notice
EIS	Environmental Impact Statement
EMM	Environmental Management Measure as outlined in the project EIS documentation
EMS	Environmental Management System
Environmental aspect	Defined by AS/NZS ISO 14001:2015 as an element of an organisation's activities, products or services that can interact with the environment
Environmental impact	Defined by AS/NZS ISO 14001:2015 as any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects
Environmental objective	Defined by AS/NZS ISO 14001:2015 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve
Environment Policy	Statement by an organisation of its intention and principles for environmental performance
Environmental target	Defined by AS/NZS ISO 14001:2015 as a detailed performance requirement, applicable to the organisation or parts thereof, that arises from the environmental objectives and that needs to be set and met in order to achieve those objectives
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
ER	The Environmental Representative whose role is defined by the Project's CoAs A19 – A23
ERG	Environmental Review Group – generally comprising representatives of WestConnex Transurban, Transport for New South Wales, ER, Project delivery team, regulatory authorities and councils.
EWMS	Environmental Work Method Statement
FFMP	Flora and Fauna Management Sub-plan
GIS	Geographic Information System
GMP	Groundwater Management Sub-plan
Heritage Division	The Heritage Division of OEH
Highly noise intensive works	Works which are defined as annoying under the ICNG including: (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) rock drilling

Abbreviation	Expanded text
	(d) line drilling (e) vibratory rolling (f) rail tamping and regulating (g) bitumen milling or profiling (h) jackhammering, rock hammering or rock breaking (i) impact piling.
Hold point	Is a verification point that prevents work from commencing prior to release from WestConnex Transurban
HSE	Health, Safety and Environment
ICT	Information and Communication Technology
Impact	The result of an action that has, will have, or is likely to have an adverse effect to the environment relevant to the CoA controlling the action.
Incident	An occurrence or set of circumstances that causes, or threatens to cause, material harm to the environment, community or any member of the community, being actual or potential harm to the health or safety of human beings or to threatened species, endangered ecological communities or ecosystems that is not trivial Note: “material harm” is defined in the SSI 7485 approval
ISCA	Infrastructure Sustainability Council of Australia
ISO	International Standards Organisation
LLE	Lendlease Engineering (now Acciona)
Material harm	This is harm that: (a) involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial or (b) results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).
Minister, the	Minister for Planning
MOC	Motorway operations complex
NAHMP	Non-Aboriginal Heritage Management Sub-plan
NCR	Non-conformance report
Non-compliance	An occurrence, set of circumstances or development that is a breach of the Conditions of Approval but is not an incident.
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation
NSW	New South Wales
NVMP	Noise and Vibration Management Sub-plan
OEH	Office of Environment and Heritage

Abbreviation	Expanded text
Operation	The operation of the CSSI (whether in full or in part) for its intended purpose excluding the following activities carried out during construction: (a) commissioning trials of equipment; (b) temporary use of any part of the CSSI (c) maintenance works. Note: There may be overlap between the carrying out of construction and operation if the phases are staged
PCP	Project Conversion Plan
PESCP	Progressive Erosion and Sediment Control Plan
PIRMP	Pollution Incident Response Management Plan
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Pre-construction	All work prior to, and in respect of the CSSI that is excluded from the definition of construction
Principal, the	Transport for New South Wales
Project Company	WestConnex Transurban The Project Company, WestConnex Transurban has been engaged by Transport for New South Wales to deliver the M4-M5 Link Mainline Tunnels project. WestConnex Transurban has in turn, engaged the Contractor, ASBJV to design and construct the project
Project, the	WestConnex M4-M5 Link Mainline Tunnels
Proponent	The person identified as the proponent in Schedule 1 of the Infrastructure Approval (Roads and Maritime Services (now known as Transport for New South Wales))
Relevant council(s)	Any or all as relevant, Inner West or City of Sydney
REMM	Revised Environmental Management Measure
Roads and Maritime	Road and Maritime Services
Transport for New South Wales Representative	Transport for New South Wales Environmental Manager
RoLs	Road Occupancy Licences
SAP	Sensitive Area Plan
Secretary	Secretary of the NSW Department of Planning and Environment or nominee, whether nominated before or after the date on which this approval was granted
Secretary's approval or agreement or submissions to the Secretary	A written approval from the Secretary (or nominee)
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 CSSI, including demolition of existing structures on the site, erection of site fencing / hoarding, provision of utility services to the site, site levelling,

Abbreviation	Expanded text
	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.
SEMP	Site Establishment Management Plan
SMC	Sydney Motorway Corporation
SMS	Sustainability Management Strategy
SPIR	Submissions and Preferred Infrastructure Report
SSI	State Significant Infrastructure
SSWMP	Soil and Surface Water Management Sub-plan
Submission and Preferred Infrastructure Report (SPIR)	The M4-M5 Link Submissions and Preferred Infrastructure Report dated January 2018, submitted to the Secretary under the EP&A Act, comprising a response to written submissions made during the public exhibition period of the EIS and changes to the design of the proposal since the publication of the EIS
SWMS	Safe Work Methods Statements
TfNSW	Transport for New South Wales
TTAMP	Traffic and Transport and Access Management Sub-plan
Unexpected Heritage Find	An object or place that is discovered during the carrying out of the CSSI and which may be a heritage item but was not identified in the EIS or SPIR or suspected to be present. An unexpected heritage find does not include human remains
UDLP	Urban Design and Landscape Plan
WDRS	WestConnex Disaster Recovery Site
WMCC	WestConnex Motorway Control Centre
WMP	Waste Management Sub-plan
Works	All physical activities to construct or facilitate the construction of the CSSI, including environmental management measures and utility works

1 Introduction

1.1 Background

WestConnex is one of the NSW Government's key infrastructure projects which aims to ease congestion, create jobs and connect communities. The 33-kilometre WestConnex motorway will link Sydney's west and south-west with the Sydney Central Business District, Sydney Airport and Port Botany. WestConnex is one component of an integrated solution to meet Sydney's growing transport and infrastructure needs and is consistent with NSW Government transport and planning policies and strategies.

The Proponent for the project was Roads and Maritime Services (Roads and Maritime) who commissioned the WestConnex Transurban to deliver WestConnex. On 1 December 2019 Roads and Maritime were dissolved, with all Roads and Maritime's functions, assets, rights and liabilities being transferred to Transport for NSW (TfNSW). TfNSW are now considered the Proponent.

The WestConnex M4-M5 Link project will be constructed and opened to traffic in two stages:

- Stage 1: M4-M5 Link Mainline tunnels
- Stage 2: Rozelle interchange.

WestConnex Transurban has engaged the Acciona Samsung Bouygues Joint Venture (ASBJV), formerly the Lendlease Samsung Bouygues Joint Venture, to design and construct Stage 1 of the M4-M5 Link project (the Project). The WestConnex M4-M5 Link Mainline Tunnels project will deliver twin mainline motorway tunnels between the New M4 at Haberfield and the New M5 at St Peters. Each tunnel would be around 7.5 kilometres long and would generally accommodate up to four lanes of traffic in each direction

The project was declared by Ministerial Order to be State Significant Infrastructure (SSI) and Critical State Significant Infrastructure (CSSI), under Section 5.12 (4) and Section 5.13 (previously referred to as 115U(4) and 115V prior to amendment of the *Environmental Planning and Assessment Act 1979* (EP&A Act)) as well as under clause 16 of the State Environmental Planning Policy (State and Regional Development) 2011. The project remains subject to assessment under the EP&A Act and requires the approval of the NSW Minister for Planning. The proposal is critical State significant infrastructure by virtue of Schedule 5, clause 4 of State Environmental Planning Policy (State and Regional Development) 2011.

An Environmental Impact Statement (EIS) (AECOM 2017) was prepared and placed on public exhibition from 18 August 2017 to 16 October 2017. Submissions were received from government, agencies, organisations and the public in repose to the project. A Submissions and Preferred Infrastructure Report (SPIR) was prepared by Roads and Maritime (now TfNSW) in response to submissions received during the exhibition period. The Project was approved by the Minister for Planning on 17 April 2018. A Project Modification report (AECOM 2018) was prepared and placed on public exhibition for 14 days from 12 September 2018. The Project Modification was determined by the Minister for Planning on 25 February 2019.

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) and Sub-plans have been prepared to outline how ASBJV, during the construction of the project, will comply with the NSW Minister for Planning's Conditions of Approval (CoA). Additionally, it outlines how ASBJV will minimise the environmental risks, and achieve environmental outcomes on the project by providing a structured approach to ensure appropriate Revised Environmental Management Measures (REMM) and controls are implemented.

A detailed description of the Project is provided in the EIS Chapter 5 (Project Description) and summarised below in Section 1.3.

Implementing the CEMP and Sub-plans effectively will ensure that the project meets the requirements of the CoA, Environment Protection Licence, REMM, Compliance Tracking and Environmental Audit Program (CTEAP), TfNSW Specifications, the EIS and all applicable legislation. ASBJV will also achieve environmental outcomes on the project through the application of the ASBJV Environmental Management System (EMS), which has been based on the Lendlease Engineering (LLE) EMS.

The CEMP has been prepared in accordance with:

- TfNSW QA Specification G36, G38 and G40
- The project approvals including the CoA and REMM
- The requirements of the relevant EMP guidance as specified by the Department of Planning and Environment *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004)
- AS/NZS ISO 14001.

This CEMP will:

- Describe the project in detail including activities to be undertaken and relative timing
- Identify the environmental obligations, hazards and risks associated with the construction activities and propose a program for the ongoing analysis of these key environmental risks
- Provide specific mechanisms to fulfil all environmental and planning requirements and ensure compliance with applicable environmental policies, approvals, guidelines, principles, licences, permits, consultation agreements and legislation
- Provide specific mitigation measures and controls that can be applied on site to avoid or minimise negative environmental impacts and negative impacts on the community that relate to the Project's environmental impacts
- State objectives and targets for issues that are important to the environmental performance of the Project
- Identify environmental management roles and responsibilities of personnel including all ASBJV environmental staff, sub-contractors and utility workers
- Outline monitoring, inspection and compliance auditing regimes to check the adequacy of controls as they are implemented during construction
- Fulfil ASBJV Contractors' EMS requirements enabling continued certification to ISO14001 and contribution to ASBJVs overall Project Plans.

The requirements of this approval and where they are met in this CEMP are shown in Table 1-1. Agency consultation requirements for each Sub-plan are outlined in the respective Sub-plans.

Please refer to Appendix A9 for all other CoA relevant to the development of this Plan.

This CEMP is the overarching document in the environmental management system for the Project that includes a number of management documents. It is applicable to all staff and sub-contractors associated with the construction of the Project.

Table 1-1 CoA requirements for CEMP

CoA	Requirement	Reference	How Addressed
C1	A Construction Environmental Management Plan (CEMP) must be prepared in accordance with the Department's Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004) to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 will be implemented and achieved during all stages of construction.	Section 1.2 Section 1.5 Section 3.1.1 Appendix A1 (Table 1-7)	This CEMP has been prepared in accordance with the Department's Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004) and is evidenced in Appendix A1 (Table 1-7).
C2	The CEMP must provide: (a) a description of activities to be undertaken during construction (including the scheduling of construction)	Section 1.3	This CEMP details the activities to be undertaken during construction in section 1.3.
	(b) details of environmental policies, guidelines and principles to be followed in the construction of the CSSI	Section 1.5 Section 3.2.2 Appendix A1 – Legal requirements register Appendix A3 – Environmental Policy	The Project environmental policy is detailed in Appendix A3 and the projects overarching environmental principles and policies that will be followed are detailed in Section 1.5 All relevant guidelines and legislation are detailed in Appendix A1 and referenced in Section 3.2.2.
	(c) a schedule for compliance auditing	Section 3.9.3 Section 3.9.4 Compliance Tracking and Environmental Audit Program (CTEAP)	A schedule for compliance auditing is referenced in Section 3.9.3 and 3.9.4. Compliance auditing is also detailed in the CTEAP prepared for the Project.

CoA	Requirement	Reference	How Addressed
	(d) a program for ongoing analysis of the key environmental risks arising from the activities described in subsection (a) of this condition, including an initial risk assessment undertaken before the commencement of construction of the CSSI	Section 3.2.1 Section 3.12 Appendix A2 Ongoing Project risk assessments	Ongoing environmental risk assessments for the Project will be undertaken in accordance with the details listed in Section 3.2.1 of this plan as well as in Section 3.12. The initial risk assessment is evidenced in Appendix A2.
	(e) details of how the activities described in subsection (a) of this condition will be carried out to: (i) meet the performance outcomes stated in the documents listed in Condition A1	Table 3-2 Appendix B1-B9	Performance outcomes and how they will be addressed during Project activities listed in Condition A1 are detailed in Table 3-2. Environmental-aspect-specific performance outcomes listed in the SPIR are individually addressed and detailed in the Appendices B1-B9.
	(ii) manage the risks identified in the risk analysis undertaken in subsection (d) of this condition	Section 3.2.1 Section 3.12 Appendix A2 LLE Environmental Risk Management in Project Delivery Ongoing Project risk assessments	Risks and their proposed mitigation measures are identified in Appendix A2 of this plan. Section 3.2.1 and 3.12 describe how risks will be managed throughout the project through ongoing risk analysis assessments.

CoA	Requirement	Reference	How Addressed
	(f) an inspection program detailing the activities to be inspected and frequency of inspections	Section 3.9.1 Environmental Inspection Checklist CTEAP	Inspections will be undertaken in accordance with the details provided in Section 3.9.1 and in the CTEAP.
	(g) a protocol for managing and reporting any: (i) incidents (ii) non-compliances with this approval and with statutory requirements	Section 3.8 Appendix A6 LLE Environmental Incidents and Emergencies (internal document) Environmental Incident Report	Section 3.8 details the protocols to follow in the management and reporting of incidents and non-compliances. Furthermore, the Environmental incident classification and reporting procedure provided in Appendix A6 and the LLE Environmental Incidents and Emergencies procedure (internal document) will be followed in the case of any incidents or non-compliances.
	(h) procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction	Section 3.8 Section 3.9.3 Section 3.9.4 Section 3.10 CTEAP	Section 3.8, 3.9.3, 3.9.4, 3.10 and the CTEAP detail procedures for rectifying non-compliances with the terms of approval.
	(i) a list of all the CEMP Sub-plans required in respect of construction, as set out in Condition C4. Where staged construction of the CSSI is proposed, the CEMP must also identify which CEMP Sub-plan applies to each of the proposed stages of construction	Table 2-1 Appendix B1-B9	The CEMP Sub-plans required for the Project and detailed in CoA C4 are listed in Table 2-1 and provided in Appendix B1-B9 of this plan.

CoA	Requirement	Reference	How Addressed
	(j) a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER	Section 3.3.1	Section 3.3.1 details the roles and environmental responsibilities of key Project employees and their relationship with the ER, as well as the AA, where relevant.
	(k) an outline of the training and induction for employees, including contractors and sub-contractors, in relation to environmental and compliance obligations under the terms of this approval	Section 3.5	An outline of the training and induction programs for all project employees is provided in Section 3.5 of this plan.
	(l) the process for periodic review and update of the CEMP and all associated plans and programs	Section 3.9.4 Section 3.12 Section 3.13 CTEAP	The CEMP as well as its associated plans and programs will be reviewed and updated in accordance with the details provided in the CTEAP and Sections Section 3.9.4, Section 3.12 and Section 3.13 of this plan.
C3	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of construction, or where construction is staged no later than one (1) month prior to the commencement of that stage.	Section 2.2	This CEMP (Revision 1) received ER endorsement on the 29 of August 2018 (17021-LT-ED-006_0).
C7	Any of the CEMP Sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP.	Section 2.2	The CEMP Sub-plans have been submitted for approval to DPE prior to the final submission of the CEMP for DPE approval.

CoA	Requirement	Reference	How Addressed
C8	Construction must not commence until the CEMP and all CEMP Sub-plans have been approved by the Secretary. The CEMP and CEMP Sub-plans, as approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where the CSSI is being staged, construction of that stage is not to commence until the relevant CEMP and CEMP Sub-plans have been endorsed by the ER and approved by the Secretary.	Section 2.2	Construction will not commence until the CEMP and all CEMP Sub-plans have been approved by DPE. The CEMP and all CEMP Sub-plans will be implemented for the duration of construction.

1.3 Project description

This section provides an overview of the Project as referred to in the CoA and as stated in the EIS Chapter 5 (Project description) and Chapter 6 (Construction work).

The Project is located two to seven kilometres south, southwest and west of the Sydney CBD and crosses the suburbs of Ashfield, Haberfield, Leichhardt, Lilyfield, Rozelle, Annandale, Stanmore, Camperdown, Newtown and St Peters. The Project is generally located within the City of Sydney and Inner West local government areas (LGAs).

An overview of the Project is shown in Figure 1-1.

1.3.1 Project features

The WestConnex M4-M5 Link project is being constructed in two stages (refer to Figure 1-1):

- Stage 1 (the Project and subject of this document): M4-M5 Link Mainline tunnels
- Stage 2: Rozelle interchange.

WestConnex Transurban has engaged Acciona Samsung Bouygues Joint Venture (ASBJV) to design and construct Stage 1 of the project. The key features of the Mainline tunnels project include:

- Twin mainline motorway tunnels between the M4 East at Haberfield and the New M5 at St Peters. Each tunnel would be around 7.5 kilometres long and would generally accommodate up to four lanes of traffic in each direction
- Connections of the mainline tunnels to the M4 East project, comprising:
    - A tunnel-to-tunnel connection to the M4 East mainline stub tunnels east of Parramatta Road near Alt Street at Haberfield
    - Entry and exit ramp connections between the mainline tunnels and the Wattle Street interchange at Haberfield (constructed as part of the M4 East project)
    - Minor physical integration works with the surface road network at the Wattle Street interchange including road pavement and line marking
- Connections of the mainline tunnels to the New M5 project, comprising:
    - A tunnel-to-tunnel connection to the New M5 mainline stub tunnels north of the Princes Highway near the intersection of Mary Street and Bakers Lane at St Peters
    - Entry and exit ramp connections between the mainline tunnels and the St Peters interchange at St Peters (which is currently being constructed as part of the New M5 project)
    - Minor physical integration works with the surface road network at the St Peters interchange including road pavement and line marking
- Construction of tunnel stubs to provide for future underground connection of the mainline tunnels to the Rozelle interchange and Iron Cove Link
- A motorway operations complex at St Peters (Campbell Road) (MOC5). The types of facilities that would be contained within the motorway operations complexes would include substations, water treatment plants, ventilation facilities and outlets (the Campbell Road ventilation facility), offices, on-site storage and parking for employees
- Tunnel ventilation systems, including ventilation supply and exhaust facilities, ventilation fans, ventilation outlets and ventilation tunnels
- Fit out (mechanical and electrical) of part of the Parramatta Road ventilation facility at Haberfield (constructed as part of M4 East project) for use by the M4-M5 Link project

- Drainage infrastructure to collect surface and groundwater for treatment at dedicated facilities
- Water treatment would occur at the Project operational water treatment facility
- Ancillary infrastructure and operational facilities for electronic tolling and traffic control and signage (including electronic signage)
- Emergency access and evacuation facilities, including pedestrian and vehicular cross and long passages and fire and life safety systems
- Utility works, including protection and/or adjustment of existing utilities, removal of redundant utilities and installation of new utilities
- Temporary construction ancillary facilities to facilitate construction of the project at the following locations:
    - Northcote Street civil and tunnel site (C3a), Haberfield
    - Haberfield civil site (C2b), Haberfield
    - Parramatta Road East civil site (C3b), Haberfield
    - Parramatta Road West civil site (C1b), Ashfield
    - Wattle Street civil and tunnel site (C1a), Haberfield
    - Pyrmont Bridge Road tunnel site (C9), Camperdown/Annandale
    - Campbell Road civil and tunnel site (C10), St Peters

An overview of the project footprint and ancillary facilities is presented in the SEMP.

1.3.2 Construction staging

As stated in the EIS Chapter 6 (Construction work) and previously in Section 1.3.1, the M4-M5 Link Project will be constructed and opened to traffic in two stages.

Stage 1 can be summarised to include (see Figure 1-1):

- Construction of the mainline tunnels between the M4 East at Haberfield and the New M5 at St Peters, stub tunnels to the Rozelle interchange (at the Inner West subsurface interchange) and ancillary infrastructure at Campbell Road motorway operations complex (MOC5)
- These works are anticipated to commence in 2018 with the mainline tunnels open to traffic in 2023. At the completion of Stage 1, the mainline tunnels would operate with two traffic lanes in each direction. This would increase to generally four lanes at the completion of Stage 2, when the full project is operational.

Stage 2 can be summarised to include:

- Construction of the Rozelle interchange including:
    - Connections to the stub tunnels at the Inner West subsurface interchange (built during Stage 1)
    - Ancillary infrastructure at the Rozelle West motorway operations complex (MOC2), Rozelle East motorway operations complex (MOC3) and Iron Cove Link motorway operations complex (MOC4)
    - Connections to the surface road network at Lilyfield and Rozelle
    - Construction of tunnels, ramps and associated infrastructure as part of the Rozelle interchange to provide connections to the proposed future Western Harbour Tunnel and Beaches Link project
- Stage 2 works are expected to commence in 2019 with these components of the project open to traffic in 2023.

The total construction period for the Project is programmed to occur across five years, which includes commissioning that would occur concurrently with the final stages of construction. Further staging details would be confirmed when construction contractors have been engaged.

A more detailed description of how the Project would be constructed is provided in Chapter 6 (Construction work) of the EIS.

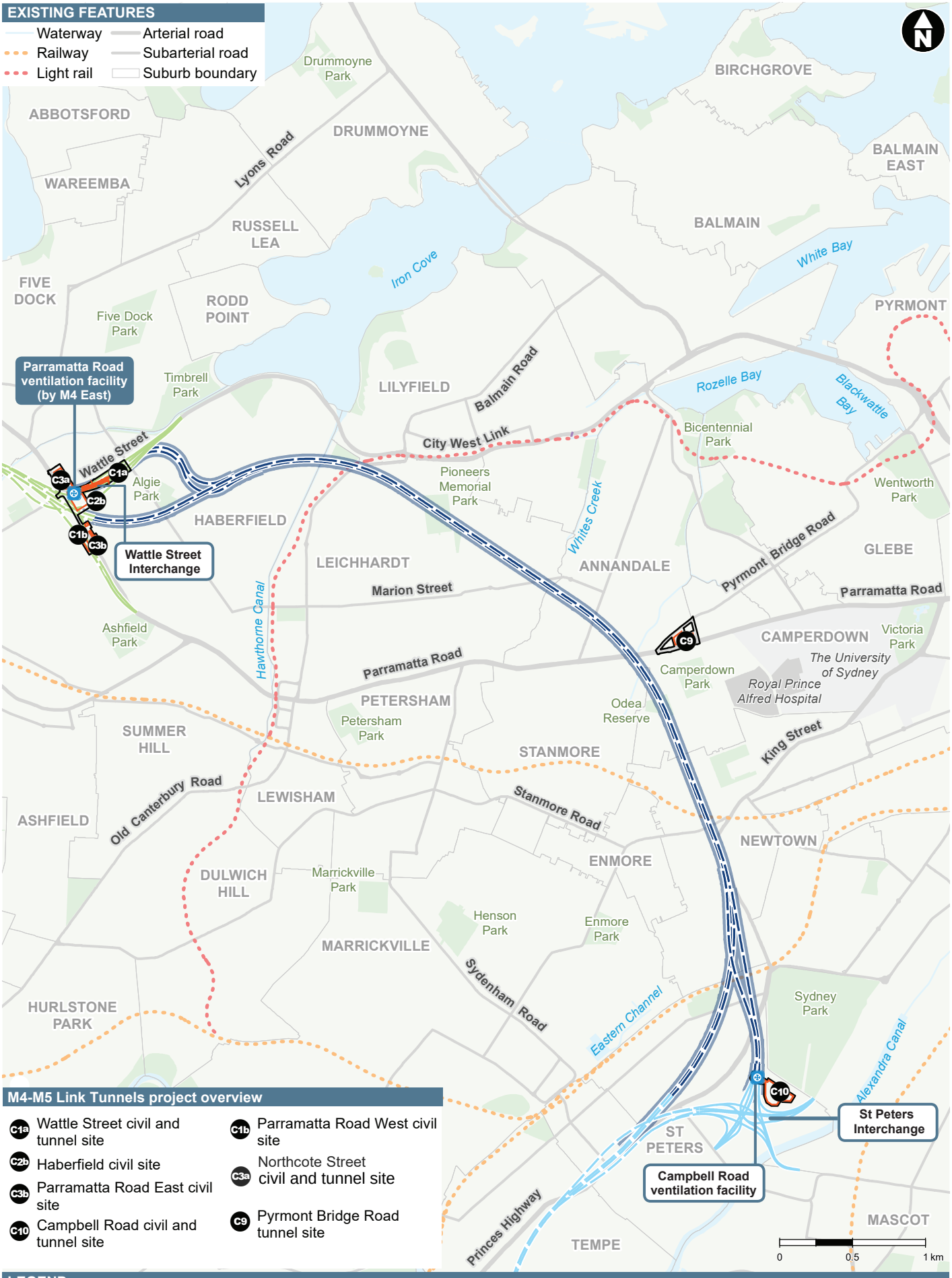

Figure 1-1 Overview of Stage 1 (the Project)

1.3.3 Construction activities and sequence

The key construction activities for the Project are summarised in Table 1-2 below and detailed in Chapter 6 of the EIS (Construction work). The list is not exhaustive and some of these activities may be undertaken prior to construction as part of early works packages prior to the CEMP being approved. Early works packages will be those activities which do not constitute 'construction' as defined in the CoA Schedule 1 Table 1 "Definitions and Terms".

Table 1-2 Overview of construction activities

Component	Typical Activities
Site establishment and enabling works (where permitted under CoA framework)	• Vegetation clearing and removal • Utility works • Traffic management measures • Install safety and environmental controls • Install site fencing and hoarding • Establish temporary noise attenuation measures • Demolish buildings and structures • Carry out site clearing • Construction of Water Treatment Facilities • Heritage salvage or conservation works (if required) • Establish construction ancillary facilities and access • Supply utilities (including construction power) to construction facilities • Establish temporary pedestrian and cyclist diversions as required.
Surface earthworks and structures	• Topsoil stripping • Construct dive and cut-and-cover tunnel structures • Install stabilisation and excavation support (retention systems) such as sheet pile walls, diaphragm walls and secant pile walls (where required) • Establish acoustic sheds • Construct required retaining structures • Excavate new road levels.
Surface grouting	• Installation of site sheds and amenities • Installation of grout supply lines including either a floating or elevated crossing of the canal • Installation of grout plant and associated machinery. • Drilling of grout holes • Install packers within boreholes to facilitate grouting of target zones • Grouting of grout holes • Where required undertake abbreviated water testing • Repeat the process until all the holes are grouted.
Tunnel Construction	• Construct temporary access tunnels

Component	Typical Activities
	• Excavate mainline tunnels, entry and exit ramps and associated tunnelled infrastructure and install ground support • Spoil management and haulage • Finishing works in tunnel and provision of permanent tunnel services • Construct new pits and pipes • Construct new groundwater drainage system • Connect drainage to existing network • Construct sumps / spill containment in tunnels as required • Install road pavements • Line mark to new road surfaces • Erect directional and other signage and other roadside furniture such as street lighting • Mechanical and Electrical fit out • Erect toll gantries, signage and other control systems • Construct pedestrian and cyclist paths • Carry out earthworks at disturbed areas to establish the finished landform • Carry out landscaping • Closure and backfill of temporary access tunnels (except where these are to be used for inspection and/or maintenance purposes) • Site demobilisation and preparation of the site for a future use.
Operational ancillary facilities	• Install ventilation systems and facilities at St Peters • Mechanical and Electrical fit out of ventilation facilities at Haberfield • Works in WestConnex Disaster Recovery Site (WDRS) at Homebush • Integration works at WestConnex Motorway Control Centre (WMCC) at St Peters. • Construct operational phase water treatment facility • Construct fire pump rooms and install water tanks • Test and commission plant and equipment • Construct electrical substations to supply permanent power to the project.

Construction of the Project is planned to start in the fourth quarter of 2018, with completion planned for the 2023. The total period of construction works is expected to be around four years, with around twelve months of commissioning occurring concurrently with the final stages of construction. An indicative program is shown in Figure 1-2 which has been updated from the indicative program shown in the EIS with recent information from the detailed design stage.

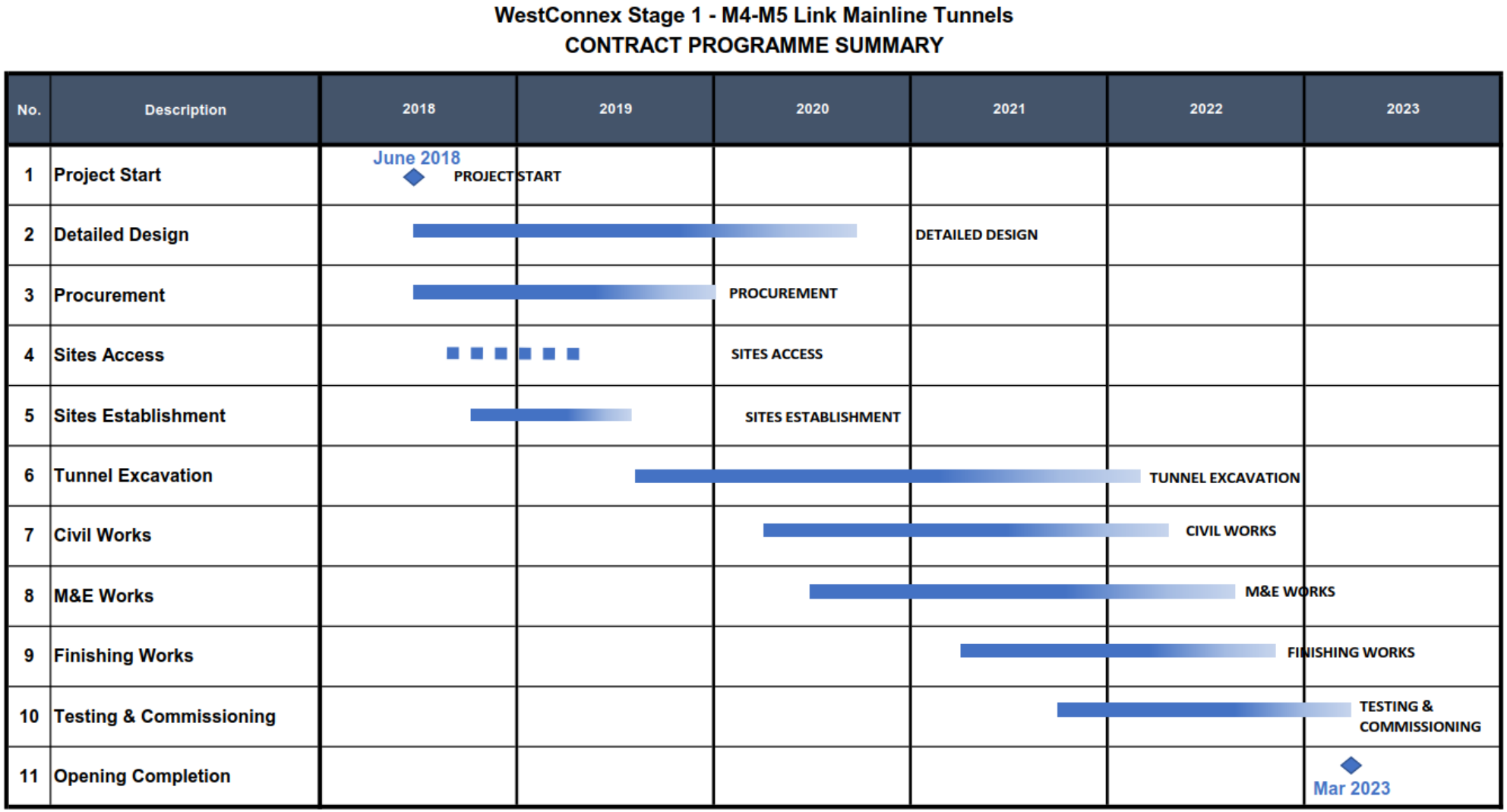

Figure 1-2 Indicative construction program based on detailed design

1.3.4 Compound and ancillary facilities

The EIS (AECOM 2017) identified eight potential ancillary facilities will be required to support construction for the Project. ASBJV intend to utilise seven of these facilities during construction. Following the EIS and as detailed in the SPIR, an additional construction ancillary facility (White Bay civil site C11) was identified. C11 is located at Rozelle near White Bay, on land owned by the Port Authority of NSW. C11 is not proposed for use by the Project.

An overview of the location of the ancillary facilities proposed for the M4-M5 Link Project is provided in Figure 1-1.

The EIS Chapter 6 (Construction work) provides an assessment of the characteristics, likely activities and potential impacts at each site. The number, location and layout of construction ancillary facilities will be finalised as part of detailed construction planning during detailed design. One of the seven total temporary ancillary facilities required is to become a permanent facility to assist the motorway and tunnel operation (C10 Campbell Road civil and tunnel site will become the Campbell Road motorway operations complex (MOC5)).

The establishment of ancillary facilities prior to CEMP approval has been addressed in the Site Establishment Management Plans (SEMPs) which detail the location, composition and purpose of compound and ancillary facilities required for the Project. Where a facility is to be established following the approval of the CEMP, establishment of those facilities will be completed in accordance with the management and mitigation measures set out in the CEMP and its Sub-plans. All facilities will be operated in accordance with the management and mitigation measures set out in the CEMP and its Sub-plans.

Figure 1-1 shows the locations of the proposed ancillary facilities for the Project. A summary of the primary uses of the current approved facilities for construction to facilitate construction of the Project are listed in Table 1-3.

Table 1-3 Ancillary facilities and key uses proposed during construction with information from the EIS Chapter 6 (Construction works), the SPIR and recent detailed design development information

Ancillary Facility	Primary use during Project construction	Primary use during Project operation
(C1a) Wattle Street, Haberfield	Civil site Tunnel site	Part of operational motorway
(C3a) Northcote Street civil and tunnel site	Tunnel and civil site	None
(C1b) Parramatta Road West, Ashfield	Civil site	None

Ancillary Facility	Primary use during Project construction	Primary use during Project operation
(C2b) Haberfield civil site	Civil site	Will include ventilation facilities including outlets, fire and life safety systems, workshop facilities, bulky equipment storage, emergency evacuation, an operational Water Treatment Plant and extraction infrastructure and electrical substations
(C3b) Parramatta Road East, Haberfield	Civil site	None
(C9) Pyrmont Bridge Road, Camperdown/Annandale	Tunnel site	None
(C10) Campbell Road, St Peters	Civil site Tunnel site	Campbell Road motorway operations complex (MOC5). Will include a water treatment plant, ventilation facilities including outlets, fire and life safety systems, emergency evacuation and extraction infrastructure and electrical substations

1.4 Scope of the CEMP

The scope of this Plan is to describe how ASBJV propose to manage environmental issues during construction of the Project. Operational environmental issues and management measures do not fall within the scope of this Plan and therefore are not included within the processes contained within this Plan.

1.5 Environmental Management System overview

An Environmental Management System (EMS) has been developed by ASBJV for the Project based on the LLE Environmental Management System which is certified under the LLE (now Acciona) ISO 14001:2015 accreditation.

The ASBJV EMS, including the CEMP, developed for the Project has been prepared:

- To comply with the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004)
- To comply with the principles of AS/NZS ISO 14000 Environmental Management Standards Set
- To comply with the TfNSW Specifications G36 and relevant environmental and approval documents
- To comply with the NSW Government – Environmental Management System Guidelines, Third Edition August 2013.

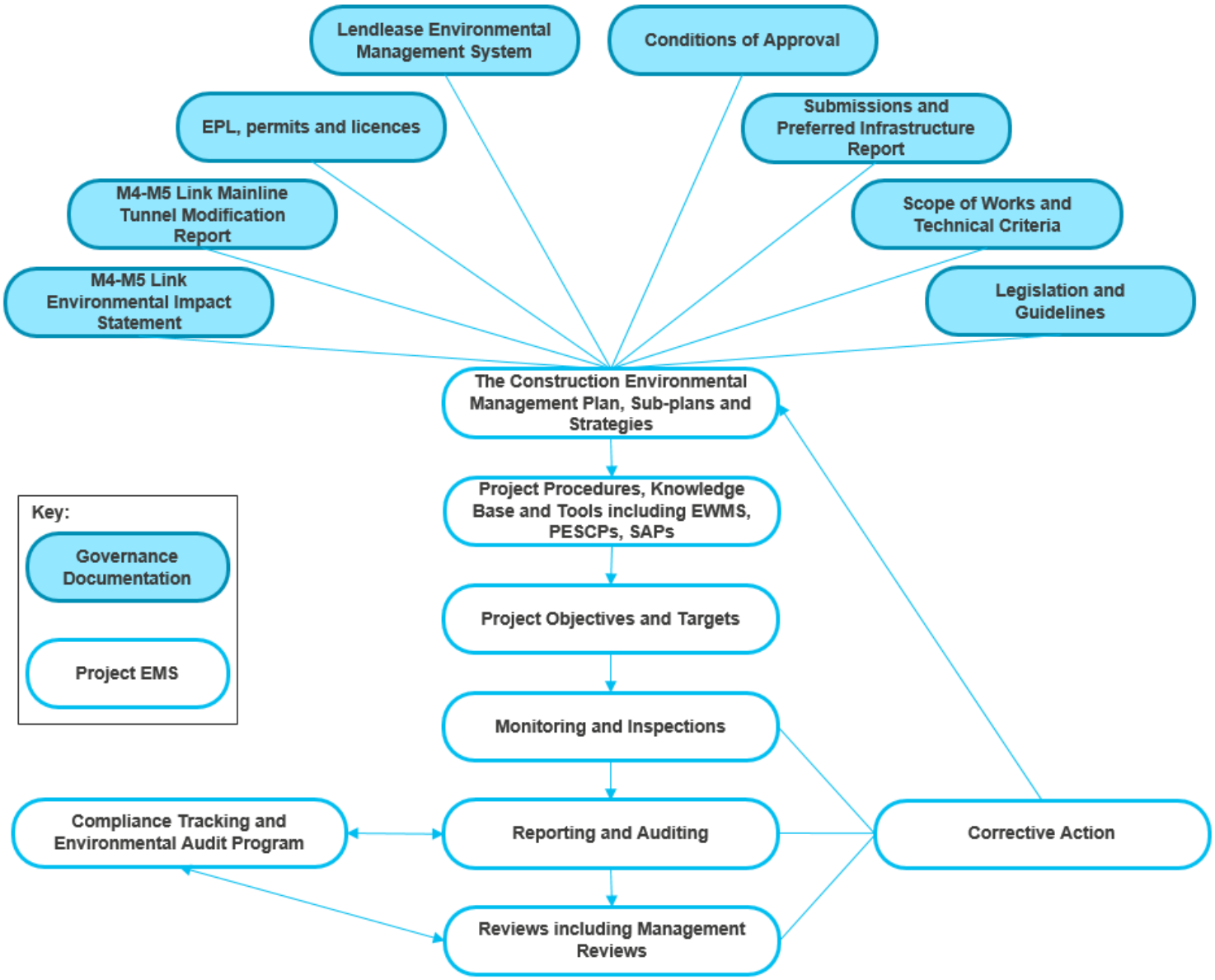

Figure 1-3 Project EMS structure

The EMS is summarised in Figure 1-3 and consists of the following key components:

- Governance documentation that defines the environmental framework, standards and resources of the EMS
    - Includes the LLE EMS, Environment Policy and procedures, as well as a sound knowledge base and tools which underpin the priorities and principles of the ASBJV culture which will be demonstrated by all employees and applied in all aspects of running the Project
- Project specific documentation which builds on the expectations, policies and objectives in the governance documentation to develop a project-specific management plan and supporting resources as required. These include:
    - The CEMP is the overarching environmental management plan for the Project and contains a suite of environmental management documents. The CEMP:
        - Provides a structured and systematic approach to manage and minimise environmental impacts during construction of the Project
        - Describes the actions to be taken by the Project to comply with the LLE EMS, all applicable environmental laws, obligations and approvals and minimise environmental impacts
        - Proposes environmental targets and objectives and describes how ASBJV will achieve these environmental outcomes during construction of the Project through environmental management practices and procedures
        - Establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment
        - Is consistent with the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004), TfNSW Specification G36 and has been developed with consideration of the Project requirements and safeguards including the CoA and REMM presented in the SPIR
    - The CEMP Sub-plans and Monitoring Programs as required in the CoA are listed in Table 2-1. These address environmental measures, approval requirements and processes applicable to specific impacts of the Project's activities and guide environmental management
    - Project specific procedures, knowledge base and tools (ASBJV EMS procedures, tools, forms and templates will provide additional detail to support the CEMP and Sub-plans or are used in the implementation of the CEMP). The LLE EMS forms and procedures have been summarised below in Table 1-4. Project specific forms and procedures will be developed from these LLE EMS documents. Project specific documentation also includes:
        - Environmental Work Method Statements (EWMS)
        - Progressive Erosion and Sediment Control Plans (PESCPs)
        - Sensitive Area Plans (SAPs)
    - Project objectives and performance targets.

The full suite of EMS (governance and project specific) documentation can be found in Appendix A4 of this CEMP (Document Register). Included in Appendix A4 are example Schedules. These Schedules are working elements of the CEMP and they will be regularly reviewed throughout construction as required outside of the CEMP and these updates will be approved by the Environment and Sustainability Manager.

Table 1-4 LLE procedures

LLE Document No.	LLE Document Name
LSB107	Non-conformance, Corrective and Preventive Action
LSB701A	Environmental Work Method Statement
LSB702	Figure 1 Potential Critical Incident Notification
LSB702A	Environmental Incident Report
LSB702B	Environmental Incident Investigation
LSB703A	Environmental Inspection Checklist
LSB703B	Environmental Observation Report
LSB703C	Environmental Improvement Notice
LSB704A	Environment, Community and Sustainability Project Conversion Plan (PCP) Checklist and Summary Report
LSB705A	Sediment Basin Discharge Permit
LSB705B	Dewatering Permit
LSB708A	Monitoring Record – Noise Event
LSB708B	Monitoring Record – Vibration Event
LSB708C	Out of Hours Application Form
LSB700	General Requirements
LSB701	Environmental Risk Management in Project Delivery
LSB702	Environmental Incidents and Emergencies
LSB703	Environmental Monitoring and Inspection
LSB704	PCP Environment and Sustainability Review
LSB705	Water Quality
LSB706	Soil Conservation
LSB707	Air Quality
LSB708	Noise and Vibration
LSB709	Flora and Fauna
LSB710	Landscape and Rehabilitation
LSB711	Archaeology and Heritage
LSB712	Waste Management
LSB713	Contaminated Sites
LSB714	Community and Stakeholder Engagement
LSB715	Materials Selection and Resource Consumption

In addition to specifying the day-to-day environmental management of the Project, the CEMP details activities performed to deliver continuous improvement in environmental performance. ASBJV will ensure the continuous improvement of the EMS and CEMP through:

- Constant measurement and evaluation such as through monitoring and inspections

- Internal and external audits
- Reviewing the effectiveness of the CEMP
- Adjustment and improvement of the CEMP, Project environmental outcomes and the ASBJV EMS.

Further details regarding the improvement process and the CEMP can be found in Section 3.10, 3.12 and 3.13 of this Plan.

2 Endorsement and approval

2.1 Internal consultation

The development of the CEMP and its Sub-plans and monitoring programs involved detailed review of the documentation by ASBJV Environmental Managers, Construction Managers, the Environment and Sustainability Manager and finally the Project Director.

Following ASBJV satisfaction of the documents, a review process was completed with WestConnex Transurban, TfNSW and Environmental Representative (ER) prior to submission of the document to the Department of Planning and Environment (DPE).

2.2 External consultation

External consultation for the CEMP's Sub-plans and monitoring programs was undertaken with relevant stakeholders, agencies, regulatory authorities and the Secretary. The process for consultation, endorsement and subsequent approval is detailed in Table 2-1.

In accordance with CoA C6, CEMP Sub-plans must be endorsed by the ER and then submitted to DPE no later than one month prior to the commencement of construction. The CEMP Sub-plans will be submitted to DPE along with, or subsequent to, the submission of this CEMP as outlined in CoA C7. Construction will not commence until the CEMP and all CEMP Sub-plans have been approved by DPE consistent with CoA C8. Additionally, the approved CEMP and CEMP Sub-plans, including any amendments approved by the ER, will be implemented for the duration of construction.

Consultation will continue through the Design and Construct (D&C) of the Project with relevant stakeholders and government authorities.

A separate document 'Stakeholder Consultation and Comments Tracking Register' has been prepared to detail the consultation process and how stakeholder comments were addressed in accordance with CoA A6 relative to each document.

ASBJV responses to consultation feedback received are included in the Register, which has been provided to DPE for information.

Table 2-1 CEMP consultation and approval requirements (A = Approval required, C = consultation required, E = endorsement required)

	COA	Stakeholder															
		DPE	WestConnex Transurban	TfNSW	EPA	OEH	DoI Water	DPI Fisheries	NSW Health	Sydney Water	Port Authority	Heritage Council of NSW	Heritage Division	Sydney Coordination Office	Local Councils	ER	**AA**
CEMP																	
CEMP	C3	A	C	C												E	
CEMP Sub-plans																	
Transport and Traffic and Access Management Sub-plan	C4 C6	A	C	C							C			C	C	E	
Noise and Vibration Management Sub-plan	C4 C6	A	C	C	C										C	E	E
Flora and Fauna Management Sub-plan	C4 C6	A	C	C		C									C	E	
Air Quality Management Sub-plan	C4 C6	A	C	C	C										C	E	
Soil and Surface Water Management Sub-plan	C4 C6	A	C	C	C	C	C			C					C	E	
Groundwater Management Sub-plan	C4 C6	A	C	C			C									E	
Non-Aboriginal Heritage Management Sub-plan	C4 C6	A	C	C								C	C		C	E	
Aboriginal Heritage Management Sub-plan	C4 C6	A	C	C		C										E	
Waste Management Sub-plan	C4 C6	A	C	C												E	
CEMP Sub-plan Monitoring Programs																	
Surface Water Quality	C9 C14	A	C	C			C			C					C	E	

	COA	Stakeholder															
		DPE	WestConnex Transurban	TfNSW	EPA	OEH	DoI Water	DPI Fisheries	NSW Health	Sydney Water	Port Authority	Heritage Council of NSW	Heritage Division	Sydney Coordination Office	Local Councils	ER	**AA**
Monitoring Program																	
Groundwater Monitoring Program	C9 C12 C14	A	C	C	C		C	C		C					C	E	
Noise and Vibration Monitoring Program	C9 C11 C14	A	C	C					C						C	E	E
Dust Deposition Monitoring Program	C9 C14	A	C	C	C											E	
Blast Monitoring Program	C9	A			C											E	E

Ongoing consultation with stakeholders, including the surrounding community, will be conducted throughout construction in accordance with the Community Communications Strategy (CCS). For details regarding revisions of this document post-approval of the CEMP, refer to Sections 3.12 and 3.13 of this document.

3 Environmental Management Plan

3.1 Preparation and availability of the CEMP

3.1.1 Preparation

The CEMP has been prepared in accordance with the Guideline for the Preparation of Environmental Management Plans (DIPNR, 2004) and the LLE EMS which has been adopted into the Project EMS.

The CEMP incorporates all relevant requirements of the EIS documentation, CoA, SPIR, Project Modification report as well as all relevant licences, permits and approvals for the Project including an Environment Policy. The ASBJV signed corporate Environment Policy has been attached to this CEMP (Appendix A3) and was developed in accordance with requirements outlined in Section 5.2 of ISO 14001:2015.

For further detail regarding CEMP preparation refer to Section 1.5, Section 2.2 and Section 2.3 of this Plan. The CEMP will be submitted to TfNSW, WestConnex Transurban and the Secretary prior to commencement of works as outlined in the CoA and TfNSW Specification G36 Clause 3.1.

3.1.2 Availability

This CEMP will be available to all personnel and sub-contractors via the Project document control management system. An electronic version of the CEMP is available on the project website, in accordance with CoA B17.

Subject to confidentiality, all documents subject to the CoA B17, including this CEMP will be made available for public inspection if requested. In accordance with CoA B17, copies of the following documents will be published prior to works commencing and maintained on the Project website:

- Information on the current implementation status of the CSSI
- A copy of the documents listed in CoA A1 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval
- 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
- A copy of each licence or permit required and obtained in relation to the CSSI.

Where a CoA requires a document to be prepared prior to commencement of any work or construction, a current copy of the relevant document will also be published on the Project website before the activity is undertaken.

Confidential information, which may include the location of threatened species, Aboriginal objects or places and personnel contact details, will be removed from all documents provided or made available to the public. The Project's Environment Policy will be displayed on the Project website, at the site office, and communicated to staff and other interested parties via inductions and ongoing awareness programs.

The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project office. Copies of this CEMP will be distributed via the Project document management system to:

- ASBJV Project Director
- ASBJV Design and Construction Director
- ASBJV Environment and Sustainability Manager

- ASBJV Public Liaison Manager
- Roads & Maritime
- WestConnex Transurban
- The ER
- The AA.

3.2 Planning

3.2.1 Environmental Risk Assessment Workshop

An environmental risk assessment workshop was held for the Project and involved site management staff including the ASBJV Environment and Sustainability Manager and other Environmental personnel, ASBJV construction personnel, WestConnex Transurban personnel, the TfNSW Representative and the ER.

Each key construction phase was assessed to identify the associated environmental hazards, initial risk levels, mitigation measures and how to avoid, manage and/or minimise the risks and residual risks. Each of these items were documented in an environmental risk register (Appendix A2).

Where residual risk is assessed as high, or if required under the Contract Specification, an EWMS will be developed for that activity.

Where relevant, the requirements from the TfNSW Environmental Specification G36, CoA and REMM will be incorporated into the environmental risk assessment and EWMS, particularly in developing the agreed activity specific site controls.

Appendix A2 contains a list of environmental aspects and impacts including those identified in the risk assessment workshop.

Following the workshop, the environmental risk assessment will be regularly reviewed and an ongoing risk analysis for the Project will be conducted during Management Reviews as detailed in Section 3.13 and in accordance with the LLE Environmental Risk Management in Project Delivery Procedure.

3.2.2 Regulatory requirements and compliance

Legislation

A register of legal and other requirements for the Project, current at the time of CEMP submission for approval, are contained in the Legal Requirements Register (Appendix A1).

This register will be regularly reviewed by the Project team, such as during management reviews, and updated with any applicable legislative changes to ensure the register remains up to date and current. Any changes made to the legal requirements register will be communicated to the wider Project team, including subcontractors where necessary through toolbox talks, specific training and other methods detailed in Section 3.4 of this CEMP.

Access to all relevant legislation will be available to Environment Team personnel via EnviroLaw or other online resources (e.g. state or Commonwealth government websites or www.austlii.edu.au).

Approvals, permits and licences

Approvals, permits and licenses are required for the Project. All necessary licences, permits and approvals required for the development of the Project have and/or will be obtained and maintained as required throughout construction of the Project. The timing to obtain each necessary regulatory approval is determined and included within the Project program linked to relevant activities. The Legal Requirements Register (Appendix A1) and CTEAP of this CEMP contains a register of all relevant environmental approvals, permits and licenses. The following approvals and licences listed in Table 3-1 are required for the Project:

Table 3-1 Environmental approvals, permits and licences relevant to the delivery phase of the Project

Approvals / Permit / Licence	Regulatory authority	Timing	Status of the approval/ permit/ licence
Instrument of Approval under the EP&A Act	DPE / Minister for Planning	Prior to commencement of works	Approved 17 April 2018, updated on 25 February 2019
Environment Protection Licence (EPL) will be required for activities listed in Schedule 1 of the POEO Act	EPA	Prior to scheduled activities or works that enable a scheduled activity	EPL 21149 issued 9 October 2018
Section 143 notice of POEO Act	EPA	Prior to transportation of waste to receiving facility	Ongoing
Road Occupancy Licences (RoLs)	Roads and Maritime Councils	Prior to commencement of traffic related works that require access to roads	Ongoing

The register will be maintained by the ASBJV Environment and Sustainability Manager and will be updated to include conditions associated with newly received regulatory approvals.

No CoA of the Project Approval removes the obligation for ASBJV to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 5.23 (formerly referred to as Section 115ZG) of the EP&A Act.

Compliance tracking

A CTEAP has been established for the Project to track compliance with the requirements of CoAs A27 and A36. The Project Approval, CoA and REMM are contained in the CTEAP and provide a reference to where each requirement is addressed by this CEMP or other Project documentation. The timing, compliance status, responsibility and evidence or reference of compliance will be included in the compliance reports undertaken as described in the CTEAP.

For further details regarding the CTEAP and reporting refer to Section 3.9.4 of this Plan.

3.2.3 Environmental objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. The CEMP environmental objectives have been developed in accordance with the outcomes of the environmental risk assessment workshop and are consistent with the ASBJV Environmental Policy (included in Appendix A3). These objectives and targets have been developed with consideration of key performance outcomes for each key issue, as specified in the Project CoA and REMM. The objectives and targets are consistent with the Project Environment Policy and will assist in monitoring whether the commitments of the policy are being met.

The performance of the project will be monitored against the objectives and targets. Project performance monitoring will be documented in the Project construction compliance reports (refer to Section 3.9.4) and at least on a six monthly basis as part of the management review.

Environmental objectives and targets for the Project are incorporated into relevant environmental management Sub-plans and a summary is provided in Table 3-2 below.

The Project's environmental management objectives are to:

- Establish and maintain an environmental management system in accordance with AS/NZS ISO 14001:2015, contract requirements and relevant legislation
- Regularly review business operations, identify and implement opportunities for improvement
- Educate our Project team including sub-contractors on key environmental issues, management controls
- Prevent pollution, reduce waste and commit to recovery and recycling
- Restore/enhance natural environments, implement social benefits such as safer travel and local employment, as well as to deliver the Project efficiently and in a commercially sound manner
- Compliance with all relevant legislative requirements.

Table 3-2 Environmental objectives and targets

Objective	Target	Management & Measurement tool
Construction of the Project in accordance with environmental approvals	• Full compliance with statutory approvals.	Audits, construction compliance reporting, management view.
Compliance with all legal requirements	• No regulatory infringements (Penalty Infringement Notices or prosecutions)	Audits, construction compliance reporting, management review, EPL annual returns.
Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001	• Address non-conformances and corrective actions within specific timeframes.	Audits, management reviews.
Continuously improve environmental performance and the EMS	• Develop and maintain a program of ongoing environmental training • Capture lessons learnt from environmental incidents to minimise repeat issues • Encourage innovation and effort throughout the works force.	Construction compliance report, management review.
Foster environmental awareness and genuine respect for environmental protection in employees	• Include environmental awareness in the Project induction and ongoing toolbox talks • Environmental management plans include environmental responsibilities allocated to relevant site personnel.	EMS Audit, Induction, induction records, toolbox talk records, CEMP and Sub-plans.
Participate in a sustainability measurement program	• Achievement of an 'Excellent' Design and As Built rating from Infrastructure Sustainability Council of Australia (ISCA)	ISCA rating program.
Identify and manage risks to, and impacts on, the	• Maintain a risk register, which includes an assessment of environmental risks	Risk register, construction

Objective	Target	Management & Measurement tool
environment from our work	• Track environmental compliance against relevant requirements.	compliance reporting through CTEAP.
Project Performance Outcomes - Construction Phase		
Consultation The project is developed with meaningful and effective engagement during project design and delivery.	• Engaged and informed community and key stakeholders.	Community consultation will be undertaken in accordance with the CCS throughout the delivery of the Project to meet the consultation performance outcomes.
Transport and Traffic Network connectivity, safety and efficiency of the transport system in the vicinity of the project are managed to minimise impacts. The safety of transport system customers is maintained. Impacts on network capacity and the level of service are effectively managed. Works are compatible with existing infrastructure and future transport corridors.	• Minimise impacts to local streets from loss of parking, road closures and heavy vehicles • Minimise impacts to road network efficiency during construction • Maintain pedestrian and cyclist safety • Access to properties would be maintained.	Construction activities will be managed in accordance with the TTAMP and CPAS to meet the Project's transport and traffic performance outcomes.
Air Quality The project is designed, constructed and operated in a manner that minimises air quality impacts (including nuisance dust and odour) to minimise risks to human health and the environment to the greatest extent practicable.	• Effective management of dust, odour and other emissions during construction.	Construction activities will be managed in accordance with the AQMP to meet the Project's air quality performance outcomes.
Health and Safety The project avoids or minimises any adverse health impacts arising from the project.	• Establish and operate ancillary facilities and construction sites to protect road user and public safety • Hazardous materials within project areas will be managed to protect human health	Construction activities will be managed in accordance with the SEMP, CEMP, NVMP, SSWMP and TTAMP to meet the

Objective	Target	Management & Measurement tool
The project avoids, to the greatest extent possible, risk to public safety.	• Minimise incidents and crashes and risks to public safety during construction.	Project's health and safety performance outcomes.
Noise and Vibration - Amenity Construction noise and vibration (including airborne noise and ground-borne noise) are effectively managed to minimise adverse impacts on acoustic amenity.	• Comply with the relevant criteria from the NSW Industrial Noise Policy • Minimise increases in road traffic noise • Effective management of construction noise and vibration in accordance with relevant guidelines.	Construction activities will be managed in accordance with the NVMP to meet the Project's Noise and Vibration (amenity) performance outcomes.
Noise and Vibration - Structural Construction noise and vibration (including airborne noise and ground-borne noise) are effectively managed to minimise adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage. Increases in noise emissions and vibration affecting environmental heritage as defined in the Heritage Act 1977 during operation of the project are effectively managed.	• No damage to features of heritage conservation significance from vibration.	Construction activities will be managed in accordance with the NVMP and NAHMP to meet the Project's Noise and Vibration (structural) performance outcomes.
Biodiversity The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity. Offsets and/or supplementary measures are assured which are equivalent to any remaining impacts of project construction and operation.	• Minimise impact to aquatic biodiversity values • Minimise removal of high retention value trees • Compensatory tree planting.	Construction activities will be managed in accordance with the FFMP and SSWMP to meet the Project's biodiversity performance outcomes.
Urban Design and Visual Amenity	• Sympathetic urban design that integrates with adjacent and historical land uses	The project design complements the visual amenity, character and quality

Objective	Target	Management & Measurement tool
The project design complements the visual amenity, character and quality of the surrounding environment. The project contributes to the accessibility and connectivity of communities. The project minimises adverse impacts on the visual amenity of the built and natural environment (including public open space) and capitalises on opportunities to improve visual amenity.	• Establish and operate ancillary facilities to minimise adverse impacts on the visual amenity of the local community.	of the surrounding environment will be managed through the implementation of the UDLP.
Socio-economic, Land Use and Property The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities. The project minimises impacts to property and business and achieves appropriate integration with adjoining land uses, including maintenance of appropriate access to properties and community facilities, and minimisation of displacement of existing land	• Minimise property acquisition • Manage the property acquisition process to minimise impacts to community • Minimise impacts to businesses during construction • Make provision for social infrastructure.	The implementation of the CCS will minimise adverse social and economic impacts and capitalises on opportunities potentially available to affected communities. The implementation of the Business Management Plan will minimise impacts to property and business and achieves appropriate integration with adjoining land uses.
Water – Hydrology and Quality Long term impacts on surface water and groundwater hydrology (including drawdown, flow rates and volumes) are minimised. The environmental values of nearby, connected and affected water sources, groundwater and dependent ecological	• Design and construct tunnels to minimise groundwater inflow • Establish water quality discharge criteria with consideration of NSW Water Quality Objectives • Effectively treat water to meet water quality discharge criteria • Maximise reuse of treated water during construction.	Management of soil and surface water will be undertaken throughout the delivery of the Project in accordance with the SSWMP. Groundwater will be managed throughout the delivery of the Project in accordance with the

Objective	Target	Management & Measurement tool
systems including estuarine and marine water (if applicable) are maintained (where values are achieved) or improved and maintained (where values are not achieved). Sustainable use of water resources. The project is designed, constructed and operated to protect the NSW Water Quality Objectives where they are currently being achieved, and contribute towards achievement of the Water Quality Objectives over time where they are currently not being achieved, including downstream of the project to the extent of the project impact including estuarine and marine waters (if applicable).		GWMP and the Project EPL.
Flooding The project minimises adverse impacts on existing flooding characteristics. Construction and operation of the project avoids or minimises the risk of, and adverse impacts from, infrastructure flooding, flooding hazards, or dam failure.	• Meet flooding criteria determined during project detailed design.	Detail design development in accordance with CoA. The implementation of the Flood Mitigation Strategy will minimise the risk of, and adverse impacts from, infrastructure flooding, flooding hazards.
Soils The environmental values of land, including soils, subsoils and landforms, are protected. Risks arising from the disturbance and excavation of land and disposal of soil are minimised, including disturbance to acid sulfate	• 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 ASS in accordance with good practice measures • Manage contamination to protect environmental values and human health.	Construction activities will be managed in accordance with the SSWMP to meet the Project's soils performance outcomes.

Objective	Target	Management & Measurement tool
soils (ASS) and site contamination.		
Heritage The design, construction and operation of the project facilitates, to the greatest extent possible, the long term protection, conservation and management of the heritage significance of items of environmental heritage and Aboriginal objects and places. The design, construction and operation of the project avoids or minimises impacts, to the greatest extent possible, on the heritage significance of environmental heritage and Aboriginal objects and places.	• Establish archival recording of items of heritage significance that will be demolished • Salvage features and fabric of heritage significance for redistribution to the community • Minimise impacts on heritage items during construction • Incorporate key heritage values and stories into the final urban design and landscaping outcome • Minimise damage to features of heritage conservation significance from vibration • Avoid damage to AHIMS site #45-6-2278.	Construction activities will be managed in accordance with the NAHMP to meet the Project's heritage performance outcomes.
Sustainability The project reduces the NSW Government's operating costs and ensures the effective and efficient use of resources. Conservation of natural resources is maximised.	• Achieve an Infrastructure Sustainability Council of Australia rating of 'Excellent'.	Implementation of the Sustainability Strategy and the Sustainability Management Plan will reduce the NSW Government's operating costs and ensures the effective and efficient use of resources and ensure conservation of natural resources is maximised.
Waste All wastes generated during the construction and operation of the project are effectively stored, handled, treated, reused, recycled and/or disposed of lawfully and in a manner that protects environmental values.	• Recycle or reuse uncontaminated spoil either on site or off-site • Manage off-site waste re-use in accordance with relevant NSW Environment Protection Authority resource recovery exemptions and requirements • Dispose of waste at appropriately licensed facilities.	Construction activities will be managed in accordance with the WMP to meet the Project's Waste performance outcomes.
Climate Change Risk	• Incorporate climate change and sea level rise adaptation measures into the	The implementation of the Sustainability

Objective	Target	Management & Measurement tool
The project is designed, constructed and operated to be resilient to the future impacts of climate change.	detailed design and construction planning for the project.	Management Plan, Flood Mitigation Strategy, Climate Change Risk Assessment and Detailed Design.

3.2.4 Environmental Work Method Statement and Sensitive Area Plans

Environmental Work Method Statements

EWMS will be prepared for high-risk activities identified through the Environmental Risk Assessment Workshop (refer to Section 3.2.1).

EWMS will be prepared prior to the commencement of relevant construction activities. They will incorporate relevant mitigation measures and controls, including those from relevant management Sub-plans and key procedures to be used concurrently with the EWMS. EWMS are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

EWMS will be prepared progressively prior to and throughout construction, in consultation with the relevant site management personnel. This will ensure that all issues are addressed, methods and activities are practical and all personnel are aware of their commitments and responsibilities.

In accordance with the TfNSW Specification G36 the EWMS will include at least the following elements:

- 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
- Process for assessing the performance of the implemented mitigation measures.

All construction personnel and sub-contractors undertaking a task governed by an EWMS must participate in training on the EWMS, and acknowledge that they have read and understood their obligations by signing an attendance record prior to commencing work.

Regular monitoring, inspections and auditing of compliance with the EWMS will be undertaken by project management and environmental personnel to ensure its effectiveness and that all controls are being followed and that any non-conformances are recorded and corrective actions implemented. Any improvements or changes identified in such reviews will be incorporated into subsequent revisions of the EWMS.

Sensitive Area Plans

The Project traverses a range of environmental and socially sensitive areas/sites. To assist with construction planning and management, these site constraints are consolidated on a series of map-based sheets that extend the length of the Project. The SAPs include information pertaining, but not limited to:

- Noise sensitive receivers (e.g. residential dwellings, hospitals, educational institutions)
- Flora features, including threatened species and endangered ecological communities

- Aboriginal and non-Aboriginal heritage sites, including items, places, objects and conservation areas
- Local waterways
- Contamination, including potential or actual acid sulphate soil areas, contaminated sites or a “sensitive place” as defined in TfNSW Specification G36 Clause 1.3.

SAPs will be used in conjunction with EWMS to help identify key risk areas and to promote ongoing communication to construction personnel during the Project.

As SAPs are a working element of the CEMP, they will be regularly reviewed throughout construction to reflect true ground conditions and identify new environmentally sensitive areas. A SAP update will not require the CEMP to be updated as they will be a document controlled within the Project’s Geographic Information System (GIS). The GIS can be accessed by all Project personnel via the Project’s Intranet.

As part of the environmental induction, all staff and subcontractors working on site will be provided with an understanding of the risks associated with working in or near environmentally sensitive areas, and training on implementing the relevant environmental protection measures. The current SAPs are presented in Appendix A5.

3.3 Resources, responsibilities and authority

The key environmental management roles and responsibilities for the construction phase of the Project are described below. The structure of these roles is shown in Figure 3-1.

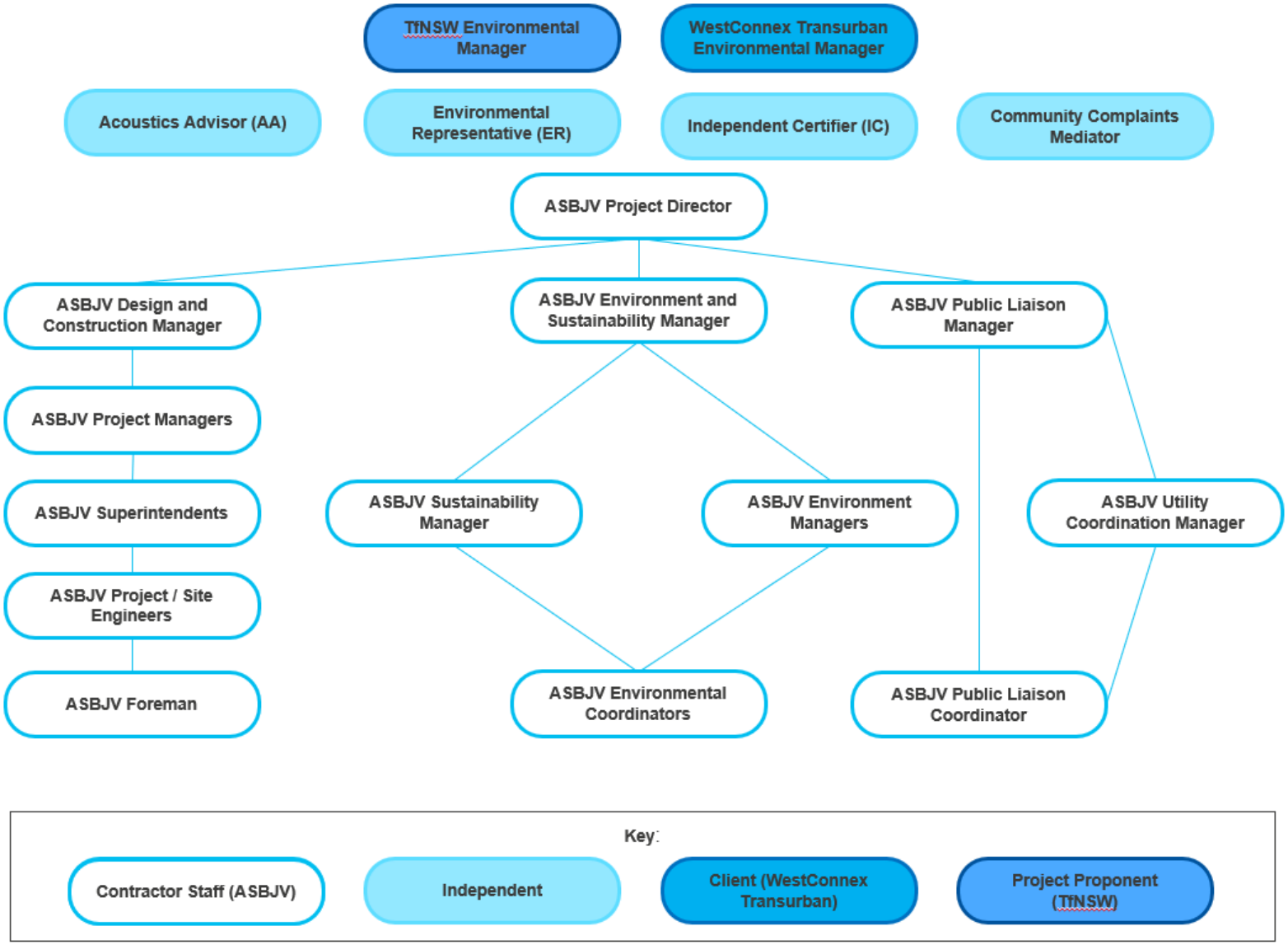

Figure 3-1 Project management structure

3.3.1 Roles and responsibilities

Environmental Representative (ER)

A suitably qualified and experienced ER has been approved by the Secretary in accordance with CoA A17 after having due regard to CoA A19. For the duration of the Project works until completion of construction, the ER will fulfil the requirements of A21 including:

(a) receive and respond to communication from the Secretary in relation to the environmental performance of the CSSI

(b) consider and inform the Secretary on matters specified in the terms of this approval

(c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community

(d) review documents identified in Conditions C1, C4 and C9 and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under this approval and if so:

(i) make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary), or

(ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary / Department for information or are not required to be submitted to the Secretary / Department)

(e) regularly monitor the implementation of the documents listed in Conditions C1, C4 and C9 to ensure implementation is being carried out in accordance with the document and the terms of this approval

(f) as may be requested by the Secretary, help plan, attend or undertake audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36 of this approval

(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 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

(j) prepare and submit to the Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading “Environmental Representative Monthly Reports.” The Environmental Representative Monthly Report must be submitted within seven (7) calendar days following the end of each month for the duration of the ER’s engagement for the CSSI, or as otherwise agreed with the Secretary.

Additionally, the ER roles will cover other CoA that require the ER’s involvement. For example, the ER will be required to review and approve low risk Out of Hours Works not subject to an EPL in accordance with the Out of Hours Works Protocol (refer to Appendix D of the Noise and Vibration Management Sub-plan).

A number of Project personnel will be required to liaise and assist the ER throughout the duration of the Project. In accordance with CoA C2 (j), this section as well as Figure 3-2 describes the relationship between relevant Project personnel and the ER.

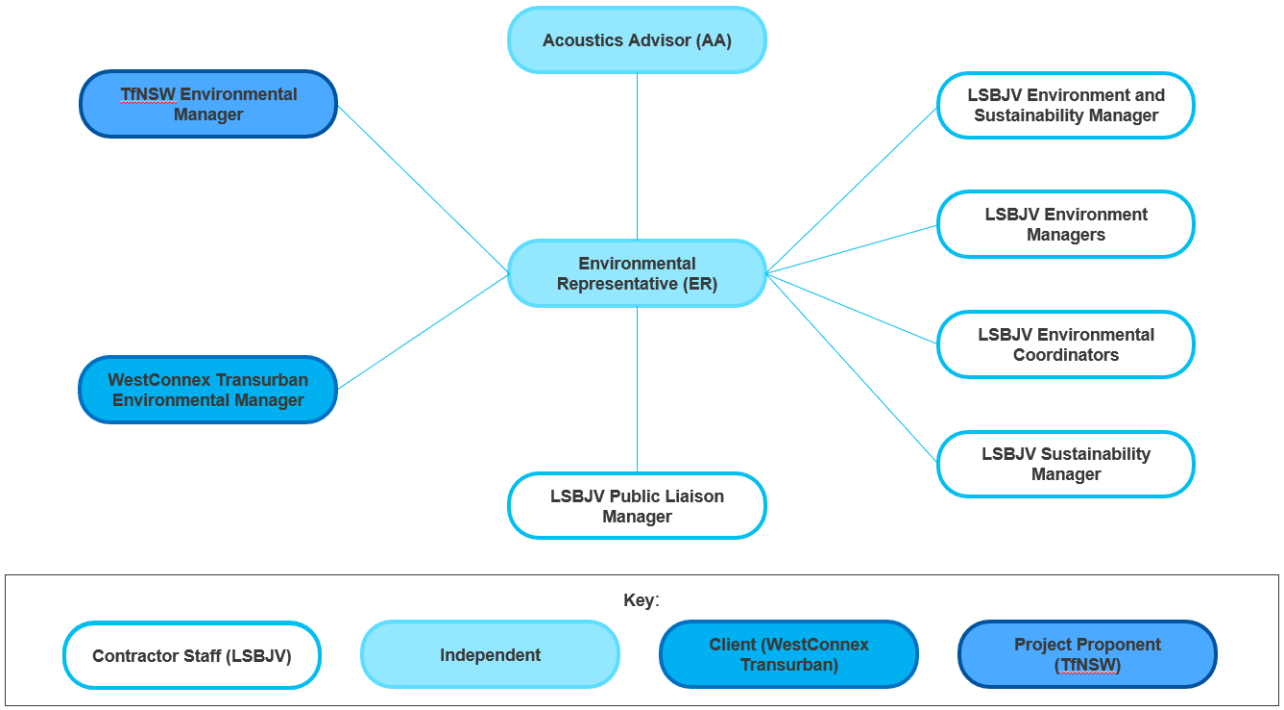

Figure 3-2 Relationship between the ER and relevant Project personnel

Acoustics Advisor (AA)

A suitably qualified and experienced AA has been approved by the Secretary in accordance with CoA A25 after having due regard to CoA A24. The AA will fulfil the requirements of A26 and other CoA that require the AA's involvement. In addition to the requirements of these CoA the AA will also:

- Review and endorse the Construction Noise and Vibration Impact Statements (CNVIS) and noise and vibration predictive tools
- Review and endorsement of the validation of the CNVIS and noise and vibration predictive tools
- Assist the ER to review and approve low risk Out of Hours Works not subject to an EPL in accordance with the Out of Hours Works Protocol (refer to Appendix D of the Noise and Vibration Management Sub-plan)
- Assist the Project with the identification of appropriate mitigation measures and respite periods for Out of Hours Works.

Refer to the NVMP for further information about this role.

Community Complaints Mediator (CCM)

A suitably qualified and experienced CCM has been approved by the Secretary in accordance with CoA B13. The CCM will fulfil the requirements of B14 and B15 and other CoA that require the CCM's involvement.

Refer to the CCS for further information about this role.

WestConnex Transurban and TfNSW

The environmental responsibilities of WestConnex Transurban and TfNSW include (but are not limited to) the following:

- Monitor the environmental performance of the Project in relation to WestConnex Transurban and TfNSW requirements
- Liaise with the ER and AA as required

- Review and consider minor Project refinements that are consistent with the Project environmental assessment in accordance with approval documentation
- Provide guidance and where appropriate, monitor compliance with DPE post approval document submission requirements
- Evaluate and advise on compliance with WestConnex Transurban and TfNSW environmental requirements including undertaking periodic inspections of the Project sites to identify environmental non-conformances
- Review any environmental management plans for the Project or related activities that are not required to be approved by the Minister of DPE.

ASBJV Project Director

The environmental responsibilities of the ASBJV Project Director include (but are not limited to) the following:

- Be an emergency contact and available to be contacted by EPA and TfNSW Representative on a 24-hour basis
- Ensure all works are planned and executed to ensure compliance with relevant regulatory and Project requirements
- Ensure the requirements of this CEMP are fully implemented and that environmental requirements are not secondary to other construction requirements
- Endorse and support the Project Environment Policy attached in Appendix A3
- Provide adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of this CEMP
- Ensure that resources are made available to in order to implement the Sustainability Management Strategy
- Champion sustainability at the highest level of project governance
- Stop work immediately if an unacceptable impact on the environment has or is likely to occur.

ASBJV Superintendent

The environmental responsibilities of the ASBJV Superintendent include (but are not limited to) the following:

- Communicate with all personnel and sub-contractors regarding compliance with the CEMP and site-specific environmental issues
- Ensure all site workers attend an environmental induction prior to the commencement of works
- Co-ordinate the implementation of the CEMP
- Coordinate the implementation of close out of actions from internal environmental and/or ER inspections
- Co-ordinate the implementation and maintenance of pollution control measures
- Identify resources required for implementation of the CEMP
- Support the ASBJV Environmental Manager in achieving environmental objectives, including on ground implementation of the EWMS and PESCP
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the ASBJV Environmental Manager / Environmental Coordinator
- Co-ordinate action in emergency situations and allocate required resources

- Asist in the delivery of Sustainability Management Strategy
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the ASBJV Manager and Environmental Manager.

ASBJV Environment and Sustainability Manager

For the purpose of the CEMP, the ASBJV Environment and Sustainability Manager refers to the overarching and lead environmental and sustainability management position.

The environmental responsibilities of the ASBJV Environment and Sustainability Manager include, but are not limited to, the following:

- Overall accountability of the implementation of the CEMP and Sustainability Management plans on the Project.
- Be an emergency contact and available to be contacted by EPA, WestConnex Transurban and TfNSW Representative on a 24-hour basis
- Act as the main point of contact for the ER, AA, WestConnex Transurban, TfNSW, ER and approval authorities
- Oversee the Environmental Managers liaison with the ER and AA as required including complaint investigation response and facilitating site inspections and close out of actions raised by the ER and AA during their site visits
- Review subcontractors' performance and compliance with ASBJV environmental requirements, including assessing their environmental capabilities and overseeing the submission of their environmental documents
- Ensure regular inspections, observations, monitoring and audits are conducted to check the effectiveness of controls and that compliance is maintained
- Identify, assess and leverage opportunities to achieve sustainability outcomes
- Report to the ASBJV Project Director and other senior managers on the performance and implementation of the CEMP and EPL
- Stop activities directly or via delegation through members of their team, where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformances, and advise the ASBJV Project Director and Superintendent
- Drive Sustainability across the project

ASBJV Sustainability Manager

Reporting to the Environment and Sustainability Manager, the responsibilities of the ASBJV Sustainability Manager include (but are not limited to) the following:

- Provide sustainability advice and guide the achievement of the IS rating, sustainability considerations (vision, commitments, principles, objectives and targets), initiatives, knowledge sharing, monitoring and reporting requirements
- Liaison with ASBJV and ISCA personnel to drive sustainability performance and reporting
- Coordination, collation and reporting of ISCA documentation and progress
- Prepare and manage compliance with the Sustainability Strategy and Sustainability Plan
- Preparation and delivery of sustainability training for Project personnel
- Arrange (in conjunction with the TfNSW Representative/Environmental Manager) and participate in regular sustainability knowledge sharing workshops during the design and construction stages
- The ASBJV Sustainability Manager must work in collaboration with WestConnex Transurban, TfNSW Representative, ER and AA as required, to facilitate ongoing reporting, knowledge sharing and continual improvement.

ASBJV Environmental Manager

Reporting to the Environment and Sustainability Manager, the responsibilities of the ASBJV Environmental Managers includes (but is not limited to) the following:

- Implementation of the CEMP and EPL requirements
- Responsible for identification and appropriate mitigation measures are implemented for environmental risks of the Project
- Identify where environmental measures are not meeting the targets set and where improvement can be achieved
- Responsible for environmental protocols being in place and managed
- Ensure environmental compliance
- Responsible for on site implementation of relevant measures identified in the CEMP, relevant sustainability plans and requirements of the EPL
- Assist in the preparation of environmental reporting within the Project team, and to WestConnex Transurban, TfNSW and regulatory authorities
- Coordinate on site environmental activities, including baseline reporting, controls and monitoring
- Prepare and/or distribute environment awareness notes
- Review and approve PESCPs
- Facilitate induction and toolbox talks
- Notification to WestConnex Transurban, TfNSW and relevant authorities in the event of an environmental incident and manage close-out of these
- Liaise with the ER and AA as required including complaint investigation response and facilitating site inspections and close out of actions raised by the ER and AA during their site visits.
- Assist the ER on site and during inspections, as required
- Assist the Public Liaison Manager to resolve environment-related complaints.

ASBJV Environmental Coordinator

Reporting to the Environmental Manager, the responsibilities of the ASBJV Environmental Coordinators includes (but is not limited to) the following:

- Assist the relevant ASBJV Environmental and Sustainability Managers to prepare, implement, maintain and review this CEMP and associated documents in accordance with all relevant requirements
- Assist all site staff with issues concerning Project environmental matters and act as the first source of environmental advice and information for the ASBJV design and construction teams
- Develop PESCP in consultation with the ASBJV Superintendent, Project / Site Engineers, foreman and other relevant site personnel, as required
- Preparation of EWMS/SAPs
- Manage the day-to-day environmental elements of construction
- Assist in identifying environmental risks
- Undertake regular site inspections, carry out monitoring activities and complete site checklists and audits as required and in accordance with this CEMP, EPL and Sub-plans

- Respond to incidents and manage investigations as directed by the ASBJV Environment and Sustainability Manager and relevant Environmental Manager
- Assist in developing training programs regarding environmental requirements and deliver where required, including delivery of the environmental component of toolbox talks
- Assist Environmental Manager to liaise with the ER and AA as required including facilitating site inspections and close out of actions raised by the ER and AA during their site visits
- Maintain regular communication with the ASBJV Environment and Sustainability Manager regarding environmental performance and conformance.

ASBJV Public Liaison Manager

The environmental responsibilities of the ASBJV Public Liaison Manager include (but are not limited to) the following:

- Ensure that all community consultation activities are carried out
- Report any environmental issues to the relevant ASBJV Environmental Manager raised by stakeholders or members of the community
- Support the ASBJV Sustainability Manager in the implementation of the Sustainability Strategy
- Communicate general Project progress, performance and issues to external stakeholders including the community (including relevant councils, government authorities, adjoining affected landowners and businesses, and others directly impacted by the CSSI) and ensure stakeholders are informed of upcoming works
- Develop, implement and maintain a communication strategy to facilitate communication between ASBJV, ER, AA, WestConnex Transurban, TfNSW staff and DPE
- Develop, implement and maintain a communication strategy to facilitate communication between the proponent and the community
- Maintain the 24-hour complaints hotline
- Liaise with the Community Complaints mediator as required
- Maintain the Complaints Register located in the CCS and ensure environmental complaints and enquiries regarding construction works are recorded and responded to appropriately.

Refer to the CCS for more information about this role.

Public Liaison Coordinators

In accordance with CoA B6, Public Liaison Coordinators will be appointed during works to assist the Public Liaison Manager and the public with questions and complaints they may have at any time during construction.

Refer to the CCS for more information about this role.

ASBJV Utility Coordination Manager

In accordance with the CoA E141, a Utility Coordination Manager will be appointed for the duration of the CSSI works. The role of the ASBJV Utility Coordination Manager will include, but not be limited to:

- The management and coordination of all utility works associated with the delivery of the CSSI, to ensure respite is provided to the community, as required under CoA E75
- Providing advice to the Public Liaison Officer(s), regarding upcoming utility works, including the scope of the works and responsibility for the works
- Investigating complaints received from the Community Complaints Mediator or the Public Liaison Officer(s), relating to utility works, and providing a response to the Community Complaints Mediator or Public Liaison Officer(s).

ASBJV Project / Site Engineers

The environmental responsibilities of the ASBJV Project / Site Engineers include (but are not limited to) the following:

- Provide input into the preparation of environmental planning documents as required
- Ensure that instructions are issued, and adequate information provided to employees that relate to environmental risks on site
- Ensure that the works are carried out in accordance with the requirements of the CEMP, EPL and supporting documentation, including the implementation of all appropriate environmental controls, mitigation and management measures
- Identify any environmental risks
- Identify resource needs for implementation of CEMP and EPL requirements and related documents
- Implement corrective or preventative actions as required to fulfil the requirements of this plan
- Take action in the event of an emergency and allocate the required resources to minimise the environmental impact
- Implement sustainability actions as allocated to them by the ASBJV Sustainability Manager
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the ASBJV Superintendent and relevant Environmental Manager.

ASBJV Foreman

The environmental responsibilities of the ASBJV Foreman include (but are not limited to) the following:

- Undertake any environmental duties as defined by the ASBJV Superintendent or Project / Site Engineer
- Control field works and ensure appropriate environmental controls, mitigation and management measures are implemented and maintained effectively
- Where required, undertake environmental risk assessment of works prior to commencement
- Ensure site activities comply with EWMS and relevant records are kept
- Ensure all site workers are site inducted prior to commencement of works
- Attend to any spills or environmental incidents that may occur on site and report environmental incidents and complaints immediately
- Report any activity that has resulted, or has the potential to result, in an environmental incident immediately to the Superintendent
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the ASBJV Project Director, Design and Construction Director, Superintendent or Environmental Manager
- Implement sustainability actions as allocated to them by the ASBJV Sustainability Manager.

Wider project team (including sub-contractors)

The environmental responsibilities of all other members of the Project team, including sub-contractors, include the following:

- Comply with the relevant requirements of the CEMP, EPL or other environmental management guidance as instructed by a member of the Project's management
- Participate in the mandatory Project / site induction program

- Report any environmental incidents to the foreman immediately or as soon as practicable if reasonable steps can be adopted to control the incident
- Undertake remedial action as required to ensure environmental controls are maintained in good working order
- Stop activities where there is an actual or immediate risk of harm to the environment and advise the ASBJV Project Director, Design and Construction Director, Superintendent or Environmental Manager
- Implement sustainability actions as allocated to them by the ASBJV Sustainability Manager.

3.4 Selection and management of subcontractors

Environmental requirements and responsibilities are to be specified to subcontractors in the contract documentation.

3.4.1 Selection

As part of the selection process, consideration will also to be given to their past environmental and sustainability performance. The ASBJV Environment and Sustainability Manager, or delegate, will participate in the tender assessment and selection process where it is deemed necessary due to associated environment and sustainability risks. All subcontractors will be required to complete a sub-contractor questionnaire or similar.

All subcontractors are required to work in accordance with the approved CEMP and requirements of the EPL.

3.4.2 Prior to works

Subcontractors will be made aware of ASBJV's environment and sustainability requirements during the tender process and start-up meetings. All sub-contractors are required to attend Project and/or site inductions (refer to Section 3.5.1) where the requirements and obligations of the CEMP and EPL will be communicated. A record of all subcontractors inducted will be maintained as part of the Project Induction and Training Register.

The scope of work to be performed by each subcontractor will be reviewed by the Environment and Sustainability Manager to determine whether it includes works for which Project planning and environmental risk assessments have been performed. If so, the subcontractor is formally informed of all relevant risks and existing Project documents, systems and procedures to be followed prior to commencing works (having been informed of these during the tendering process). These may include the contents of the construction methodology and environmental Sub-plans in this CEMP.

If the scope of works includes activities not already adequately addressed in Project planning and risk assessment, then an appropriate risk assessment will be performed. Following this, existing documentation will either be revised, or new documentation will be produced.

The subcontractor will be informed of relevant items and the controls, procedures and documents to be followed and implemented in order to achieve compliance during the tendering process. The subcontractor will be informed of the requirement to provide all relevant data relating to their works as per the National Greenhouse and Energy Reporting Act 2007 (Commonwealth).

The subcontractor will provide ASBJV with all required environmental documentation prior to commencing work on the Project as described in the executed agreement. Any further requirements will be agreed by the ASBJV Commercial Director and the Environment and Sustainability Manager.

3.4.3 During construction works

All subcontractors will undergo environmental training for the Project. The training required will be determined by reviewing the scope of work and roles being filled or supplied by the subcontractor but will include as a minimum environmental induction training.

Subcontractors will participate in communication forums and monitoring activities, as a minimum, including:

- Project induction
- Scheduled Health, Safety and Environment (HSE) management meetings, toolbox talks, pre-start meetings, HSE committees (as required)
- HSE observations, inspections and audits
- Incident investigations (as required)
- Development or review of safe work systems and Safe Work Methods Statements (SWMS) as required.

In accordance with the LLE Environmental Incidents and Emergencies Procedure, prior to starting work on site all employees and subcontractors must be made aware of the Project Environment Policy, their responsibility to report all incidents and undertake their works in accordance with this procedure. This requirement will be conveyed to all personnel on site during the site-specific induction and will be reinforced through regular toolbox talks.

All subcontractors are required to work in accordance with the approved CEMP and requirements of the EPL.

3.4.4 Compliance

Subcontractors and their works will be regularly inspected and monitored for environmental performance in accordance with regular inspections, monitoring and auditing described in Section 3.9. A standard monitoring form will be developed that will be used to assess:

- The subcontractor's general work practices
- The effectiveness of the subcontractor's environmental protection measures
- The subcontractor's compliance with the requirements of this CEMP and EPL
- The maintenance of environmental measures.

Where reckless or continued substandard environmental performance is displayed by any subcontractors, individuals or entire subcontract teams may be issued warnings or removed from site.

Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation.

3.5 Competence, training and awareness

To ensure that the CEMP and requirements of the EPL are effectively implemented, each level of Project management are responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The ASBJV Environmental Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety). Training will be developed in accordance with the ASBJV Project Training Management Plan and will be updated / amended throughout the Project as training needs are identified.

3.5.1 Environmental induction

All personnel (including subcontractors) are required to attend a compulsory site induction that includes an environmental component before commencing work on site. This is done to ensure all personnel involved in the Project are aware of the requirements of the CEMP, EPL and to ensure the implementation of REMM. This will aid in the prevention of any breaches of the conditions of approval resulting from the actions of all persons that it invites onto any site, including contractors, subcontractors and visitors.

Short-term visitors undertaking inspections or entering site (such as regulators) will be required to undertake a visitors induction and be accompanied by inducted personnel at all times. Temporary

visitors to site for purposes such as deliveries will be required to be accompanied by inducted personnel at all times.

In accordance with the CoA, TfNSW Specification G36, the environmental component of the induction would include as a minimum:

- Relevant details of the CEMP, CEMP Sub-plans and EPL requirements including their purpose and objectives
- Requirements of due diligence and duty of care
- Awareness of legislative responsibilities, including any associated penalties for failing to meet those responsibilities
- Conditions of environmental licences, permits and approvals
- Incident response, reporting and notification requirements for pollution and other environmental incidents including the existence of the Pollution Incident Response Management Plan (PIRMP) and staff responsibilities with regard to the PIRMP
- High risk activities on the Project and their associated environmental safeguards including the existence of relevant EWMS
- Out of hours works
- What to do when working in or near environmentally sensitive areas and the associated risks
- Specific environmental management requirements and responsibilities including the implementation of Noise and Vibration mitigation measures
- Sustainability objectives, targets and requirements
- Making all staff and subcontractors working on site aware of these external and internal communications procedures and ensuring they are properly trained in their application
- Making all staff and subcontractors working on site aware of approved haulage routes and parking restrictions as per the Construction Parking and Access Strategy
- Awareness of key environmental issues relating to the Project.

A record of all environment inductions will be maintained and kept on site. The ASBJV Environmental Manager may authorise amendments to the induction at any time. Possible reasons for changes to the induction may be Project modifications, legislative changes or amendments to this CEMP or related documentation.

Legible environmental records of all environmental inductions will be kept in an Induction Register.

3.5.2 Toolbox talks, training and awareness

Toolbox talks will be used as a method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks will be used to ensure environmental awareness continues throughout construction and include details of EWMS for relevant personnel. Toolbox talks will also be tailored to specific environmental issues relevant to upcoming works. Toolbox talk attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

To promote environmental awareness amongst the construction team, environmental alerts will be issued as required and distributed amongst the ASBJV Project / Site Engineers and Supervisors which will be discussed during the daily pre-start meeting or during toolbox talks. In addition, the SAPs will be displayed in crib sheds and site offices to promote awareness of the environmental

constraints. PESCPs will be distributed to the foreman to provide detail on erosion and sediment controls on the Project.

Environmental awareness may also be promoted to construction personnel through the development and distribution of awareness notes. These will typically take the form of a poster, booklet, or similar and will be distributed to ASBJV Engineers, Leading Hands, Foreman and others with a responsibility for managing specific work locations or activities. This documentation may be used to inform the broader workforce through either daily pre-start meetings (see Section 3.5.3) or provision in worker crib sheds / break facilities.

A Training Register is kept on the Project Information and Communication Technology (ICT) system.

3.5.3 Daily Pre-Start Meetings

The daily pre-start meeting is a tool for informing the workforce of the day's activities, safe work practices, environmental protection practices, work area restrictions, activities that may affect the works, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Foreman will conduct a daily pre-start meeting with the site workforce before the commencement of work each day (or shift) or where changes occur during a shift. Daily pre-start meetings will be succinct in nature and generally take approximately 10-15 minutes.

The environmental component of pre-starts will be determined by relevant Foreman and environmental personnel, and will include any environmental issues that could potentially be impacted by, or impact on, the day's activities as required. All attendees will be required to sign on to the pre-start and acknowledge their understanding of the issues explained.

3.6 Working hours

In accordance with CoA E70, the following works are permitted to be carried out 24 hours a day, seven days a week:

- Tunnelling activities excluding cut and cover tunnelling
- Haulage of spoil and delivery of material
- Works within an acoustic shed
- Tunnel fit out works.

Working hours for the Project are set by the CoA E68 to E78. Standard construction hours as approved in the CoA E68 are as follows:

- Monday to Friday: 7:00 am to 6:00 pm
- Saturday: 8:00 am to 1:00 pm
- At no times on Sundays and Public Holidays.

Notwithstanding the above, works may also be carried out between 1:00pm to 6:00pm on Saturdays, in accordance with CoA E69. In accordance with CoA E72, except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver will only be undertaken:

- Between the hours of 8:00 am and 6:00 pm Monday to Friday
- Between the hours of 8:00 am and 1:00 pm Saturday
- In continuous blocks not exceeding three hours each with a minimum respite from those activities and works of not less than one hour between each block. 'Continuous' includes any period during which there is less than one hour respite between recommencing any of the work that are the subject of the CoA.

Construction activities which are defined as annoying under the ICNG are defined as ‘highly noise intensive works’. These include;

- Using power saws (for cutting timber, masonry, road pavement or steel work)
- Grinding metal, concrete or masonry
- Rock drilling
- Line drilling
- Vibratory rolling
- Bitumen milling and profiling
- Jackhammering
- Rock-hammering or rock-breaking
- Impact piling.

Any other works outside of standard construction hours would be permitted providing they meet the requirements of CoA E73, the EPL or if they are undertaken as per the Out-of-Hours Work Protocol (OOHW) as per the CoA E77. The OOHW protocol is included as Appendix B of the Construction Noise and Vibration Management Plan (NVMP).

As per CoA E100, blasting, should it be required, is further restricted to the following hours:

> *(a) 9:00 am to 5:00 pm, Monday to Friday, inclusive;*
>
> *(b) 9:00 am to 1:00 pm, Saturday; and*
>
> *(c) at no time on Sunday or on a public holiday;*
>
> *or as authorised through an EPL if blasting is proposed outside of these hours.*
>
> *This condition does not apply in the event of a direction from police or other relevant authority for safety or emergency reasons to avoid loss of life, property loss and/or to prevent environmental harm.*

3.7 Communication

All site personnel including subcontractors will be made aware of the external and internal communications procedures and ASBJV will ensure they are properly trained in their application.

3.7.1 Internal Communication

Clear lines of communication throughout all levels and functions (e.g. management, staff and subcontracted service providers), are key to minimising environmental impacts and achieving continual improvements in environmental performance.

The ASBJV environmental team will meet regularly to discuss any issues with environmental management on site, any amendments to plans that might be required or any new / changes to construction activities. Regular meetings may also be scheduled with the ER, AA, WestConnex Transurban and TfNSW environmental staff. The purpose of these meetings would be to communicate ongoing environmental performance and to identify any issues to be addressed.

In addition, ASBJV environmental team members will participate, as required, in toolbox talks, daily pre-start meetings or activity specific pre-start meetings to communicate environmental performance, management or issues with the wider construction team. This forum will provide an opportunity for the environment team members to advise on any upcoming sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

Further internal communications regarding environmental issues and aspects will be through awareness training as described in Section 3.5.

3.7.2 Liaison with EPA, government authorities or other relevant stakeholders

The ASBJV Environment and Sustainability Manager will be the authorised contact person for communications with the relevant stakeholders i.e. TfNSW, WestConnex Transurban, DPE and the EPA on environmental matters. Liaison will include reporting on the ongoing environmental performance, any key environmental matters on the Project to these stakeholders. The ASBJV Environment and Sustainability Manager will report to the EPA via the methods listed in Section 3.9.4 and 3.9.5.

Relevant government agencies will be consulted throughout construction as required.

In accordance with the TfNSW Specification G36 requirements, two persons have been nominated as available to be contacted by the EPA on a 24-hour basis. For the Project, the ASBJV Project Director and the Environment and Sustainability Manager will be these 24-hour contacts and will be the key emergency response personnel during an environmental site emergency. In accordance with the TfNSW Specification G36 requirements these two ASBJV staff have the authority to take immediate action to shut down any activity, or to affect any pollution control measure, as directed by an authorised officer of the EPA.

Where changes are made to the CEMP or Sub-plans following consultation, updates will be recorded in the relevant version control section(s).

In accordance with the TfNSW Specification G36, a report will be prepared on each occasion a Project site is visited by EPA, and the TfNSW will be immediately notified. The report will be provided to TfNSW within one working day of the visit. In accordance with the CoA A43, if statutory notification is given to the EPA as required under the POEO Act in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.

3.7.3 Community liaison and/or notification

A CCS has been prepared in accordance with CoA B2 to provide an approach to stakeholder and community communications. This plan identified opportunities and key communication tools needed to provide information and consult with the community and stakeholders during construction of the Project.

In accordance with TfNSW Specification G36 Cl 3.7.2, the CCS also includes the process for notifying external stakeholders of new, changed or upcoming construction works, including works outside of normal working hours.

The CCS has been submitted to DPE for approval prior to the commencement of works in accordance with CoA B3.

3.7.4 Complaints management

The CCS details the Complaints Management System, which includes a Complaints Register, which has been developed for the Project, in accordance with the requirements of AS 4269: Complaints Handling and the CoA B8, B9, B10, B11 and B12.

As required by CoA B9(a)(b)(c) the Complaints Register must record the:

a) Number of complaints received

b) Number of people affected in relation to a complaint

c) Nature of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation.

The Complaints Register will be provided to the ER on a daily basis, in accordance with CoA A22(a). Please refer to the CCS for more information about complaints management.

3.8 Emergency and incident response

3.8.1 General emergency and incident response

The management and reporting of an environmental incident including pollution incidents will be managed and reported in accordance with the PIRMP (only pollution incidents or emergencies that have or have the potential to cause material environmental harm), TfNSW Environmental Incident Report and TfNSW's Environmental Incident Classification and Reporting Procedure (2017) located in Appendix A6.

The procedure provides the Project's approach to:

- Types of incidents
- Criteria for classifying environmental incidents
- Processes, and legal requirements (e.g. Acts, Regulations, EPL), for reporting and notification of an environmental incident.

The procedure covers the management of events such as, but not limited to:

- Spills of fuels, oils, chemicals and other hazardous materials
- Unauthorised discharge containment devices
- Unauthorised clearing or clearing beyond the extent of the Project boundary or premises
- Inadequate installation and subsequent failure of temporary erosion and sediment controls
- Unauthorised damage or interference to threatened species, endangered ecological communities or critical habitat
- Unauthorised harm or desecration to Aboriginal objects and Aboriginal places
- Unauthorised damage or destruction to any State or locally significant relic or Heritage item
- Potential contamination of waterways or land
- Accidental starting of a fire or a fire breaking out of containment
- Any potential breach of legislation, including a potential breach of a condition of: an environment protection licence, CoA approval or any agency permit condition
- Works undertaken without appropriate approval or assessment under the EPA Act
- Works undertaken that are not in accordance with a Project assessment
- Unauthorised dumping of waste.

In accordance with the PIRMP emergency management measures will include:

- Bunding for chemical storage areas at:
    - Northcote Street civil and tunnel site (C3a), Haberfield
    - Parramatta Road West civil site (C1b), Ashfield
    - Parramatta Road East civil site (C3b), Haberfield
    - Pyrmont Bridge Road tunnel site (C9), Camperdown/Annandale
    - Campbell Road civil and tunnel site (C10), St Peters.
- Environmental and safety information on hazardous substances (eg SDS) will be available at the main site office and where such substances are to be stored.

Environmental incidents that would be or have the potential to be classified as Category 1 under the TfNSW's Environmental Incident Classification and Reporting Procedure, will be notified verbally immediately to both the WestConnex Transurban and TfNSW Environmental Managers. Verbal notification will be provided immediately, and written notification will be provided within 24

hours to WestConnex Transurban, TfNSW and the ER (and the AA in the case of noise and vibration incidents). This will be followed up with an TfNSW Incident Report within three days of the incident, including immediate actions and proposed measures to prevent the re-occurrence of a similar incident. All efforts will be undertaken immediately to avoid and reduce impacts of incidents and suitable controls put in place. Incidents will be closed out as quickly as possible, taking all required action to resolve each environmental incident.

Lucidity which is an electronic incident management tool, will be used to document all environmental incidents.

The EPA will be notified of any pollution incidents that trigger the PIRMP response on or around the site via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act). The circumstances where this will take place include:

- It involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
- 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).

The WestConnex Transurban and TfNSW Representative will be verbally notified immediately and in writing within 24 hours, of any pollution incidents which have been reported to the EPA under Part 5.7 of the POEO Act. All other environmental incidents, reportable events and regulatory action would be reported to WestConnex Transurban and TfNSW as outlined in the TfNSW's Environmental Incident Classification and Reporting Procedure. ASBJV will provide all records of the environmental incidents and regulatory action to WestConnex Transurban and TfNSW Project team.

Where an incident involves a potential impact to an Aboriginal site, relevant authorities such as the Office of Environment and Heritage, and Registered Aboriginal Parties will be notified and their input sought in closing out the incident.

In accordance with the LLE EMS (LLE702), any incidents classified as Critical (where actual environmental impact has been recorded or an incident that has the potential to result in a catastrophic impact and risk to the environment were not appropriately identified and addressed etc) or Business Reportable (moderate release impacting environment or atmosphere) are to be reported by phone to the Acciona State Environment and Sustainability Manager within 1 hour.

Additionally, all incidents will be documented, and where required, due to the severity or ongoing nature of the incident, investigations conducted and action plans established in order that the event does not occur again. Further guidance on when investigations are required is detailed in both the TfNSW incident management procedures described in Appendix A6.

Where lessons are learnt from the investigation or current procedures are identified as being ineffective, the CEMP may be revised by the ASBJV Environment and Sustainability Manager to include the improved procedures or requirement.

An environmental investigation includes the following basic elements:

- Identifying the cause, extent and responsibility of the incident
- Identifying and implementing the necessary corrective action
- Implementing or modifying controls necessary to avoid a repeat occurrence of the incident
- Identifying the personnel responsible for carrying out the above actions
- Recording any changes in written procedures required
- Verification of actions complete and incident close out.

Please refer to Appendix A7 for Emergency Contact details.

3.8.2 Department of Planning, Industry and Environment incident notification

Further to the notification process detailed in Section 3.8.1 above, ASBJV will undertake regulatory incident reporting requirements, including those listed in CoA A40, A41, A42 and A43 which state:

- The Secretary must be notified as soon as possible and in any event within 24 hours of any incident (as defined in the Conditions of Approval)
- Notification of an incident (as defined in the Conditions of Approval) under CoA A40 of this approval must include the time and date of the incident, details of the incident and must identify any consequent non-compliance with this approval
- All written requirements of the Secretary or relevant public authority, which may be given at any point in time, to address the cause or impact of an incident (as defined in the Conditions of Approval) must be complied with, within any timeframe specified by the Secretary or relevant public authority
- If statutory notification is given to the EPA as required under the POEO Act in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.

3.9 Monitoring, inspections and auditing

3.9.1 Environmental inspections

Environmental inspections

Weekly site environmental inspections will be undertaken to assess the ongoing effectiveness and suitability of the Project's environmental controls. The site environmental inspections will cover the following:

- High risk activities and processes
- Work in environmentally sensitive areas
- Site preparedness for adverse weather conditions, including adequacy of environmental controls and availability of emergency equipment.

Copies of all environmental inspection reports prepared by Project environmental staff will be kept with the Project records and closed out within the agreed timeframes. These timeframes will be dependent on the nature of the required corrective action and the environmental risk associated with the outstanding action as determined by the relevant Environmental Manager. The outcomes of inspections will be captured on Environmental Inspection Checklists.

In general, the corrective action will concentrate on the environmental management system and its associated processes rather than on the perceived deficiencies of individual workers.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded in an environmental action list. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority. The environmental action list will then be issued to the relevant Foreman for actioning. Actions will be assigned an implementation priority by the ASBJV Environmental Coordinator based on environmental risk. Actions are closed out by the Forman and evidence of close out (usually a photograph) is supplied back to the Environmental Coordinator.

When an observation is raised of a significant nature, and where deemed necessary by the relevant ASBJV Environmental Manager, an Environmental Improvement Notice (EIN) may be issued to either Engineering Supervisor or the subcontractor supervisor in charge of the work activity and/or an individual. The engineer or individual receiving the improvement notice will be required to respond to the agreed corrective action as outlined on the notice.

The completed EIN must be reviewed and followed-up to ensure they are promptly completed. Repetitive observations that have significant hazards should be reviewed to check that a system failure is not occurring. The ASBJV Environmental Coordinator will confirm close out of the EIN and report this to the ASBJV Environmental Manager.

Weekly and post rainfall site inspections

The ASBJV Environmental Manager and/or Environmental Coordinators will undertake weekly and post rainfall inspections of the work sites to evaluate the effectiveness of environmental controls. Post rainfall inspections would be undertaken after more than 25mm of rain in a 24-hour period. The ASBJV Environmental Coordinators will record inspection findings on an inspection checklist form.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded in an environmental action list. Records will also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority. The environmental action list will then be issued to the relevant Foreman for actioning. Actions will be assigned an implementation priority by the ASBJV Environmental Coordinator based on environmental risk.

Environmental Representative, WestConnex Transurban and TfNSW inspections

The ER, WestConnex Transurban and TfNSW staff will undertake fortnightly inspections of works sites, and, critical activities throughout construction of the Project. Outcomes of these inspections will be included in the Monthly ER Reports (refer to Table 3-5).

Environmental Review Group Inspections

Environmental Review Group (ERG) inspections will be offered during construction will include the ER, representatives of WestConnex Transurban, TfNSW, Councils, DPE, EPA and other agencies upon request. These inspections will be typically less frequent, more likely on a quarterly basis depending on the construction staging of Project. These inspections provide a good opportunity to provide the participants with a project update as well as to allow the participants to provide feedback of performance to the Project delivery team.

A member of the Project environment team will participate in all ER, client and ERG inspections. Deficiencies and required actions will be promptly analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed.

If serious non-conformances are identified during the site inspection the process described in Section 3.10 will be followed.

3.9.2 Environmental monitoring

In addition to the outputs detailed in the CTEAP, environmental monitoring will be undertaken to validate the impacts predicted for the Project, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management Sub-plans and summarised in Table 3-3 below.

Table 3-3 Summary of construction phase environmental monitoring required by the Project approval

CoA / EMM	Description	Relevant Sub-plan or CEMP Chapter	Reporting Requirements
C9 (a)	Surface Water Quality Monitoring Program	Soil and Surface Water Management Sub-plan	Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program

CoA / EMM	Description	Relevant Sub-plan or CEMP Chapter	Reporting Requirements
C9 (b)	Groundwater Monitoring Program	Groundwater Management Sub-plan	Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program
C9 (c)	Noise and Vibration Monitoring Program	Noise and Vibration Management Sub-plan	Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program
C9 (d)	Blast Monitoring Program	Prepared as a stand-alone document	Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program
C9 (e)	Dust Deposition Monitoring Program	Air Quality Management Sub-plan	Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program

The LLE EMS Environmental Monitoring and Inspection procedure (LLE703) and associated inspection checklists will be followed. The timing, frequency, methodology, locations and responsibilities for the proposed environmental monitoring programs are specified in the respective Sub-plans. The monitoring programs range from those involving formal sample collection, analysis and measurement, to those involving a more qualitative assessment. The monitoring procedure will include:

- Purpose and scope
- Minimum acceptable frequency and standards listed in applicable approvals, licences and regulations
- Relevant EPA approved methods, Australian Standards or, in the absence of an Australian Standard, industry acceptable procedures
- Targets and parameters
- Processes for response to any exceedances of targets/standards
- Processes for recording and reporting results.

The ER, WestConnex Transurban and TfNSW Representative will be advised of any construction phase non-conformances from monitoring and details reported in accordance with the environmental incident reporting process.

Where a non-conformance is detected or monitoring results are outside of the expected range and are directly attributable to the Project (i.e. are influenced by factors under the direct control of the Project e.g. noise from construction equipment), the process described in Section 3.10 will be implemented.

An Environmental Incident Report and/or EIN may be issued by the ASBJV Environmental Manager in response to the non-conformance problem if it is found to be construction related.

The timing for any improvement will be agreed between the relevant ASBJV Project Site / Engineer, Superintendent and Environmental Manager based on the level of risk (e.g. a significant risk will require immediate action).

All environmental monitoring equipment shall be maintained and calibrated according to manufacturer's specifications and appropriate records kept.

3.9.3 Auditing

In accordance with CoA A36 and the CTEAP, environmental audits will be conducted according to the audit schedule located in the program, during construction of the Project. Audits will include works undertaken by subcontractors. Internal and external environmental audits will be undertaken in accordance with the CTEAP prepared in accordance with the terms of the project approval and the AS/NZS ISO 19011:2014.

The ER will ensure that environmental auditing is undertaken in accordance with this CEMP and the Project's environmental management system, in accordance with CoA A21, including audits that may be requested by DPE in accordance with CoA A21(f). Table 3-4 presents auditing requirements that are applicable to the Project.

For details regarding the schedule and requirements for internal and external Project audits as well as audit reporting requirements, refer to the CTEAP.

3.9.4 Construction Phase Compliance Tracking

A CTEAP has been developed for the Project. The requirements of the CTEAP, as prescribed in the CoA A27 and A36 include:

- Provisions for the notification of the Minister of the commencement of works prior to the commencement of construction and prior to the commencement of operation of the Project (including prior to each stage, where works are being staged)
- Provisions for periodic review of Project compliance with the requirements of this approval, EMMS and documents listed under CoA C2 (c) and (l)
- Provisions for periodic reporting of compliance status against the requirements of this approval, REMM and documents listed under CoA A33 to the Minister including at least one month prior to the commencement of construction and operation of the Project and at other intervals during the construction and operation, as identified in the Program
- A program for independent environmental auditing in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing
- 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
- Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.

The CTEAP describes how the requirements of CoA will be met and sets out a program and frequency for compliance reporting and independent auditing. The compliance reporting required under the CTEAP will record how the CoA and REMM have been addressed.

Construction Compliance Reports will be prepared and submitted to the Secretary for information every six months from the date of the commencement of construction, for the duration of construction. The Construction Compliance Reports will include:

- A results summary and analysis of environmental monitoring
- The number of any complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints
- Details of any review of, and minor amendments made to, the CEMP as a result of construction carried out during the reporting period
- A register of any consistency assessments undertaken and their status

- Results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit
- A summary of all incidents notified in accordance with CoAs A40 and A42 of this approval
- any other matter relating to compliance with the terms of this approval or as requested by the Secretary.

A summary of the required compliance reporting for the construction phase of the Project, as required by CoA and as tracked and monitored in the CTEAP is provided in Table 3-4.

Table 3-4 Compliance reporting

Report	CoA	Requirement	Timing	Responsibility	Recipient
Pre-Construction Compliance Reporting	A30 A31 A32	Description of compliance status of the Project prior to the commencement of construction.	Prior to construction	ASBJV Environment and Sustainability Manager	DPE, ER, WestConnex Transurban and TfNSW
During Construction Compliance Reporting	A29 A33 A39	Report on compliance and performance (including KPIs) against approval requirements. The compliance reporting required under the CTEAP will record how the CoA and REMM have been addressed.	Ongoing six-monthly compliance reports First report will be issued 6 months following commencement of construction	ASBJV Environment and Sustainability Manager submits to TfNSW, WestConnex Transurban and ER to review and submit to DPE	DPE, ER, WestConnex Transurban and TfNSW
Environmental Audit Report	A38 A39	A report on the environmental performance of the CSSI, compliance with the terms of approval and actions to improve environmental performance.	Within six weeks of audit completion	ASBJV Environment and Sustainability Manager	DPE, ER, WestConnex Transurban and TfNSW

3.9.5 Other reporting

Prior to, during and following construction, various reports will be prepared to fulfil TfNSW and other reporting needs, and requirements under the Project approval. Table 3-5 sets out the reporting requirements applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

Additional reporting may be necessary as the works progress. In such a circumstance, Table 3-5 will be amended to reflect these changes.

Table 3-5 Reporting requirements

Report	Requirement	Timing	Responsibility	Recipient
Monthly Environmental Report	A monthly summary of the achievements, approvals, complaints and Incidents during the period.	Monthly	ASBJV Environment and Sustainability Manager	WestConnex Transurban, TfNSW, as required by the Deed, JV parent companies
EPL annual returns	Report on compliance with EPL	Annually - Within 60 days of the anniversary of the EPL	ASBJV Environment and Sustainability Manager	EPA
ER Monthly Report	Report of site environmental performance following routine inspections and a summary of the Complaints Register for the preceding month.	Monthly - within seven (7) calendar days following the end of each month	ER	WestConnex Transurban, TfNSW, ASBJV, DPE and relevant regulatory agencies
AA Monthly Noise and Vibration Report	Report detailing the AAs actions and decisions on matters for which the AA was responsible in the preceding month	Monthly - within seven (7) calendar days following the end of each month	AA	WestConnex Transurban, TfNSW, ASBJV, DPE and relevant regulatory agencies
Monitoring Results	Report on monitoring data recorded and potential exceedances against criteria	As per frequency identified in monitoring programs	ASBJV Environmental Manager / Construction Environmental Coordinators	As identified by the monitoring programs
ER Environmental Inspection Reports	ER site inspections	Fortnightly ER / TfNSW site inspection reports	ASBJV Environmental Manager /Environmental Coordinators	WestConnex Transurban and TfNSW
Waste Avoidance and Resource Recovery Report	Information relating to wastes generated or recycled in accordance with Annexure G36/F	Annual within one-month form 1 July and at actual completion date	ASBJV Environmental Manager / Environmental Coordinators	WestConnex Transurban and TfNSW
Sustainability Report	Report on performance towards the sustainability requirements of the Deed and sustainability initiatives identified in the Sustainability	Quarterly. During the period from the date of the Project	ASBJV Sustainability Manager /	WestConnex Transurban and TfNSW

Report	Requirement	Timing	Responsibility	Recipient
	Plan, and all other sustainability requirements/ objectives/targets set out in the Sustainability Plan	Deed until the Date for Completion, within 15 Business Days after the end of each quarter	Environmental Coordinators	

3.10 Environmental non-conformances and incidents

Review of compliance

A non-compliance is an occurrence, or set of circumstances or development that is a breach of the Conditions of Approval but is not an incident. If a non-compliance is identified during a review of compliance, the Environment and Sustainability Manager may issue an Environmental Actions List (*LLE703B Environmental Observation Report* – internal document) or an Environmental Improvement Notice (*LLE703C Environmental Improvement Notice* – internal document) in response to the identified compliance issue. The list or notice will be issued to the appropriate person for implementation of the corrective / preventative action. The action will then be closed out within the allocated time as set by the Environment and Sustainability Manager.

On completion of the agreed actions, the appropriate person will submit evidence (eg photographs, a revised process or plan etc) of the close out to the Environment and Sustainability Manager. The Environment and Sustainability Manager will then review the evidence supplied and determine if the non-compliance has been adequately responded to. If agreed, the list or notice issued by the Environment and Sustainability Manager will be closed out.

Further procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management are also documented in the CTEAP (also refer to Section 3.9.4).

Further to Appendix A6 (Table 5.2 - Breaches of Conditions of Approval), DPE will be notified of known breaches of CoA.

Incident management

Following an incident, the Environment and Sustainability Manager will initiate an investigation to identify the root causes and contributing factors. Once the root cause and contributing factors have been identified, the Environment and Sustainability Manager will then allocate appropriate resources and identify an appropriate person to implement those actions. In addition, ASBJV will meet the requirements of the Secretary (or relevant public authority, as determined by the Secretary) to address the cause or impact of the incident, in accordance with CoA A42.

On completion of the agreed actions, the appropriate person will submit evidence (eg photographs, a revised process or plan etc) of the close out to the Environment and Sustainability Manager. The Environment and Sustainability Manager will then review the evidence supplied and determine if the incident has been adequately responded to. If agreed, the incident form *LLE702B Environmental Incident Investigation* (internal document) will be closed out by the Environment and Sustainability Manager. Lessons learnt from the investigation will be shared within the Project Team.

It should be noted that the occurrence of an environmental incident may not require a NCR and related actions. Similarly, a non-conformance may not qualify as an environmental incident or require incident management as mentioned previously or in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure (2017).

For further details regarding incident classification and NCR requirements, refer to the TfNSW Environmental Incident Classification and Reporting Procedure and the Environmental Incidents and Emergencies Procedure (refer to Appendix A6).

Non-conformance report

A non-conformance is a failure to comply with the requirements of the Project's system documentation, such as the CEMP or associated documents. A non-conformance may be raised by the Project team, the ER, TfNSW, the WestConnex Transurban Representative or public authority.

Where non-conformances are identified the Environment and Sustainability Manager may issue an Environmental Actions List (*LLE703B Environmental Observation Report* – internal document) or an Environmental Improvement Notice (*LLE703C Environmental Improvement Notice* – internal document). Actions will be assigned an implementation priority in a collaborative way by the inspection team based on environmental risk. Where more significant deficiencies in environmental controls or in the standard or environmental performance are observed, the Environment and Sustainability Manager will issue an Environmental Improvement Notice (EIN) using form *LLE703C Environmental Improvement Notice* (internal document) in response to poor or inappropriate work methods or environmental controls, equipment selection, maintenance of controls, or other identified concerns.

Non-conforming activities may be stopped, if necessary, by the Environment and Sustainability Manager, Environmental Officers or Project / Site Engineer following consultation with the Area Manager or delegate. The works will not re-commence until a corrective / preventative action has been closed out. The ER may also stop works in these circumstances. In such circumstances, a non-conformance report must be prepared in accordance with the Project Quality Management Plan. Non-conformance reports will be lodged with the relevant Project stakeholders including the ER in accordance with the TfNSW Incident Procedure.

3.11 Records of environmental activities

3.11.1 Environmental records

The ASBJV Environment and Sustainability Manager is responsible for maintaining all environmental management documents and records as current at the point of use. In accordance with TfNSW D&C Q6 Annexure Q/E, legible environmental records of all environmental activities associated with Work Under the deed will be kept in order to demonstrate compliance with the LLE EMS and CEMP.

Types of documents and records include:

- All environmental monitoring, inspection and compliance reports/records
- Environmental monitoring data
- Reports on environmental incidents, other environmental non-conformances and follow-up action
- Results of internal and external audits
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken
- Induction and training records
- Procedures and protocols
- Checklists, forms and templates
- Correspondence with public authorities
- Complaints and enquiries received, and follow-up action

- Notifications received by regulators
- Community engagement information
- CEMP and Sub-plans
- EWMS
- Additional documents and requirements as identified in the CoA, REMM and TfNSW specifications (i.e. G36).

The minimum document retention periods beyond practical completion for environmental documents and records will be in accordance with TfNSW Specification G36. Records must be held for at least five years after the Construction Completion Date.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licensing requirements. Only the ASBJV Environmental Manager, or delegate, has the authority to change any of the environmental management documentation.

3.11.2 Document control

ASBJV, the ER, TfNSW and WestConnex Transurban where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents and records listed above. During the Project, the environmental documents and records will be stored at each of the main site compounds.

ASBJV will implement a Project document control management system to control the flow of documents within and between TfNSW, WestConnex Transurban, stakeholders and subcontractors.

The procedure will also ensure that documentation is:

- Developed, reviewed and approved prior to issue
- Issued for use
- Controlled and stored for the legally required timeframe
- Removed from use when superseded or obsolete
- Archived.

A register and distribution list will identify the current revision of particular documents, records or data.

3.12 Management review

Management reviews of the Project's EMS will be undertaken as part of the continual improvement process. The purpose of the reviews is to periodically examine the effectiveness and proper implementation of the CEMP to ensure that the system is meeting the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance. The ASBJV Environmental and Sustainability Manager will review the CEMP and its operation and implementation at least every six months from construction commencement. Between the scheduled reviews, a register of issues will be maintained to ensure that any issue raised by internal and external personnel associated with the Project is recorded.

The purpose of the review is to ensure that the system is meeting the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance. The ASBJV Project Director will review and approve changes to the system.

This review will be held at least every six months and will consider:

- Opportunities to improve environmental management documentation, processes and practices

- Reviewing key environmental risks
- Client and agency feedback
- Non-conformances and deficiencies, including those identified in environment inspections and audits
- An analysis and verification of the effectiveness of corrective and preventative actions
- Changes or developments in the LLE EMS
- Highlighting any changes in procedures resulting from process improvement.
- Complaints
- New environmental assessments or updated risk assessments
- Effectiveness of environmental management documentation implementation
- Adequacy of resources
- Environmental objectives and targets including sustainability performance
- Compliance with legal and other requirements
- Organisation changes
- Effectiveness of training and inductions.

The outcomes of the reviews may result in the amendment of this CEMP or related documents, revision to the Project's EMS, risk assessment review, re-evaluation of the Project's objectives and targets as well as feeding into other Project documents.

3.13 CEMP/Sub-plan revision and changes to the Project

3.13.1 CEMP revision

Continual improvement is achieved through regular measurement, evaluation, audit and review of the effectiveness of the CEMP, Project environmental outcomes and the ASBJV EMS. A review process ensures that environmental documentation is updated as appropriate for the specific works that are occurring on site. Reviews undertaken as described in Section 3.12 will provide specific opportunities to identify improvements in the environmental management system and/or this CEMP.

This CEMP, CEMP Sub-plans and Monitoring Programs will be updated as required:

- 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
- In response to internal or external audits or six monthly management reviews.
- Following reportable environmental incidents
- Upon identification of new risks, including risks identified during risk register updates
- When non-compliances are identified
- Following environmental audits that identify matters that require attention
- In response to Project change (including modifications)
- Within three months of any of the above occurrences
- As part of a continuous improvement process
- Where requested or required by the NSW Department of Planning and Environment or any other Authority

- At the end of the project (to allow for improvements in subsequent projects).

Should the document review process identify any issues or items within the documents that are either redundant or in need of updating, it is the responsibility of the ASBJV Environmental Manager or Environmental Coordinators to prepare the revised documents.

This CEMP, and subsequent revisions, must be authorised by the ASBJV Environment and Sustainability Manager. The ER can approve minor changes to the CEMP, where the ER is satisfied that the amendment to the CEMP is necessary. Minor changes as described in the CoA A21 would typically include those that:

- Are administrative in nature (e.g. staff and agency/authority name changes)
- Do not noticeably increase the magnitude of impacts on the environment when considered individually or cumulatively
- Are in response to audit findings or periodic reviews
- Do not compromise the ability of the Project to meet legislative requirements and are consistent with terms of the approval, and does not include any modifications to the terms of Project approval.

Where the ER deems it necessary, the amended CEMP will be forwarded to relevant stakeholders for review and comment if required and forwarded to the Secretary for approval. This CEMP, and subsequent revisions must be internally approved by the ASBJV Project Director, and the ER can approve for minor updates, and otherwise endorse, before being submitted for approval to the Secretary. All updates to the CEMP are to be communicated to WestConnex Transurban and TfNSW prior to finalisation and/or update of document in accordance with the requirements of the TfNSW Specification G36.

Revised versions of the CEMP or Sub-plans will be made available and distributed to relevant stakeholders through the processes described in Section 3.11.2. Changes will also be communicated through toolbox talks to existing onsite personnel and incorporated into environmental induction materials.

3.13.2 Changes to the Project

Refinements to the Project may result from detailed design refinements or changed circumstances throughout construction. In these instances the ASBJV Environment and Sustainability Manager will undertake a review of the refinement to confirm that it is covered by the EIS. It may be the case that a consistency assessment in consultation with WestConnex Transurban and TfNSW will need to be undertaken to determine if a Project modification may be required following design changes or changes in scope.

Should the consistency assessment determine that a Project modification may be required (i.e. the impacts are of a nature and scale that it is not considered consistent with the Project approval), a modification application under Section 5.25(2) (formerly referred to as 115ZI(2)) of the *EP&A Act 1979* as prepared and lodged by TfNSW to the Secretary DPE for determination.

In line with the TfNSW Part 5.1 Assessment procedure, the TfNSW Project Director Motorways and Director Environment Motorways will approve all refinements that are deemed consistent with the Project approval, where appropriate. Changes are to be in accordance with the TfNSW Part 5.1 Assessment Procedure, including the consistency assessment report template and approval signatory.

If required, the CEMP and Sub-plans would be updated as required to incorporate any additional potential environmental impacts or mitigation or management measures that resulted from the proposed changes. Affected personnel will be made aware of changes before the relevant works commence through toolbox talks, daily pre-start meeting, HSE committees or forums arranged to specifically address changes.

4 Environmental Management Documentation

CEMP Sub-plans, Strategies and Monitoring Programs support the Project's CEMP and environmental management. These documents have been prepared to address the requirements of the CoA, REMM, TfNSW Specifications G36, G38, G40, other measures identified in Section 1.2 and environment assessment documentation. Key environmental management documents are discussed below.

4.1 Traffic and Transport and Access

A Traffic, Transport and Access Management Sub-plan (TTAMP) has been developed to manage the traffic and transport risks from construction of the Project. The TTAMP is located in Appendix B1 of the CEMP and has been developed in accordance with general CoA C4, C5 and C6.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the TTAMP refer to Section 3.2 and Section 3.3 of the TTAMP (Appendix B1).

Furthermore, in accordance with the CoA E54 a separate Construction Parking and Access Strategy has been prepared.

4.2 Noise and Vibration

A Noise and Vibration Management Plan (NVMP) has been developed to manage the noise and vibration risks from construction of the Project. The NVMP is located in Appendix B2 of the CEMP and has been developed in accordance with general CoA C4, C5, C6 and C9.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the NVMP refer to Section 3.2, Section 3.3 and Section 6 of the NVMP (Appendix B2).

Furthermore, in accordance with the CoA C9(c) a Noise and Vibration Monitoring Program has been prepared.

4.3 Flora and Fauna

A Flora and Fauna Management Plan (FFMP) has been developed to manage the risks to biodiversity and flora and fauna from construction of the Project. The FFMP is located in Appendix B3 of the CEMP and has been developed in accordance with general CoA C4, C5 and C6.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the FFMP refer to Section 3.2, Section 3.3 and Section 6 of the FFMP (Appendix B3).

Furthermore, in accordance with the CoA C9(c) a Microbat Management Strategy has been prepared and included in the FFMP.

4.4 Air Quality

An Air Quality Management Plan (AQMP) has been developed to manage the air quality risks from construction of the Project. The AQMP is located in Appendix B4 of the CEMP and has been developed in accordance with general CoA C4, C5, C6 and C9.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the AQMP refer to Section 3.2, Section 3.3, Section 3.4, Section 3.5 and Section 6 of the AQMP (Appendix B4).

Furthermore, in accordance with the CoA C9(e) a Dust Deposition Monitoring Program has been prepared.

4.5 Soil and Surface Water Quality Management

For this Project, the CEMP Sub-plan for Soil and Water Quality Management Sub-plan has been divided into separate Soil and Surface Water (SSWMP) and Groundwater Management Sub-plans (GMP). This was done to ensure a comprehensive approach to managing the environmental risks to soil and water on this Project. The SSWMP is located in Appendix B5 of the CEMP and the GMP is located in Appendix B6 of the CEMP.

The SSWMP has been developed to manage the soil and surface water risks on this Project. This document has been developed in accordance with the general CoA C4, C5, C6 and C9. For Sub-plan specific CoA, REMM and other relevant requirements used to prepare the SSWMP refer to Legal Requirements Register (Appendix A1), Section 3.2, Section 3.3 and Section 6 of the SSWMP (Appendix B5). For Sub-plan specific CoA, REMM and other relevant requirements used to prepare the GMP refer to Legal Requirements Register (Appendix A1), Section 3.2, Section 3.3 and Section 6 of the GMP (Appendix B6).

Furthermore, in accordance with the CoA C9(a) a Surface Water Quality Monitoring Program has been prepared.

4.6 Groundwater Quality Management

The GMP has been developed to manage the risks to groundwater from construction of the Project. This document has been developed in accordance with the general CoA C4, C5, C6 and C9.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the GMP refer to Section 3.2, Section 3.3 and Section 6 of the GMP (Appendix B6).

Furthermore, in accordance with the CoA C9(b) a Groundwater Monitoring Program has been prepared.

4.7 Contaminated Land

Approval documentation including the EIS, CoA and REMM did not identify the need for a separate Contaminated Land Management Plan (CLMP). However, in order to ensure the effective management of contamination on the Project and in accordance with TfNSW Specification G36 Cl 4.2.2, a CLMP has been prepared and included as an appendix of the SSWMP (Appendix A).

The CoA did however, identify the need for a Site Contamination Report and an Unexpected Contaminated Land and Asbestos Finds Procedure. A Site Contamination Report will be prepared in accordance with CoA E181. An Unexpected Contaminated Land and Asbestos Finds Procedure has been prepared in accordance with CoA E184 / E185 and is located in Appendix A of the CLMP as a part of the SSWMP.

The CLMP was prepared in accordance with the *Contaminated Land Management Act 1997* (NSW), TfNSW publication “Contaminated Land Management Guideline”, TfNSW “Environmental Incident Classification and Reporting Procedure”, and relevant EPA guidelines.

4.8 Non-Aboriginal Heritage

A Non-Aboriginal Heritage Management Plan (NAHMP) has been developed to manage the risks from construction of the Project. The NAHMP is located in Appendix B7 of the CEMP and has been developed in accordance with general CoA C4, C5 and C6.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the NAHMP refer to Section 3.2, Section 3.3 and Section 7 of the NAHMP (Appendix B7).

4.9 Aboriginal Cultural Heritage

An Aboriginal Cultural Heritage Management Plan (ACHMP) has been developed to manage the risks to Aboriginal cultural heritage from construction of the Project. The ACHMP is located in

Appendix B8 of the CEMP and has been developed in accordance with general CoA C4, C5 and C6.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the ACHMP refer to Section 3.2, Section 3.3 and Section 7 of the ACHMP (Appendix B8).

4.10 Waste Management

A Waste Management Sub-plan (WMP) has been developed to manage the waste management and resource consumption risks from construction of the Project. The WMP is located in Appendix B9 of the CEMP and has been developed in accordance with general CoA C4, C5 and C6.

For further Sub-plan specific CoA, REMM and other relevant requirements used to prepare the WMP refer to Section 3.2, Section 3.3 and Section 7 of the WMP (Appendix B9).

4.11 Sustainability

In accordance with CoA E199 / E200, a Sustainability Strategy has been prepared and provided to DPE. In addition, opportunities to reduce operational greenhouse gas emissions will be investigated during detailed design. The sustainability initiatives identified will be implemented, reviewed, updated regularly throughout the design development and construction in accordance with CoA E201.

Separate to but complementing the Sustainability Strategy, a Sustainability Management Plan has also been prepared in order to comply with WestConnex Transurban requirements.

The Sustainability Management Plan details:

- The sustainability requirements of the Project i.e. how the Project will achieve a minimum “Excellent” ‘Design’ and ‘As built’ rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool
- Establishes governance structures, processes and systems that ensure integration of all sustainability considerations (vision, commitments, principles, objectives and targets), initiatives, monitoring and reporting during the detailed design and construction phases of the Project
- Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design.

Furthermore, in accordance with the CoA E198 a Water Reuse Strategy will be prepared.

4.12 Spill Prevention and Response

A Pollution Incident Response Management Plan (PIRMP) has been developed to manage spill prevention and response on the Project, as required by Part 5.7 of the *Protection of the Environment Operations Act 1997* (NSW) (POEO Act). This document has been developed in accordance with relevant requirements referenced in the PIRMP.

4.13 Use of Pesticides

In accordance with the relevant Specification G36 Clause 4.12 and best practice, the use of pesticides must be in accordance with the *Pesticides Act 1999*, other relevant legislation, label directions and any relevant industry codes of practice.

Pesticide use is to be in accordance with as a minimum the TfNSW Pesticide Notification Plan and will be avoided in the following conditions:

- On hot days when plants are stressed
- After the seed has set
- Within 24 hours of rain or when rain is imminent

- When winds will cause drift of pesticides into non-target areas.

For detailed information regarding pesticide use on the Project refer to the Weed Management Protocol (Appendix D) located in the FFMP.

4.14 Work in Environmentally Sensitive Areas

Clause 4.13 of G36 is addressed in Section 3.2.4 of this CEMP.

4.15 Environmental Incident Notification and Reporting

Clause 4.14 of G36 is addressed in Section 3.8 of this CEMP. The response to environmental emergencies and incidents is to be consistent with the TfNSW Environmental Incident Classification and Reporting Procedure (Appendix A6).

4.16 Ancillary Site Facilities

Ancillary site facilities used as part of the Project are discussed in Section 1.3.4.

4.16.1 Ancillary Facilities Approval Pathways

Two approval pathways exist for ancillary facilities, as presented in Figure 4-1:

1. Ancillary facilities identified in the EIS and/or SPIR which have been established prior to approval of the CEMP are subject to a Site Establishment Management Plan (SEMP) as per CoA C22. Ancillary facilities identified in the EIS and/or SPIR which are established following CEMP approval will be managed during the establishment phase by this CEMP.
2. Minor construction ancillary facilities (lunch sheds, office sheds, and portable toilet facilities) not detailed in the EIS or SPIR, which would be of minimal environmental impact may be approved under CoA C24. This must be in accordance with the criteria of this CoA, including:
    - 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 CoA C22 of this approval
    - Are located within the project boundary
    - Have been assessed by the ER to have:
        - 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
        - Minimal environmental impact with respect to waste management and flooding
        - No impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.

All ancillary facilities must be operated in accordance with this CEMP as per CoA C23.

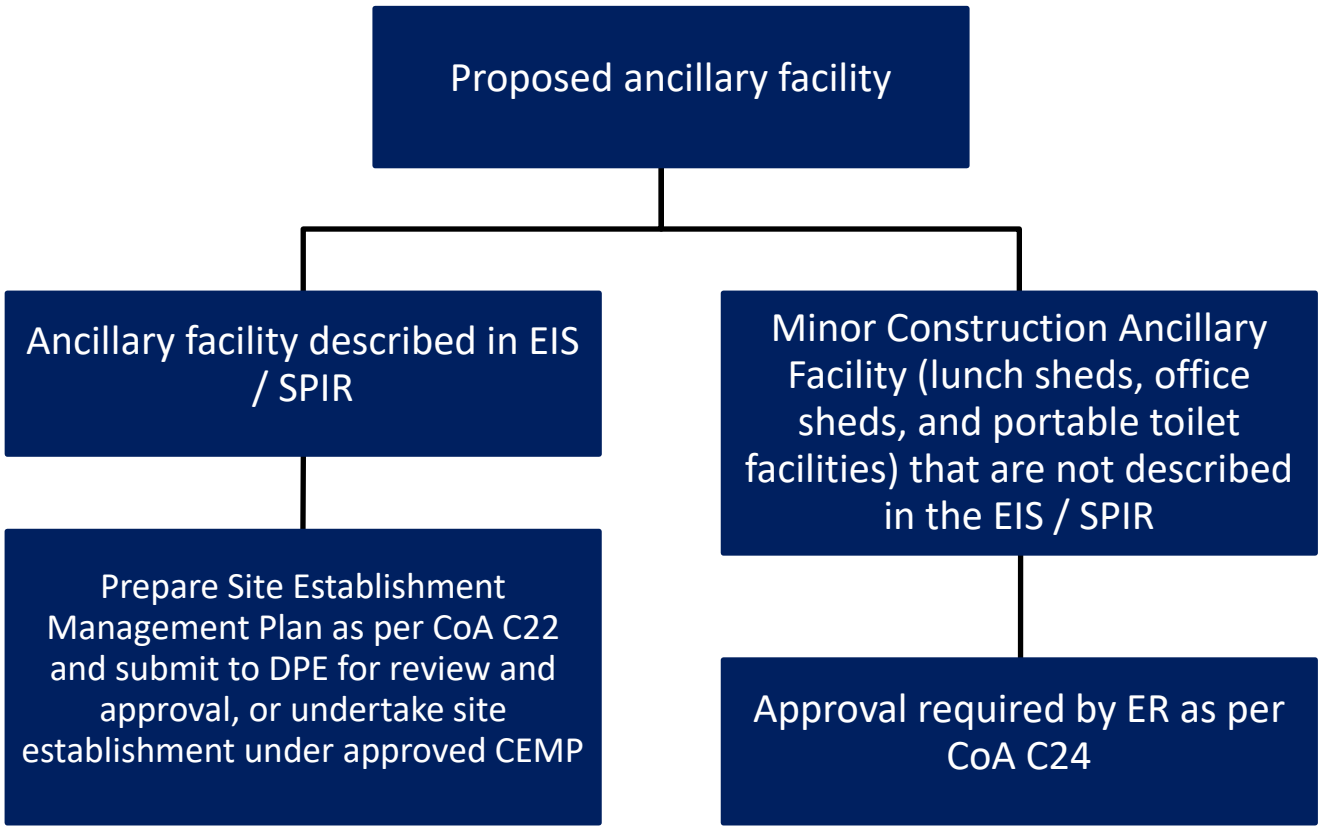

Figure 4-1 Approval flowchart for ancillary facilities

It should be noted that varying Project phases may see the need to make minor changes to facilitate constructability, amenity or internal traffic movement requirements. This may include, but is not limited to:

- Interchangeable use of laydown/storage and car parking areas
- Relocation of internal access roads to allow for efficiencies in heavy vehicle/light vehicle movements
- Alteration to car parking/container and laydown areas for safe working distances
- Movement of portable site accommodation, workshops and containers for construction staging
- Management of environmental constraints and/or in response to community and agency feedback.

Key structures are less likely to change unless their use to support specific site establishment works is no longer required.

Such amendments would be approved as follows:

- Changes that result in a neutral or positive overall environmental impact will be approved by the ASBJV Environment and Sustainability Manager, and will be updated within this document as required. Determination of the significance of impacts arising from these amendments will be undertaken in consultation with the ER
- Changes that result in a minor overall negative impact, will be approved by the ER as part of an update to this document
- Changes that result in a greater than minor negative environmental impact will require approval of the DPE.

4.16.2 Sites established under SEMP

Due to the timing of the construction program and availability of site access, the Project ancillary facilities will be established at different times during the Project. As noted above, sites established prior to the CEMP approval are required to be established under a SEMP, prepared in accordance with CoA C22. The SEMP is subsequently approved by the DPE, to enable establishment works to commence.

The following sites will be established under a SEMP:

- C3b – Parramatta Road East
- C1b – Parramatta Road West
- C9 – Pyrmont Bridge Road
- C10 – Campbell Road.

4.16.3 Sites established under CEMP

Following approval of the CEMP, the following sites are required to be established:

- C1a – Wattle Street
- C2b – Haberfield - Parramatta Road Ventilation Facility
- C3a – Northcote Street.
- In general, the activities required to establish these sites are provided in Table 4-1.

4.16.4 Sites following tunnel opening

Prior to tunnel opening, the following sites will be handed back to WCX to facilitate the operation of the tunnel:

- C1a – Wattle Street
- C2b – Haberfield - Parramatta Road Ventilation Facility

Following tunnel opening, the remaining ancillary facilities, as detailed below, will continue to be managed in accordance with the CEMP until construction completion:

- C3b – Parramatta Road East
- C1b – Parramatta Road West
- C9 – Pyrmont Bridge Road
- C10 – Campbell Road.
- C3a – Northcote Street.

An indicative site layout for each remaining facility is included in Appendix A8.

Table 4-1 Indicative site establishment activities

Key Work Activities
Site preparation • Provision of site security including required hoarding and signage where required • Provision of minimum WHS requirements including: ◦ Toilet facilities

Key Work Activities
◦ First aid and lunch room facilities. • Survey and site investigation works including: ◦ Ground penetrating radar or electromagnetic ground investigation ◦ Contamination investigations where required. **Site establishment** • Installation of environmental controls: ◦ Erosion and sediment controls, including mud tracking controls where required ◦ Installation of noise mitigation measures where required ◦ Delineation of sensitive areas where required • Site access: ◦ Traffic controls ◦ Establishment of site access and egress points ◦ Installation or upgrading of internal roads. • Services and utilities: ◦ Protection of existing services ◦ Installation of new services as required, including drainage and communications • Site installation involving: ◦ Office facilities ◦ Water tanks and water treatment facilities where required ◦ Storage and refuelling areas ◦ Weighbridges and wheel wash where required ◦ Utilisation of site offices and amenities previously established by the M4 East Project.

Additional works specific for the Project may include the installation of site sheds, hoarding and signage required under the CoA, and any relevant environmental controls.

It is anticipated that site establishment may take one to eight weeks depending on the site.

Compliance with CoA C22 for sites established as part of this CEMP has been demonstrated in Table 4-2 below.

Table 4-2 CoA C22 compliance for CEMP established sites

CoA	Where requirement has been addressed
C22(a)	Through meeting the requirements of CoA C2(a) (Section 1.3 and Section 4.16.3)
C22(b)	Appendix A8
C22(c)	Through meeting the requirements of C2(d) (Sections 3.2.1 and Section 3.12)
C22(d)(i)	Through meeting the requirements of C2(e)(i) (Table 3-2)

CoA	Where requirement has been addressed
C22(d)(ii)	As per SEMP; not required as spoil haulage would not be required during site establishment
C22(d)(iii)	Through meeting the requirements of C2(e)(ii) (Section 3.12)
C22(e)	Through Section 3.9

4.16.5 Boundary Screening Approach

Boundary fencing will be erected around ancillary facilities that are adjacent to sensitive receivers as required under CoA C25.Boundary fencing will be erected around ancillary facilities that are adjacent to sensitive receivers as required under CoA C25. Throughout site demobilisation and reinstatement, the boundary fencing and hoarding erected around the ancillary facilities will go through a transitional period that will include a change from solid boundary hoarding to permanent chain wire fences. During this transition, solid hoarding will be retained along boundaries adjacent to neighbouring properties at the Northcote and PREW sites.

All other ancillary facility boundaries will be temporary ATF fencing with additional appropriate screening installed to minimise impact as required by CoA C26, albeit noting that there will be a short period of time where screening may not be in place during the construction of the permanent chain wire fence.

4.17 Utilities

In order to address the EIS, Land Use and Property management measures identified in the SPIR and in accordance with the CoA E140, a Utilities Management Strategy has been prepared. This strategy details:

- 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 CoA E141
- A description of all utility works to be undertaken, including low impact utility works and how they meet the definition in subclause (a)
- The management measures that will be implemented to manage dust, noise, traffic, access and lighting impacts associated with low impact utility works.

The current utilities works identified for the Project is subject to final design, confirmation of site conditions and provision of as-built information from adjacent major projects. Where utilities construction works are required outside the ‘Areas of Interest’ (identified in Appendix F of the EIS and included in the Project Utilities Management Strategy) an environmental constraints analysis and risk assessment will be undertaken to confirm that the environmental management measures that would be applied are appropriate. If additional environmental impacts are identified, existing management measures would be reviewed and, if necessary, modified to minimise potential impacts.

The environmental constraints analysis and risk assessment for works outside ‘Areas of Interest’ would consider the following:

- Obtaining agreements with utility service providers, effective co-ordination of utility adjustment works and consideration of appropriate route options. This would be managed

by the Utility Coordination Manager described in Section 6.2 and as described under Section 3.8

- Stakeholder and community consultation and notification. This would be undertaken in compliance with the CCS and the detail provided in Section 6.1.

Where utilities construction works are required outside the 'Areas of Interest' an environmental constraints analysis and risk assessment will be undertaken to confirm that the environmental management measures that would be applied (either through this Strategy for 'low impact' works, or the CEMP and sub-plans for all other works) are appropriate. This environmental constraints and risk assessment would form part of an TfNSW Consistency Assessment that would be prepared when works are required outside of the 'Areas of Interest'. If additional environmental impacts are identified, existing management measures would be reviewed and, if necessary, modified to minimise potential impacts. Refer to the Utilities Management Strategy for additional information about proposed utilities works for the Project.

4.18 Restoration of site

On completion of the works, any areas disturbed by construction activities (such as areas for site compounds, material storage, access and haul roads and the provision of the Principal's Project accommodation) will be reinstated and restored in accordance with Residual Land Management Plans where applicable. Prior to works commencing and following completion restoration of the areas in accordance with G36 Cl 4.16, a pre- and post-construction land condition assessment will be undertaken for each area that has been used.

4.19 Controlled Blasting

Blasting is an activity permitted for the Project, as described within the EIS. CoA E96 requires a Blast Management Strategy to be prepared, in addition to the Blast Monitoring Program required under CoA C9(d). These documents will be prepared separately but will be read in conjunction for the monitoring and management of controlled blasts across the Project.

As per CoA E96, the Blast Management Strategy will include information on:

(a) sequencing and review of trial blasting to inform blasting;

(b) regularity of blasting;

(c) intensity of blasting;

(d) impact mitigation measures including periods of relief; and

(e) blasting program.

The Blast Management Strategy will be:

- endorsed by a suitably qualified and experienced person
- reviewed by an independent specialist
- prepared in accordance with relevant guidelines
- prepared in consultation with the EPA to ensure that all blasting and associated activities are carried out so as not to generate unacceptable noise and vibration impacts or pose a significant risk to sensitive receivers.

The Blast Management Strategy will be submitted to the Secretary for information no later than one month prior to the commencement of blasting. The Strategy as submitted to the Secretary, must be implemented for all blasting activities.

Appendix A1

Legal Requirements Register

M4-M5 Link Mainline Tunnels

October 2018

Legal requirements

Table 1-1 Legal register

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
General					
Environmental Planning and Assessment Act, 1979 (EP&A Act)	All	The Project has been declared critical State Significant Infrastructure (CSSI) by virtue of Schedule 5, clause 4 of *State Environmental Planning Policy (State and Regional Development) 2011.* Comply with the terms Minister for Planning's approval for the project. Obtain the Minister's approval for any project modifications that are not consistent with the planning approval.	S5.13 S5.14	Yes	Section 1.1
		Environmental assessment and public consultation, including a preferred infrastructure report that outlines any proposed changes to the SSI	S5.17		Section 1.1 Section 2
		• Application of other provisions of the EP&A Act • Approvals and legislation that does not apply • Approvals and legislation that must be applied consistently	S5.22 S5.23 S5.24		This table Section 1.2, Table 1-1 Section 3.2.2 compliance
		The proponent may request the Minister to modify the Minister's approval for SSI, which should be lodged with the Planning Secretary.	S5.25		Section 3.14.2

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
Protection of the Environment Operations Act 1997	Environmental protection	Do not risk harming the environment by wilfully or negligently: • Disposing of waste unlawfully • Causing any substance to leak, spill or otherwise escape (whether or not from a container) or • Emitting an ozone depleting substance.	S115 S116 S117		Table 3-2, Section 3.2.3 WMP (Section 2.3) WMP (Table 7-1, W20, W23) SSWMP (Table 6-1, SSWMM23, SSWMM48) GMP (Section 5.2.4) Sustainability Management Plan
	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	S167		AQMP (Table 6-1 AQ15, AQ33, AQ34)
	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148		Section 3.8
	Site licensing	An Environment Protection Licence (EPL) under Chapter 3 of the POEO Act would be required for the construction of the project.	cl. 35 of Schedule 1		Section 3.2.2, Table 3-1
	Site licensing	Do not carry out or allow an activity listed in Schedule 1, or carry out work to enable such an activity, unless the premises are licensed by the EPA. This applies to: road construction: meaning the construction, widening or re-routing of roads if it results in the existence of 4 or more traffic lanes (other than bicycle lanes or lanes used for entry or exit) for 1 kilometres of their length in the metropolitan area, or 5 kilometres in length in any other area, where the road is classified, or proposed to be	S47 S48 Environment Protection Licence	Yes	Table 3-1, Section 3.2.2 Section 3.7.2 Table 3-6, Section 3.9.5

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		classified, as a freeway or tollway under the Roads Act 1993.			
Crown Lands Act 1989	Crown land	Ministerial approval required to grant a 'relevant interest' over a Crown Reserve. Any works on Crown land are likely to occur pursuant to a relevant interest (ie licence, permit, easement or right of way) to be granted for works on this land.	34A	-	No Crown land within Project footprint.
Roads Act 1993	*Road work*	Requires the consent of the appropriate road authority for carrying out work on, or disturbing, the surface of a public road. Where the proponent is a public authority, the roads authority must consult with the applicant before making a decision.	S138	Yes	Traffic and Transport and Access Management Sub-Plan (TTAMP) (Section 3.1.1)
National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes	Section 3.4.2
Water					
Water Management Act 2000 With the exception of controlled activity approvals, the *Water Management Act 2000* (WM Act) only applies in relation to those water sources	Water access and use.	Access licence required to take water from a water source (a lake, river or estuary or place where water occurs naturally on or below the surface of the ground, and includes coastal waters). This also applies to unregulated river access licences. Do not use of water on land (unless supplied by a water utility, irrigation corporation etc or in accordance with basic landholder rights) without a water use approval.	S56 S60A S89 S90 S91A	No	Under the EP&A Act the Project is exempt from this requirement

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.	Water management works	Do not construct/use a water supply work, drainage work or flood work without the appropriate approval.	S90 S91B S91C S91D	No	Under the EP&A Act the Project is exempt from this requirement
	Waterfront land	Do not deposit material, excavate, or remove material within a watercourse bank, shore or bed, or on land 40 metres inland, or interfere with the likely flow of water to such a body, without a controlled activity approval.	S91	No Public authorities are exempt from the need to obtain a controlled activity approval. Water Management (General) Regulation 2011 (cl.38)	Under the EP&A Act the Project is exempt from this requirement
	Activity approvals	An aquifer interference approval confers a right on its holder to carry out one or more specified aquifer interference activities at a specified location, or in a specified area, in the course of carrying out specified activities.	S91(3)	No	Under the EP&A Act the Project is exempt from this requirement
Water Act 1912 With the exception of controlled activity approvals, the WM Act only applies in relation to those	Surface water	Obtain a licence or permit for construction or use of 'work' for purposes including the taking and using of water	S21B	Yes	N/A Note that this Act is being progressively repealed by the *Water Management Act 2000* and does not apply to areas of the state

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
water sources covered by operational water sharing plans – these areas cover most of the State's major regulated river systems.					where water sharing plans are in place. Groundwater and surface water within and near the Project are covered by the following Water Sharing Plans: Water Sharing Plan, Greater Metropolitan Region Groundwater Sources (NoW 2011).
Sydney Water Act 1994	Wastewater	Approval to discharge wastewater to sewer and Trade Waste Agreement	S49	Yes	GMP SSWMP
Sydney Water Regulation 1994	Plumbing and drainage	Permit required to do plumbing or drainage work, which includes connection to a stormwater drain	S18	Yes	GMP SSWMP
Protection of the Environment Operations Act 1997	Water pollution	Do not cause water pollution (other than to a sewer), except in accordance with the conditions of an Environment Protection Licence.	S120 S122	Yes	GMP Soil and Surface Water Management Sub-Plan (SSWMP)
Noise					
Protection of the Environment Operations Act 1997	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes	Construction Noise and Vibration Management Sub-Plan (CNVMP) (Table 8-1, NV15)
	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes	CNVMP (Table 8-1, NV35)
Contaminated material					

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
Protection of the Environment Operations Act 1997	Land pollution	Do not cause or permit land pollution other than under authority of a licence or regulation. (However it is not a land pollution offence to place virgin excavated natural material or lawful pesticides and fertilisers on land, or by placing matter on land that has been notified to the EPA as an unlicensed landfill and which is operated in accordance with the regulations.)	S142A – S142E	Yes	Project EPL Contaminated Land Management Plan (CLMP) SSWMP (Table 6-1, SSWMM20, SSWMM21, SSWMM23)
Contaminated Land Management Act 1997	Reporting contamination	Notify the EPA if; • Contaminants exceed thresholds contained in guidelines or the regulations where contamination has entered or will foreseeably enter neighbouring land, the atmosphere, groundwater or surface water. • Contaminants in soil are equal to or exceed guideline levels with respect to the current or approved use of the land. • Contamination meets other criteria that may be prescribed by the regulations.	S60	Yes	CLMP (Appendix A, Unexpected Contaminated Lands and Asbestos Finds Procedure)
Biodiversity					
Biodiversity Conservation Act 2016	Fauna	Do not harm any animal that is; of a threatened species, that is part of a threatened ecological community or is a protected animal, unless authorised under other legislation (e.g. planning approval).	S2.1 S2.8	Yes	Flora and Fauna Management Sub-Plan (FFMP) (Section 6)
	Habitat	Do not damage habitat of a threatened species or ecological community unless authorised under other legislation (e.g. planning approval).	S2.4 S2.8	Yes	FFMP (Section 6)

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
	Biodiversity	Do not damage declared areas of outstanding biodiversity value unless authorised under other legislation (e.g. planning approval).	S2.3 S2.8	Yes	FFMP (Section 6)
	Flora	Do not pick a plant that is; of a threatened species, that is part of a threatened ecological community or is a protected plant, unless authorised under other legislation (e.g. planning approval).	S2.2 S2.8	Yes	FFMP (Section 6)
Biosecurity Act 2015	Biosecurity matters including pests, disease and weeds	The duty to prevent, eliminate and minimise biosecurity risks posed by biosecurity matters as defined by the Act.	S22	Yes	FFMP Section 4.13 Use of pesticides Section 4.18 Restoration of site FFMP (Table 6-1, FF18-FF20, Appendix D Weed Management Protocol)
Biosecurity Regulation 2017	Pests and Diseases	Notify the presence any pest or disease listed in Schedule 1 of the Biosecurity Regulation 2014, within 1 working day after suspecting or becoming aware of the pest or disease.	Regulation cl.7 Schedule 1	Yes	FFMP (Table 6-1, Section 6, FF18-FF20)
Fisheries Management Act 1994	Dredging or reclamation	Provide the Minister for Primary Industries 28 days notice of planned dredging or reclamation work.	S199	No	Under the EP&A Act the Project is exempt from this requirement/ Not relevant to Project scope
	Mangroves, seagrasses and marine vegetation	Do not harm any mangroves, seagrasses or other marine vegetation on public water land protected by the regulations without a permit.	S205	No	Under the EP&A Act the Project is exempt from this requirement

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
	Fish passage	Do not block fish passage without a permit	S219	No	Under the EP&A Act the Project is exempt from this requirement
Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13	Yes	FFMP (Appendix B, Threatened Flora / Endangered Ecological Communities (EEC) Procedure) FFMP (Appendix C, Fauna Handling and Rescue Procedure)
		Comply with the terms of any EPBC Act approval for the project.		N/A	N/A
Air Quality					
Protection of the Environment Operations Act 1997	Air quality	Do not operate plant which emits air pollution caused by poor maintenance or operation	S124	Yes	AQMP (Table 6-1, AQ30, AQ32)
		Do not cause or neglect to prevent air pollution (eg dust exceeding reasonable levels without active management measures in place)	S126	Yes	AQMP (Table 6-1)
		Do not cause or permit the emission of an offensive odour	S129	Yes	AQMP (Table 2-1, Target #8, Table 6-1, AQ33)
Protection of the Environment Operations (Clean Air) Regulation 2002	Air quality	Excessive impurities are visible for a continuous period of more than 10 seconds	S15	Yes	AQMP (Table 2-1, Target #4)
		Air emission concentrations for scheduled premises	Schedule 4	Yes	AQMP (Section 4)
Waste					

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
Protection of the Environment Operations Act 1997	Littering	Do not litter in a public place or an open private place. Do not litter from a vehicle. Only deposit advertising material in receptacles provided for mail or newspapers or under the door of the premises. Do not deposit advertising material on or in vehicles.	Part 5.6A	Yes	CCS
	Waste and transportation	Do not undertake a scheduled waste activity unless in accordance with an environmental protection licence. A licence must be obtained when construction and demolition wastes are applied to land under certain circumstances. This includes the reincorporation of crushed road base material back into roads and the placing of excess fill material onto properties. A licence is not required if the material: • Is VENM. • Does not exceed 200 tonnes in the Sydney, Newcastle and Wollongong areas, or 20,000 tonnes outside these areas. • Is covered by a "general exemption". Current exempted materials are ENM, recycled aggregates and raw mulch. These exemptions are conditional and require some chemical testing of materials before they are placed onto land. • A licence must be obtained if more than 2,500 tonnes (or cubic metres) is stored on a stockpile site at any one time, or	Part 3.2 Schedule 1	Yes	WMP (Table 7-1, Section 7, W3)

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		more than 30,000 tonnes of waste is received per year from off site.			
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes	WMP (Table 7-1, Section 7, W16)
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes	WMP (Section 2.3)
Protection of the Environment Operations (Waste) Regulation 2005	Waste and transportation	Comply with general requirements for the transport of waste. For example, any vehicle used by the person to transport waste must be kept in a clean condition and be maintained so as to prevent spillage of waste. For some wastes only licensed transporters can be used.	Regulation cl.49	Yes	WMP (Section 5.6)
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes	WMP (Appendix A, Waste and Spoil Management Tracking Register)
Waste Avoidance and Resource Recovery Act 2001		Establish the waste hierarchy. Promotes waste avoidance and resources recovery by developing waste avoidance and resource recovery strategies.	-	Yes	WMP (Table 2-1, Section 5.2, Table 7-1)
Heritage					
Heritage Act 1977	Heritage	Do not undertake an activity that will affect a place, building, work, relic, moveable object or precinct which is subject to an Interim Heritage Order or is listed on the State Heritage Register without approval from the Heritage Council.	S56-57	No	Under the EP&A Act the Project is exempt from this requirement
		Do not disturb or excavate land with knowledge or reasonable cause to suspect that the disturbance or excavation will or is likely to result in a relic being discovered, exposed, moved,	S139	No	Under the EP&A Act the Project is exempt from this requirement

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		damaged or destroyed; or Do not disturb or excavate land on where a relic has been discovered or exposed.			
		Notify the heritage Council on discovery of a relic	S146	Yes	Non-Aboriginal Heritage Management Sub-Plan (NAHMP) (Appendix A of the, Roads and Maritime Services Standard Management Procedure Unexpected Heritage Items (November 2015) (Unexpected Heritage Items Procedure))
National Parks and Wildlife Act 1974	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86	N/A	Aboriginal Cultural Heritage Management Sub-Plan (ACHMP) (Table 7-1 ACH5)
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes	ACHMP (Appendix A, Unexpected Heritage Items Procedure)
		An Aboriginal heritage impact permit may be issued	S90	No	Under the EP&A Act the Project is exempt from this licence
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes	ACHMP (Appendix A, Unexpected Heritage Items Procedure)
		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes	ACHMP (Table 2-1, Table 7-1)
Traffic					

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
Transport Administration Act 1988		Comply with the functions of Roads and Maritime relating to traffic management and safety.	S52A		TTAMP (Section 5 including 5.1.1 Construction staging, Section 5.5.2, Section 5.5.3, Section 5.10.2 , Section 6.2.4)
Road Rules 2014		Establish the road rules that are applicable to vehicles and road users on roads in NSW		Yes	TTAMP Section 3.1.1 TTAMP Section 4.6.2
		Provisions of Road Rules 2014 not applicable to a person at the site of, and engaged in, roadworks	310	Yes	TTAMP Section 6.2.3
Hazard and risk					
Environmentally Hazardous Chemicals Act 1985	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	S28	Yes	Section 3.2.2 Pollution Incident Response Management Plan (PIRMP)
Dangerous Goods (Road and Rail Transport) Act 2008	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	S9	Yes	PIRMP
Pesticides Act 1999	Hazards and risks	Do not use an unregistered pesticide without a permit. Use pesticides in an environmentally sensitive manner. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label.	S12 S13 S14 S15 S17	Yes	FFMP Section 4.13

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		Do not use any restricted pesticide unless authorised by a certificate of competency or a pesticide control order under the Act. Compliance with pesticide codes of practice is required.			
Incident response					
Protection of the Environment Operations Act 1997	Incident response	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148		Section 3.8 Section 4.15
	Incident response	Requires the holder of an EPL to prepare a pollution incident response management plan (PIRMP).	S153A-F		Section 3.8 (PIRMP)
	Pre-emptive pollution/ incident control	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices)	S167		Table 3-3, Section 3.9.2
Local Government Act 1993	Fire related incident	In the event of a fire related incident the project will comply with the requirements of the Act			Section 4.12 Fire safety and burning off
Rural Fires Act 1997	Fire related incident	In the event of a fire related incident the project will comply with the requirements of the Act			Section 4.12

Other approvals and licences

Table 1-2

Approval/Licence	Requirement	Relevant section of the CEMP
EPL	Required for activities listed in Schedule 1 of the POEO Act	Table 3-1 Table 3-6
Section 143 notice of POEO Act	Prior to transportation of waste to receiving facility	
Road Occupancy Licences	Prior to commencement of traffic related works that require access to roads	Table 3-2

RMS specification requirements

Table 1-3 RMS G36 requirements

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.1	The CEMP must be prepared in accordance with NSW Department of Infrastructure, Planning and Natural Resources (DIPNR) publication 'Guideline for the Preparation of Environmental Management Plans'. Your CEMP must be consistent with, and incorporate, all relevant elements of your CEMS.	Section 1.2
Section 3.1	The CEMP must: (a) include an Environmental Policy that contains a commitment to the principles of Ecologically Sustainable Development as detailed in the *Protection of the Environment Administration Act 1991 (NSW)* (b) describe all relevant elements of, and include reference to, the CEMS documentation and how these will apply to the Work Under the deed (c) address all aspects and stages of the Work Under the deed.	(a) Appendix A3 (b) Section 1.5 (c) Section 1.4 Scope, Section 1.3.2 Construction staging
Section 3.1	Include any Sub-Plans specified in Annexure G36/A2 that are required to address specific issues.	Appendices B1-B8
Section 3.1	Prior to commencement of any work on site, carry out an environmental risk assessment workshop to identify all the environmental constraints associated with the Project. Use the environmental risk assessment workshop to develop risk mitigation and management strategies to eliminate or reduce the risk exposure.	Section 3.2.1
Section 3.2.2	The CEMP must identify your obligations under environmental legislation that are relevant to the Work Under the deed, including those listed in Annexure G36/M.	

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	Environmental Legislation listed in Annexure G36/M includes, but are not limited to:	
	Contaminated Land Management Act 1997 (NSW)	This document (Table)
	Environmental Planning and Assessment Act 1979 (NSW) (and instruments made under it)	This document (Table)
	Environment Protection and Biodiversity Conservation Act 1999 (Cth)	This document (Table)
	Fisheries Management Act 1994 (NSW)	This document (Table)
	Heritage Act 1977 (NSW)	This document (Table)
	Local Government Act 1993 (NSW)	This document (Table)
	National Parks and Wildlife Act 1974 (NSW)	This document (Table)
	Native Vegetation Act 2003 (NSW)	Superseded by the *Biodiversity Conservation Act 2017* This document (Table)
	Pesticides Act 1999 (NSW)	This document (Table)
	Pesticides Regulation 2009 (NSW)	This document (Table)
	Protection of the Environment Operations Act 1997 (NSW)	This document (Table)
	Protection of the Environment Operations (Clean Air) Regulation 2002 (NSW)	This document (Table)

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	Threatened Species Conservation Act 1995 (NSW)	Superseded by *Biodiversity Conservation Act 2016* This document (Table)
	Waste Avoidance and Resource Recovery Act 2001 (NSW)	This document (Table)
Section 3.2.2	Include in your CEMS a compliance tracking program and keep the program up to date.	Compliance Tracking and Environmental Audit Program
Section 3.2.3	Include in the CEMP environmental objectives and targets for the Work Under the deed which must be consistent with RMS Environment Policy Statement.	Section 3.2.3
Section 3.2.4	In addition to those specified elsewhere in Specifications RMS D&C G36, D&C G38 and/or D&C G40, prepare an Environmental Work Method Statement (EWMS) and implement them as part of the Work Under the deed. Develop the EWMS in consultation with the relevant site management personnel to ensure that all issues are addressed, methods and activities are practical and all personnel are aware of their commitments and responsibilities. Review the EWMS periodically to ensure its effectiveness and proper implementation and incorporate any improvements or changes identified into subs+D15equent revisions.	Section 3.2.4
Section 3.3	Provide sufficient resources, including site personnel, for the effective implementation of the CEMP for the duration of the Work Under the deed. The CEMP must indicate the names, responsibilities and authority of your site management personnel who have primary responsibility for developing, implementing and maintaining the CEMS and the CEMP for the Work Under the deed, and rectifying any environmental nonconformities identified by you or the RMS Representative.	Section 3.3 Resources, responsibilities and authority
Section 3.3	Nominate in the CEMP a full-time Environmental Site Representative (ESR) who will be the authorised contact person for communications with the RMS Representative and the	Section 3.3.1 Roles and responsibilities

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	EPA on all environmental matters.	
Section 3.4	Include a requirement to comply with the CEMP in all contractual arrangements with your subcontractors. For subcontracted work, include in the CEMP the procedures that you will implement for ensuring subcontractor compliance, including details of: (a) the duties of each subcontractor for planning, implementing and monitoring environmental protection measures and for keeping environmental records; (b) the duties you will retain for environmental protection of subcontracted work; (c) how environmental protection measures on subcontracted work interact with adjacent work areas, as applicable; (d) your surveillance program to monitor the effectiveness of each subcontractor's environmental protection measures together with the relevant project documentation.	Section 3.3.1 Section 3.4 Selection and management of subcontractors, including Section 3.4.1 Selection, Section 3.4.2 Prior to works, Section 3.4.3 During construction works, Section 3.4.4 Compliance
Section 3.5	The CEMP must include a site-specific environmental induction and training plan that describes the minimum level of training, experience and/or qualifications required for staff and subcontractors working on the Site, the names of the persons to be trained, the proposed frequency of training and the procedures for training.	Section 3.5 Competence, training and awareness including Section 3.5.1 Environmental induction
Section 3.6	In the context of this clause, normal working hours are from Monday to Friday between 7.00 am to 6.00 pm and Saturday between 8.00 am to 1.00 pm inclusive, but excluding public holidays. The CEMP must include a procedure for notifying the RMS Representative, all relevant Authorities and the community, in advance of any proposal to work outside of these working hours (Monday to Friday between 7.00 am to 6.00 pm and Saturday between 8.00 am to 1.00 pm inclusive, but excluding public holidays). Such changes in working hours must comply with all licences, permits, approvals, consents, notification, statutory	Section 3.6 Communication (internal and external)

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	requirements, etc and have been appropriately justified and assessed.	
Section 3.7.1	The CEMP must identify at least two persons (together with their contact telephone numbers) who will be available to be contacted by the EPA on a 24 hour basis and who have authority to take immediate action to shut down any activity, or to effect any pollution control measure, as directed by an authorised officer of the EPA.	Section 3.7.2 Liaison with EPA, government authorities or other relevant stakeholders
Section 3.7.2.1	Notify local residents about any new or changed construction activities which will affect access to their properties or otherwise disrupt the residents' use of their premises, at least 5 working days before commencing work affecting residents.	Section 3.7.3 Community liaison and/or notification
Section 3.7.2.3	Inform the RMS Representative, and the residents of the proposed work outside normal working hours in accordance with the Environment Protection Licence held by you.	Section 3.7.3 Community liaison and/or notification
Section 3.7.3	Within one working day of receiving a complaint about any environmental issue, including any pollution incidents, arising from the Work Under the deed, submit a written report to the RMS Representative detailing the complaint and the action taken to remedy the problem. A final report together with your proposed measures to prevent the recurrence of such incidents must be submitted to the RMS Representative within 5 working days	Section 3.7.4 Complaints management
Section 3.8	The CEMP must include details of: (a) your key emergency response personnel, their respective responsibilities and contact details including all-hours contact telephone numbers; (b) emergency services (e.g. ambulance, fire brigade, spill clean-up services); (c) your communication strategy, both internal and external (refer to Clause 3.7), during emergencies; (d) any identified potential environmental emergencies that may occur on Site, and the	(a) Table/list of emergency and key contacts, prior to TOC of the CEMP (b) Table/list of emergency and key contacts, prior to TOC of the CEMP (c) Section 3.8 Emergency and Incident Planning, Section 3.7.2 (d) Section 3.8 Emergency and Incident Planning

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	response procedures for these emergencies; (e) frequency of tests of the emergency response procedures. Induct all staff and subcontractors working on the site about the potential environmental emergencies, and provide training in implementing the relevant environmental safeguards and risk mitigation measures.	(e) PIRMP
Section 3.9	Include in the CEMP procedure(s) to monitor and measure, on a regular basis, your environmental management performance and to evaluate compliance with this Specification.	Section 3.9 Monitoring, inspections and auditing
Section 3.9	Conduct all your internal and external environmental audits for the Work Under the deed in accordance with AS/NZS ISO 19011	Section 3.9.3 Auditing
Section 3.11	Maintain, as part of the project records in accordance with RMS D&C Q6 Annexure Q/E, legible environmental records of all environmental activities associated with Work Under the deed to demonstrate compliance with the CEMS and CEMP	Section 3.11 Records of environmental activities
Section 3.12	Develop a documented process to periodically review the effectiveness and proper implementation of the CEMP. The management review process must identify opportunities for continual improvement of your environmental management processes and practices, and ensure that the CEMS and CEMP remain relevant to the Wok Under the deed.	Section 3.12 Management review
Section 4.1	Comply with the requirements of Specification RMS D&C G38 for soil and water management.	Appendix B4
Section 4.2.2	Include in your CEMP a Contaminated Land Management Sub-Plan, which must comply with the *Contaminated Land Management Act 1997 (NSW)*, RMS publication "Contaminated Land Management Guideline", RMS "Environmental Incident Classification and Reporting Procedure", and EPA guidelines on contaminated land	Appendix B8

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	management.	
Section 4.2.3	Promptly notify the RMS Representative of any suspected or potential contamination exposed during construction activities, and cease all work activities within the vicinity of actual or suspected contaminated land.	CLMP (Appendix A Unexpected Contaminated Lands and Asbestos Finds Procedure)
Section 4.2.4	Where the contamination is known or an unexpected contamination find has been identified, a Remediation Action Plan may be provided by the RMS Representative.	To be prepared if required
Section 4.2.5	Implement relevant control measures to divert any surface runoff away from the contaminated land, and capture and treat any surface runoff contaminated by exposure to the contaminated land.	SSWMP (Table 6-1, SSWMM20, SSWMM21, SSWMM23, SSWMM50, SSWMM51, Section 7.3.2 Inspections)
Section 4.3	Plan and execute the Work Under the deed so as to minimize the possibility of pollution of the site and adjoining areas by chemicals, dangerous goods and other potential contaminants.	WMP (Table 7-1, W20, W23) SSWMP (Table 6-1)
Section 4.3	As part of the CEMP, prepare a procedure(s) for the following activities, as a minimum, to minimise the possibility of pollution of the Site: (a) refueling or maintenance and cleaning of plant and equipment including concrete agitators, bitumen spray bars and asphalt pavers (b) on-site batching of concrete and asphalt (c) mixing of bitumen with cutting oil and additives (d) application of liquid membranes, including paint and thermoplastic, resin, emulsion, precoat agent and curing compound (e) bulk fuel or chemical deliveries	EWMS WMP (Table 7-1, W13, W20, W34, W35, W40) PIRMP LLE procedures

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(f) removal and disposal of excess chemicals and water used for washing down of equipment (g) pumping out of oil and grease collection pits (h) decanting operations such as for fuel, chemicals and bitumen (i) details of the management of the bunded areas including monitoring of the bunded areas, drainage requirements and measures to ensure that bund capacities are maintained	
Section 4.3	Prepare and implement a Spill Response Procedure as part of the CEMP to minimise the impact of spills including details on the requirements for managing, cleaning up and reporting.	PIRMP
Section 4.4.1	Prepare and implement an Air Quality Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to minimise the impact of dust, offensive odour, and other air pollutants on the surrounding environment, including adjacent properties and sensitive places.	Appendix B6
Section 4.5	Comply with the requirements of the Rural Fires Act 1997 (NSW), and the Local Government Act 1993 (NSW) and be guided by the NSW Rural Fire Service publication "Equipment & Machinery Use in Bushfire Prone Areas" All items of plant used during proclaimed high fire danger periods that could discharge sparks must be fitted with spark arresters. Do not undertake cutting, welding, grinding or other activities likely to generate fires in the open on days when a total fire ban is proclaimed.	Section 4.12
Section 4.6	Prepare and implement a Noise Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to minimise the impact of noise from your operations on adjacent properties. The Noise Management Sub-Plan or mitigation strategies must include proposed environmental control measures for all significant	Appendix B3

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	noise generating activities. Where Works are proposed to be undertaken outside of normal working hours, comply with the requirements of Clause 3.7.2.	
Section 4.7	Implement all measures to prevent damage to adjacent public utilities, structures and buildings resulting from construction vibration and air blast. Prepare, as part of the CEMP, a Vibration and Air Blast Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, that describes the environmental controls to be implemented during construction to minimize the impact of vibration and air blast on adjacent properties and residents.	N/A Vibration included as part of CNVMP (Appendix B3)
Section 4.8	Prepare and implement a Flora and Fauna Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to provide effective environmental controls to protect all native flora, fauna, and fish from the impact of your construction activities.	Appendix B2
Section 4.9	Prepare an Aboriginal Heritage Management Sub-Plan as part of the CEMP or include mitigation strategies within the CEMP to manage any areas of the Site where known Aboriginal objects, places and/or culturally sensitive areas have been identified on site.	Appendix B5
Section 4.10	Prepare a Non-Aboriginal Heritage Management Plan as part of the CEMP or include mitigation strategies within the CEMP to manage any areas of the Site where any known heritage items/s and/or archaeological sites have been identified.	Appendix B5
Section 4.11.1	Prepare a Waste Management Sub-Plan as part of the CEMP, or include mitigation strategies within the CEMP, to manage and minimize the generation of waste and encourage reuse of materials.	Appendix B7
Section 4.11.2	Maintain a Waste Management Register until the Construction Completion Date, to record the type, amount and location of waste reused, recycled, stockpiled and disposed	Appendix B7

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	of.	
Section 4.12	Use of pesticides must be in accordance with the *Pesticides Act 1999,* or relevant legislation, label directions and any relevant industry codes of practice.	Section 4.13 Use of pesticides
Section 4.13	Clearly show all identified environmentally sensitive areas and sensitive places on Sensitive Areas Maps, submitted as part of the CEMP.	Appendix A6
Section 4.14	Prepare and include in the CEMP an environmental incident reporting and investigation procedure, including Pollution Incident Response Management Plan, as required by Part 5.7 of the *Protection of the Environment Operations Act 1997 (NSW)* (POEO Act).	Section 3.8 Section 4.15
Section 4.15.1	Locate and manage your site facilities (refer to Scope of Works and Technical Criteria) to minimize impacts on the environment and the community	Section 4.16 Ancillary site facilities Section 4.17 Restoration of site
Section 4.15.2	Prior to taking possession of any area of land nominated by the RMS Representative as available for use by you for locating your site facilities, including areas for construction materials storage and stockpiling, arrange for a pre-construction land condition assessment of each area you intend to occupy.	Section 4.16
Section 4.15.3	When the areas of the RMS Representative's land used for the Contractor's site facilities are no longer required, and after restoration of the areas in accordance with Clause 4.16, arrange for a post-construction land condition assessment for each area that has been used.	Section 4.16
Section 4.16	Prior to Construction Completion, restore areas disturbed by you (such as areas for site compounds, material storage, access and haul roads and the provision of RMS Site Facilities) to a condition similar to that existing before disturbance.	Section 4.17

Table1-4: RMS G38 requirements

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2.1.1	Prepare and implement a Soil Water Management Plan for the Work Under the deed.	SSWMP
Section 2.1.2	The Soil and Water Management Plan (SWMP) must identify all risks relating to soil erosion, and pollution caused by sediments and other materials, and describes how these risks will be addressed during construction.	Section 5.2.2 Soils – erosion and sedimentation
Section 2.1.2	The SWMP must include details of the following, where relevant: (a) Purpose and objectives of SWMP. (b) Approvals, licence requirements and relevant legislation. (c) Site investigation and assessment of the following: (i) soil properties (including dispersion properties and presence of acid sulphate soils); (ii) rainfall records and design parameters; (iii) waterways and other water related sensitive environments; (iv) groundwater; (v) possibilities of, and limitations on, water extraction. (d) Environmental control measures, including: (i) responsibility for its implementation, including the names and contact details of the person(s) responsible; (ii) resources required for its construction, monitoring, maintenance and removal; (iii) implementation schedule for the measures, related to construction activities; (iv) monitoring and maintenance of the environmental controls. (e) Other associated plans, Environmental Work Method Statements (EWMS) and procedures. (f) Construction sediment retention basins, including details of the following: (i) design of the construction sediment retention basins, including any temporary modifications to the operational basins, providing details of the approach, standards, criteria and references used in the design of the basins; (ii) management of the basins; (iii) procedures for testing, treatment and discharge of water from the basins; (iv) procedures for the periodic removal and disposal of the sediment collected within the basins. (g) Training, including: (i) site induction; (ii) environmental training; (iii) toolbox training.	(a) Sections 2.1, 2.2 (b) Section 3, Section 7.4 (c) As below: (i) Section 5.2.2 Soils, (ii) Section 4.3 Rainfall, (iii) Section 4.2 Surface water (Section 4.2.1 Catchments and waterways), (iv) Refer to GMP, (v) Refer to GMP (d) Section 6, (i) Not provided, (ii) Section 3.3 Resources, responsibility and authority of the CEMP, (iii) Section 5.1 Construction activities, Section 6, (iv) Section 7.3 Monitoring and inspection (e) Table 6-1, SSWMM6 (f) Refer to ESCP (g) Section 7.2 (h) Section 7.3

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(h) Inspection and auditing. In addressing items (g) and (h) above, refer to RMS D&C G36.	
Section 2.2.1	Prepare an Erosion and Sediment Control Plan (ESCP) for the Work Under the deed. The ESCP will form part of the CEMP, and where a SWMP is also required, the ESCP will be incorporated in the SWMP. The ESCP must be prepared by a person with demonstrated skills and experience in preparing the ESCP in accordance with the BLUE BOOK guidelines.	To be developed as required
Section 2.2.2	The ESCP must identify all erosion and sediment control risks and describe how these will be addressed during construction. The ESCP must include details of the following where relevant: (a) erosion and sediment control measures required: (i) before clearing and grubbing of the Site (ii) before removal of topsoil and commencement of earthworks within the catchment area (b) how upstream water will be managed so it is not polluted by the construction activities (c) method of tree removal in intermittent watercourses, leaving grasses and small understorey species undisturbed wherever possible (d) scour protection measures for haul roads and access tracks when these are an erosion hazard due to either their steepness, soil erodibility or potential for concentrating runoff flow (e) measures for stabilising temporary drains (f) measures to minimise erosion during construction of embankments (g) measures to minimise erosion and control sedimentation from stockpiles (h) methods of constructing batters to assist the retention of topsoil on the batter slopes; (i) measures to temporarily trap sediment in median areas at regular intervals (j) controls in runoff flow paths to reduce flow velocities and minimise the potential for erosion (k) measures for controlling waste water discharge on or around the Site from dewatering (refer to Clause 3.5), surface washing, grit blasting, saw cutting, drilling, washing vehicles and plant and any other activities which add pollutants to water (l) measures to be put in place during an extended shut-down of the Site or when rainfall above a certain trigger level is predicted	To be developed as required

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(m) maintenance of erosion and sediment control structures including measures to restore their capacity (n) inspection and auditing program for all erosion and sediment controls to ensure that no disturbed area is left without adequate erosion and sediment controls. In addressing item (k) above, refer to RMS D&C G36.	
Section 2.2.3	When preparing the ESCP, subdivide the site into sections based on the separate catchment areas, or alternatively into high risk areas, that will be affected by Work Under the deed.	To be developed as required
Section 2.2.3	Progressively, before work begins on any section of the Site, prepare a Design Documentation drawing for that section showing all controls required to avoid erosion and sedimentation of the Site, surrounding areas, watercourses, drainage systems, water bodies and wetlands. Include on the Design Documentation drawings locations of all ancillary activities and/or areas that may impact on water quality, such as: (a) access and haulage tracks; (b) borrow pits; (c) stockpile and storage areas; (d) temporary work areas; (d) materials processing areas; (e) compound areas; (f) concrete and asphalt batching areas.	To be developed as required
Section 2.2.3	Update each Design Documentation drawing regularly as the site conditions changes during the progress of Work Under the deed. Include as part of the ESCP a procedure for updating the Design Documentation drawings, and keep a register of all such drawings with the dates of submission, approval, and commencement of work on that section.	To be developed as required
Section 2.3	If required in Annexure G38/A, prepare a Water Quality Monitoring Program (WQMP), as a supplement to the ESCP, in accordance with the RMS Guideline for Construction Water Quality Monitoring and EPA publication “Approved Methods for the Sampling and Analysis of Water Pollutants in Include the following in the WQMP: (a) objectives of the monitoring (including EPA licence requirements); (b) map showing the water sampling locations; (c) sampling protocol, including sample collection, chain of custody information and sample preservation; (d) parameters to be monitored; (e) method for interpretation of field results and identifying exceedance of water quality criteria;	Surface Water Monitoring Program (SWMP) Groundwater Monitoring Program (GWMP) (a) SWMP & GWMP (Section 2.2) (b) SWMP (Figure 4.2), GWMP (Figure 4.1) (c) SWMP (Section 4.1.3, Table 4-2, GWMP Section 4.1.3, Table 4-2) (d) SWMP (Table 4-6 Water quality performance criteria, Section 4.1.3

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(f) accountabilities, responsibilities and training required the meet the monitoring objectives; (g) method of comparison of results between sampling locations (e.g. upstream and downstream) and any water quality criteria and/or targets; (h) reporting and recording of the monitoring results; (i) responsibility for planning, implementing, checking and reviewing each element of the monitoring; (j) methodology for using monitoring results to assess and manage identified problems; (k) reporting requirements in the case the monitoring results exceed the set criteria. Laboratories used in the monitoring program must be accredited by the National Association of Testing Authorities (NATA).	Surface water quality, Section 5 Monitoring methodology/ Sampling protocol, GWMP Table 4-10 Water Treatment Plant monthly sampling performance criteria, Section 4.1.3 Groundwater quality) (e) Refer to (d) (f) – (k) SWMP & GWMP (Section 5 Monitoring methodology / sampling protocol, Section 6 Compliance management and Section 7 Review and improvement)
Section 2.4	In preparing the SWMP and/or ESCP, be guided by the BLUE BOOK. Comply with the following requirements: (i) estimate peak flows and other parameters needed to design drains and drainage structures using the methods described in Australian Rainfall and Runoff; (ii) use the Average Recurrence Interval (ARI) shown in Annexure G38/E for the design of erosion and sediment control measures, unless site conditions or risks to life, property or the environment suggest that other values are applicable; (iii) superimpose the drawings accompanying the plans on A3 sized drainage drawings of the Project Works.	Refer to ESCP
Section 2.4	You do not need to submit the calculations carried out during preparation of the SWMP or ESCP with the plan, but you must retain them as an Identified Record. Forward a copy to the RMS Representative upon request.	Noted
Section 2.5	Develop a documented process to periodically review the effectiveness and proper implementation of the SWMP and ESCP. The management review process must identify opportunities for continual improvement of your environmental management processes and practices, and ensure that the SWMP and ESCP remain current and relevant to the Work Under the deed.	SWMP (Section 7 Review and improvement)
Section 3.1.1	In addition to the erosion and sediment control measures stated in Clause 2.2, implement the following:	To be developed as required

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(i) placing the locations of site compounds, access tracks, stockpile sites and temporary work areas to minimise erosion; (ii) staging of work and programming of construction activities to minimise the duration and extent of soil that is left exposed. This includes minimising the time between clearing and initial earthworks and commencement of subsequent works in intermittent and permanent watercourses; (iii) temporary modification of operational basins during the construction period for additional capture of stormwater runoff; (iv) installing and lining catch drains and diversion banks in accordance with the requirements of Specification RMS D&C R11 before earthworks commence; (v) installing scour protection at the base of permanent and temporary drainage outlets; (vi) constructing drains to direct runoff from disturbed areas to sediment basins or to areas with adequate sediment trapping/filtering devices and away from watercourses; (vii) filtering of sediment prior to water entering any pit and management of stormwater discharge through any pit; (viii) staged re-vegetation of the Site as work proceeds, progressively undertaking topsoiling and vegetation work as specified in RMS D&C R178.	
Section 3.1.2	Maintain a register of inspection and maintenance of erosion control and sediment capture measures, dates of discharge, water treatment (flocculation) performed, discharge water quality as defined in Clause 2.3, volumes of sediment removed from each device and daily rainfall.	SSWMP
Section 3.2	Establish erosion control and sediment capture measures, and maintain them regularly, to divert offsite stormwater, manage onsite stormwater runoff and stabilise stockpiles in accordance with RMS Technical Guideline EMS-TG-010: Stockpile Site Management and the BLUE BOOK guidelines. Install erosion control and sediment capture measures prior to stockpiling material. Comply with the following: (a) Locate stockpiles outside of the tree protection zone of trees or native vegetation identified for retention. Delineate the tree protection zone in accordance with AS 4970.	ESCP

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(b) Locate stockpiles at least 5 m from likely areas of concentrated water flows and at least 10m from waterways that are classified as Class 1 and Class 2 from the DPI Fisheries guideline "Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings". (c) Keep stockpile heights to no greater than 2 m, and slopes to no steeper than 2:1. (d) Cover, or otherwise protect from erosion, stockpiles that will be in place for more than 20 days as well as any stockpiles that are susceptible to wind or water erosion, within 10 days of forming each stockpile. (e) Keep topsoil that is not contaminated by noxious weeds in stockpiles for later spreading on fill batters and other areas. Other material may also be stockpiled but kept separated from the topsoil stockpiles. (f) Implement measures to prevent the growth of weeds in topsoil stockpiles.	
Section 3.2	If any stockpile site is to be located on private land, obtain from the landholder an approved notice under s.143 of the Protection of the Environment Operations Act 1997 prior to commencement of stockpiling.	N/A
Section 3.3	Prepare a procedure to manage the use and stockpiling of mulch on Site and to reduce the risk of tannin leachate from mulch flowing into waterways, and include this within the SWMP or ESCP. Prepare the procedure in accordance with RMS Environmental Direction 25: Management of Tannins from Vegetation Mulch.	To be developed if required
Section 3.4	Where relevant, describe in the SWMP or ESCP the proposed water source(s) intended for use for construction activities. Obtain all necessary approvals and licences from the New South Wales Office of Water, the Local Council and/or any other persons or authorities having responsibility for the chosen source(s) before commencing extraction.	To be developed if required
Section 3.4	If the proposed source is other than a town water supply or natural water source, include procedures for regular testing to ensure that the water is suitable for the purpose and is not hazardous to health and the environment.	To be developed if required
Section 3.4	The use of reclaimed water must comply with the requirements of RMS Environmental Direction 19: Use of Reclaimed Water.	To be developed if required

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.5.2	Prepare a procedure for all identified dewatering activities as part of the SWMP or ESCP. Further guidance for the preparation of a dewatering procedure is provided in RMS Technical Guideline EMS-TG-011: Environmental Management of Construction Site Dewatering.	SSWMP (Table 6-1, SSWMM56, Section 7.3.2 Inspections) (LLE705B Dewatering Permit)
Section 3.5.3	The personnel responsible for approval and/or carrying out dewatering activities must be adequately trained and inducted on the use of the dewatering procedure.	GMP (Section 3.1.2 Guidelines and standards 'Roads and Maritime Services 2011, Roads and Maritime Dewatering Guideline')
Section 3.5.4	Prior to the commencement of dewatering, inspect the entire system, including intakes and outlets, pumping and discharge locations.	GMP (Section 3.1.2 Guidelines and standards 'Roads and Maritime Services 2011, Roads and Maritime Dewatering Guideline')
Section 3.5.4	Wherever possible, supervise any dewatering activities directly. If you choose not to directly supervise dewatering, carry out a risk assessment and implement mitigation measures to eliminate the risks of pollution and to prevent the occurrence of the following: (i) intake suction placed within the deposited sediments resulting in discharge of sediment laden waters; (ii) erosion at discharge locations and downstream areas; (iii) inadvertent or intentional controlled discharge of untreated waters.	GMP (Section 3.1.2 Guidelines and standards 'Roads and Maritime Services 2011, Roads and Maritime Dewatering Guideline')
Section 3.5.5	Keep records of the following: (i) dewatering procedure; (ii) date and time for each discharge at each location; (iii) water quality test results for each discharge; (iv) personnel approving the dewatering activities; (v) evidence of discharge monitoring, or risk assessment and mitigation measures used to eliminate the risks of pollution or erosion; (vi) any other EPA licence requirements where issued.	GMP (Section 3.1.2 Guidelines and standards 'Roads and Maritime Services 2011, Roads and Maritime Dewatering Guideline')

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.6.1	Where work is required within waterways, prepare an Environmental Work Method Statement (EWMS) for the work(s). Refer to RMS D&C G36 for guidance on preparing an EWMS. The EWMS for work in waterways must detail the control measures to avoid or minimise erosion and any adverse impact on water quality and riparian fauna and flora, and must include the following: (a) plan the Work Under the deed to avoid, where practicable, any activities in aquatic habitats and riparian zones; (b) properly protect and signpost as environmentally sensitive areas, all waterways areas in or adjacent to the Site which are excluded from the work areas. Refer to RMS D&C G36 for the requirements for working in environmentally sensitive areas; (c) minimise riparian vegetation removal where practicable, and restrict access to the waterways to the minimum amount of bank length required for the activity; (d) retain stumps in riparian zones and aquatic habitats, where practicable, to reduce the potential for bank erosion; (e) carry out any refuelling of plant and equipment, chemical storage and decanting at least 50m away from aquatic habitats; (f) operate your boats or other watercraft in a manner that prevent boat wash which could cause erosion of the banks, and propeller damage to seagrass beds.	SSWMP (Table 6-1, SSWMM6)
Section 3.6.2	Provide temporary waterway crossings if required to maintain the flow in the waterway. To minimise impacts on the waterways, take into consideration the following: (a) design, construct and maintain the crossing in accordance with the requirements of the BLUE BOOK; (b) maintain fish passage in accordance with DPI Fisheries guideline “Why do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings”; (c) use material that will not result in fine sediment material entering the waterway. Rock used must be hard, sound, durable rock, free of fine particles and not contaminated with foreign materials;	N/A

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(d) provide erosion and sediment controls at entry/exits points of the crossing to minimise mudtracking on the crossing.	
Section 3.7.1	Prepare the Site under proposed embankments by ripping to a depth of 100 mm and excavating a trench at least 600 mm deep by 1200 mm wide along the centreline of the proposed embankment.	To be developed if required
Section 3.7.1	Backfill the trench and construct the embankment in layers not exceeding 200 mm and compacted so that the relative compaction, determined by Test Method RMS T166, is not less than 95.0 per cent using material with a Plasticity Index not less than 15 and not more than 30, and a grading such that at least 20 per cent by mass of material passes the 425 micron sieve.	To be developed if required
Section 3.7.1	Where material from excavations is unsuitable for the embankments and trench backfill, materials may be borrowed or imported in accordance with RMS D&C R44. Dispose of surplus materials in accordance with RMS D&C R44	To be developed if required
Section 3.7.1	Install pipes and fittings for draining the sediment basins as shown on the Design Documentation drawings.	To be developed if required
Section 3.7.1	Stabilise with vegetation the area disturbed by the construction of the operational sediment basins (except the inner surfaces below the spillway levels and the areas covered by rock mattresses) as specified in RMS D&C R178 or as shown on the Design Documentation drawings.	To be developed if required
Section 3.7.2	If you propose to use operational basins for sedimentation control during the duration of the deed, the environmental requirements specified for any discharge must be complied with.	To be developed if required
Section 3.7.3	Construct inlets, outlets and spillways as soon as possible using rock filled woven galvanised steel mattresses laid on a needle punched, mechanically bonded, non-woven geotextile filter fabric. The rock filled mattresses must comply with Specification RMS D&C R55 and the geotextile must comply with the requirements of Specification RMS D&C R63 for Application Category G4 unless shown otherwise on the Design Documentation drawings.	To be developed if required

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.7.4	Where flocculation is necessary to settle suspended sediments in the basins, apply calcium sulphate (gypsum) as the flocculating agent to settle the sediments within 24 hours of the conclusion of each rain event causing runoff.	SSWMP (Table 6-1, SSWMM17)
Section 3.7.4	You may propose the use of an alternative flocculating agent, subject to acceptance by the RMS Representative. Provide supporting documentation including analytical test results from a NATA accredited laboratory, confirming that the flocculating agent has a 48-hour EC50* (immobilisation) for water fleas and a 96-hour EC50 (imbalance) for fish greater than 100 milligrams per litre.	To be developed if required
Section 3.7.4	Before using any flocculating agent, determine the amount of the agent that is appropriate for the volume to be treated, the sediment type and the prevailing weather conditions.	To be developed if required
Section 3.7.4	Before discharging water from a basin, test the water to ensure that it meets the following criteria: Where the EPA has issued a licence, the criteria will be specified in the licence. Where no criteria have been specified in a license or another document, the following default values may be used: • total suspended solids 50 mg/L • pH 6.5 – 8.5, and • oil and grease no visible trace If a statistical correlation is developed between turbidity (NTU) and Total Suspended Solids (TSS) through the construction phase for discharge water, turbidity measurements may be used to allow discharge from sediment basins before laboratory data is available. Provide a copy of the statistical correlation assessment methodology and results to the RMS Representative before using turbidity in place of TSS for approval. Following acceptance by the RMS Representative, include in the dewatering procedure a method of ongoing verification of the relationship between turbidity measurements and TSS that includes notification to the RMS representative of any amendments made to the statistical correlation as a result of the ongoing verification before using the revised statistical correlation.	SSWMP (Section 5.2.3 Surface water quality – discharge of tunnel wastewater) GMP (Table 7-1 Discharge water quality criteria)

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.7.5	Clean out sediment basins, at minimum, whenever the accumulated sediment exceeds 60% of the sediment storage zone.	To be developed if required
Section 3.7.5	Remove accumulated sediment from sediment basins and traps in such a manner as not to damage the structures. Dispose of the sediment removed in such locations that the sediment will not be conveyed back into the construction areas, into watercourses or offsite.	To be developed if required
Section 3.7.5	Provide and maintain suitable access to sediment basins and sediment traps to allow cleaning out in all weather conditions.	To be developed if required
Section 3.7.6	Remove all construction sediment retention basins and sediment traps before Construction Completion, but not before all upstream areas have been vegetated or otherwise stabilised in accordance with BLUE BOOK.	To be developed if required
Section 3.7.6	Restore the ground disturbed by the construction of the sediment basins/traps to a similar condition to that previously existing. Include the following in the restoration work: (a) removal of all redundant mattresses from the inlets and spillway(s) and their subsequent burial into the basin area or their use as scour protection or their removal from Site; (b) spreading and compaction of the embankment material into the basin area; (c) removal of access roads. Compact the disturbed ground to at least the relative density of the material in the ground adjacent to it.	To be developed if required

Table 1-5 RMS G40 requirements

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 1.1	In advance of, or in conjunction with, clearing and grubbing operations, effective erosion and sediment control measures must be implemented as required in the Specification for soil and water management.	SSWMP
Section 2.1	Unless shown otherwise on the Design Documentation drawings, the area to be cleared for the formation is that which will be occupied by the completed formation plus a clearance of 4 m beyond tops of cuts and toes of embankments where the natural fall of the ground is towards the roadway and 2 m beyond the tops of cuts and toes of embankments where the natural fall of the ground either slopes away from the roadway or is level.	To be developed if required
Section 2.1	Also clear areas that will be occupied by ancillary earth features shown on the Design Documentation drawings, including sediment basins and traps, open drains and diversion banks.	N/A
Section 2.2	Any area outside the area to be cleared for the formation as defined in clause 2.1 and which the RMS Representative has approved as a site for the Contractor's facilities, the Principal's accommodation, stockpiles, borrow pits or any other purpose connected with the contract must be cleared to the extent required for the approved purpose. The area cleared must be the minimum consistent with the intended use.	N/A
Section 2.2	All trees, stumps and logs of the sizes listed below which are outside the area to be cleared for the formation as defined in clause 2.1 but which are within the hazard line shown on the Design Documentation drawings must be removed with a minimum of disturbance to adjacent trees and other vegetation. The sizes of the trees, stumps and logs that must be removed are shown in Table G40.1. (below)	N/A
Section 2.2	Tree (trunk diameter 100 mm or more at a point 1.5 m above the adjacent ground level) - Remove tree and stump for disposal in accordance with Clause 4.	To be developed if required
Section 2.2	Stump projecting 1.5 m or more above the adjacent ground level (Trunk diameter 100 mm or more at a point 1.5 m above the adjacent ground level) - Remove stump for disposal in accordance with Clause 4.	To be developed if required
Section 2.2	Log (Diameter 100 mm or more at any point) Remove entire log for disposal in accordance with Clause 4.	To be developed if required

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2.2	All minor built structures within the road reserve must be removed unless otherwise shown on the drawings or marked to be preserved.	N/A
Section 2.3	At bridges all trees and stumps and all built structures must be removed within the area specified in Annexure G40/A except: (a) where shown otherwise on the Design Documentation drawings; or (b) marked to be preserved; or (c) within 5 metres of the bank of any stream or other waterway.	N/A
Section 2.3	Trees outside this area but having branches overhanging the bridge must have their branches lopped to be 3 metres clear of the bridge.	N/A
Section 2.3	Trees within 10 metres of the centreline of the bridge and within 5 metres of the bank of any stream or other waterway must be cleanly cut off between 300 and 600 mm above the adjacent ground level so that stable vegetation is retained on the banks. This work must be undertaken in consultation with the RMS Representative.	N/A
Section 2.4	Before clearing commences, identify the limits of clearing by clearly visible markers placed at 25m intervals on each side of the road formation and bridges as shown on the Design Documentation drawings. Also provide a report which: (a) includes a statement from an Ecologist that identifies the species and location of any weeds growing anywhere in the road reserve over the length to be cleared and grubbed; (b) identifies all locations of threatened flora species and trees which have been marked or otherwise identified for preservation; and (c) lists any trees outside the limits of clearing which are unsound and likely to fall upon the roadway or onto private property.	FFMP (Section 6.1, Table 6.1 - FF8, Appendix A)
Section 2.4	Trees nominated in (c) above must be marked and identified in the clearing and grubbing plan in a manner which allows them to be identified as one of the listed trees and whether pruning or removal is recommended. Areas of weed infestation identified in the ecologist report (Clause 2.4 (a) must be marked).	FFMP (Table 6.1 - FF12) Tree Clearing EWMS
G40/D	Provide a CLEARING AND GRUBBING PLAN which must include, but not be limited to, the following information:	Tree Clearing EWMS WMP (Section 5.4, Table 7)

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
	(a) methods used to identify and mark areas of weeds to be removed and methods for their removal (clause 2.4); (b) procedure for the disposal of weeds and exotics (clause 2.4); (c) procedure for protecting threatened flora species and trees marked for preservation (clause 2.4); (d) methods used for identifying, marking and removing or pruning unsound trees likely to fall upon the roadway or onto private property (clause 2.4); and (e) procedure for identifying and removing trees, stumps and logs above the specified size and within the hazard line (clause 2.2). Include in the WASTE MANAGEMENT PLAN (refer to RMS D&C G36 procedures for the disposal of weeds and exotics and for the recycling and disposal of all other materials from clearing and grubbing operations. The CLEARING AND GRUBBING PLAN and the WASTE MANAGEMENT PLAN must be consistent with the requirements of the other RMS specifications and must supplement your ENVIRONMENTAL MANAGEMENT PLAN (CEMP) as set out in RMS D&C G36 Ed	
Section 2.4	Before commencing clearing and grubbing all soil erosion and sedimentation controls required for this phase of construction must be installed in accordance with Specification RMS D&C G38. All staff must be made aware of the Noxious Weeds present on-site and requirements related to the listing under the Noxious Weeds Act 1993.	ESCP – to be developed as required FFMP
Section 2.4	Weeds must be removed and disposed of in accordance with the requirements of the local Council. Removal of weeds growing in the area to be cleared and grubbed must be carried out at your cost. Removal and disposal of weeds growing in the road reserve outside the area to be cleared and grubbed may be directed by the RMS Representative as a Variation to the deed unless the RMS Representative elects to have this work carried out by others.	FFMP (Table 6.1 - FF20, Table 6.1 - FF21)

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2.4	Take protective measures during the operations of clearing and road construction to avoid damaging or destroying threatened flora species and trees which have been marked or otherwise identified for preservation. These measures must include but are not limited to: (i) fencing around trees clear of the canopy line; (ii) ensuring no materials are stockpiled and no vehicles are parked under the canopy; (iii) avoiding excavation or the placing of fill near any tree without advice from an ecologist; and (iv) routing haul roads and access tracks clear of the canopy.	FFMP (Table 6.1 - FF5, Table 6.1 - FF12, Table 6.1 - FF16)
Section 2.4	If any tree, which must be preserved, is found to be within the area to be covered by embankment, protective measures for the tree and safety barriers of a type not specifically shown on the drawings will be directed as a Variation to the deed.	N/A
Section 2.4	Those trees remaining within the road reserve, but outside the limits of clearing, which the RMS Representative has agreed are unsound and likely to fall upon the roadway or onto private property must be cleared or pruned in accordance with AS 4373.	FFMP (Table 6.1 - FF4)
Section 2.4	Any branch, which overhangs the road formation, must be cut back flush with the tree trunk in accordance with AS 4373.	N/A
Section 2.4	Every precaution must be taken to prevent timber from falling on private property and dispose of any timber so fallen or produce the written consent of the owner to its remaining there.	Tree clearing EWMS
Section 2.4	Existing trees, grasses and other ground cover must be retained within 15 metres of rivers, creeks and watercourses and in all drainage lines until immediately before construction commences in the area. An access track may be constructed across these areas on an alignment that will minimise erosion. Notwithstanding the retention of the ground cover all soil erosion and sedimentation controls for the area must be installed in accordance with RMS D&C G38. All trees in these areas must be felled manually, leaving grasses and small understorey species wherever possible.	N/A

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2.4	Damage of any kind, including damage to fencing or trees or other vegetation outside the limits of clearing, which occurs during clearing operations, must be made good by you.	Tree Clearing EWMS FFMP (Table 6.1 - FF12, Table 6.1 - FF13)
Section 2.4	Holes left following the removal of trees and stumps must be backfilled and vegetated as described in clause 3.	N/A
Section 3	All trees and stumps, on or within the limits of clearing defined in clauses 2.1, 2.2 and 2.3, and which are unable to be felled and removed by the clearing methods used by you, must be removed by grubbing.	N/A
Section 3	Grubbing operations must be carried out both to a depth of 0.5 m below the natural surface and 1.5m below the top of the Selected Material Zone.	N/A
Section 3	Holes remaining after trees and stumps have been grubbed must be backfilled promptly with sound material to prevent the infiltration and ponding of water. The backfilling material must be compacted to at least the relative compaction of the material existing in the adjacent ground. In the area defined in Clause 2.2 the final 50 mm of backfilling must be topsoil and the area must be vegetated within 7 days of removal of the stump. Topsoil and vegetation must comply with Specification RMS D&C R178.	N/A
Section 4.1	Native trees removed during clearing and grubbing may be used in conjunction with soil erosion and sediment control measures. All other native trees removed must be converted to mulch and stockpiled for use during landscape planting under the Contract. This requirement is subject to the following constraints: (a) Where the native vegetation on site is insufficient to provide the quantities of mulch needed during landscape planting, all native trees removed during clearing and grubbing must be mulched and stockpiled. Under no circumstances must the extent of clearing and grubbing be extended or weeds or exotic species used to make up any shortfall of mulch. (b) Where the quantity of mulch produced would exceed the quantity required under the Contract the excess mulch shall become your property and removed from the Construction Site.	N/A
Section 4.1	Alternatively, you may propose to reuse or dispose of timber for other purposes through the production of a Timber Reuse and Disposal Plan. The proposal must detail the reuse	N/A

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
	and/or disposal options and the benefits to the RMS Representative those options have over reuse as mulch. Include the Plan in the CEMP if the proposal is accepted.	
Section 4.2	All stockpiles must be on the Construction Site of the Project Works as described elsewhere in the documents. Obtain written consent from the RMS Representative to the use of any stockpile site which is not shown on the Design Documentation drawings. Such requests must be made at least ten working days before stockpiling is due to commence, specifying the maximum dimensions of the proposed stockpile.	N/A
Section 4.2	Stockpile sites must be located away from drainage lines and watercourses and must be arranged to minimise damage to natural vegetation and trees. The stockpile sites must be positioned so that the stockpiled material may be transported away at any time. Any clearing and grubbing required for these sites must be carried out in accordance with this Specification. Temporary erosion and sediment control measures must be taken in accordance with RMS D&C G38.	SSWMP FFMP (Table 6.1 - FF16)
Section 4.2	Restoration of stockpile sites following completion of the work must be carried out in accordance with Specification RMS D&C R178.	SSWMP
Section 4.2	Stockpiles must be monitored and turned over as required to avoid spontaneous combustion.	N/A
Section 4.2	Mulch in excess of the quantity required for landscape planting must not be stockpiled on Construction Site.	N/A
Section 4.2	Unless otherwise specified, all materials cleared, pruned and grubbed in accordance with this Specification shall become your property and must be removed from the Construction Site for recycling or disposal. Disposal must be in accordance with your Waste Management Plan.	WMP
Section 4.2	Disposal of timber and other combustible materials by burning must comply with the requirements of Specification RMS D&C G36.	WMP

Table 1-6 G36, G38 and G40 specification hold and witness points

Specification	Clause	Type	Description
G36	3.1	Hold	Submission of CEMP and selected CEMS documents
G36	3.2.2	Hold	Evidence of approvals, licences and permits obtained
G36	3.10	Hold	Verification that environmental nonconformities has been rectified
G36	4.2.4	Hold	Submission of Remediation Action Plan for contaminated land
G36	4.7	Hold	Building Condition Inspection Reports and Vibration and Airblast Management Sub-Plan
G36	4.11.4	Hold	Copy of “s.143 Notice”
G36	4.13	Hold	Working in or near environmentally sensitive areas
G36	4.15.2	Hold	Submission of pre-construction land condition assessment report for each area you intend to occupy for your site facilities
G38	3.1.1	Hold	Submission of an ESCP(s) and, where required, WQMP for a section of the Work Under the Contract.
G38	3.1.1	Witness	Submission of written notice that measures set out in the ESCP for a section of the work have been installed.

Specification	Clause	Type	Description
G40	2.4	Hold	Written notification of intention to clear any area.

Table 1-7 Guidelines for the preparation of Environmental Management Plans (DIPNR, 2004)

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
Background (EMP Guideline Section 4.3.1)		
4.3.1.1 Introduction	An introduction can be used to provide a brief description of the project's background.	Section 1
4.3.1.2 Project Description	A project description should be provided in enough detail to define the nature and scope of the project. It should include the following:	Section 1.3
	• The location should be described and a plan indicating the location of the activities provided	Section 1.3 Figure 1.1, Section 1.3.2
	• A general description of the environment of the site and surrounds	Section 1.3 of CEMP and Existing Environment sections of CEMP Sub-plans
	• A description of the construction activities to be undertaken	Section 1.3.3
	• Timing and scheduling, including anticipated commencement and completion dates or separate dates for each stage.	Section 1.3.2
4.3.1.3 EMP Context	This section should describe how the EMP fits into the overall planning process for the project.	Section 1.1
	• This will involve providing a list of the project's environmental studies (eg EIS) and any other approval or consent documentation	Section 1.1
	• Any government agency or other stakeholder consultation that has been undertaken during the preparation of the EMP should be summarized. A summary of how the outcomes of the consultation	Section 2.1 Section 2.2

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	outcomes were incorporated into the EMP should also be provided	
	• Existing environmental management documents such as an environmental management system (EMS), and the relationship of the EMP with such documents.	Section 1.5 Appendix A4
4.3.1.4 EMP Objectives	The objectives should be project specific and not broad policy statements.	Section 1.2
4.3.1.5 Environmental Policy	Where relevant, a proponent's environmental policy should be provided.	Appendix A3
Environmental Management (EMP Guideline Section 4.3.2)		
4.3.2.1 Environmental Management Structure & Responsibility	• An EMP should provide a clear organisational structure for the project	Figure 3-1, Section 3.3 Section 3.3.1
	• A description of roles and responsibilities of each identified person should also be documented	Section 3.3.1
	• The roles and responsibilities of subcontractors should also be identified	Section 3.4
	• A person should be nominated with the specific task of ensuring that the EMP is implemented and maintained. This is generally a project's manager or an organisation's environmental manager.	Section 3.3.1
	• The role of the Environmental Management Representative (EMR) should be specifically identified in a project's environmental management structure.	Section 3.3.1

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
4.3.2.2 Approval and Licensing Requirements	A project's regulatory framework must be identified. An EMP should include relevant requirements to ensure they are considered, including:	Section 3.2.2 Table 3-1, Section 3.2.2 Appendix A1
	• Conditions of approval or consent	Table 1-1, Section 1.2 Appendix A9
	• Provision of a table listing the legislation relevant to the project and any licences, approvals or permits required to be obtained under the legislation. The table should identify the relevant sections(s) of the legislation and specific triggers	Appendix A1
	• Identifying the person (or role) responsible for obtaining the licences, approvals and permits and when they should be obtained and renewed	Section 3.2.2
	• Describing any other requirements that apply to the project.	Section 3.2.2
4.3.2.3 Reporting	A description of the reporting requirements for the project should be provided and include:	Section 3.9 Monitoring, inspections and auditing
	• A list of reports required	Table 3-4, Section 3.9.4 Table 3-5, Section 3.9.5
	• A description of typical report content	Section 3.9.4 Section 3.9.5
	• Personnel responsible for preparing the reports and when they are to be prepared	Table 3-4, Section 3.9.4 Table 3-5, Section 3.9.5

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	• Communications protocols establishing who is responsible for distributing information, what is to be distributed and to whom, and the frequency of communication	Section 3.7
	• Document control procedures.	Section 3.11.2
4.3.2.4 Environmental Training	• All employees (including contractors and subcontractors) should undergo general environmental awareness training and training about their responsibilities under the EMP	Table 3-4, Section 3.9.4 Table 3-5, Section 3.9.5
	• The training should ensure that all employees understand their obligations to exercise due diligence for environmental matters.	Section 3.5
	Environmental training should include:	
	• A site induction	Section 3.5.1
	• Familiarisation with the requirements of the EMP	Section 3.5.1
	• Environmental emergency response training	Section 3.5.1
	• Familiarisation with site environmental controls	Section 3.5.1
	• Targeted environmental training for specific personnel.	Section 3.5.2
	The need for additional or revised training should be identified and implemented form outputs of monitoring and reviewing the EMP.	Section 3.13.1

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	Records of all training should be maintained and should include: • Who was trained • When the person was trained • The name of the trainer • A general description of the training content.	Section 3.5
4.3.2.5 Emergency Contracts and Response	• The EMP should nominate a contact person(s) for emergencies that will be available 24 hours a day, seven days a week, and who has the authority to stop or direct works	Appendix A7
	• It should document the procedures to be followed in the event of an environmental emergency. An environmental emergency is any event that causes or has the potential to cause material harm to the environment.	Appendix A6
	The procedures need to include:	
	• The names and contact details (including all-hours telephone numbers) for emergency response personnel	Appendix A7
	• Response personnel responsibilities	Appendix A6
	• Contact details for emergency services (ambulance, fire brigade, spill clean-up services)	Appendix A7
	• The location of on-site information on hazardous materials, including Material Safety Data Sheets and spill containment materials	Table 3-2, Section 3.2.3

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	• Steps to follow to minimise damage and control an environmental emergency	Control measures within all the respective Sub-Plans and Sections or documents covered in Section 4.1 to Section 4.18
	• Instructions and contact details for notifying relevant government agencies, local councils and, if necessary, nearby residents.	Section 3.8.2
Implementation (EMP Guideline Section 4.3.3)		
4.3.3.1 Risk Assessment	The type and level of risk assessment will vary depending upon the stage of a project. There are also several Australian standards that discuss risk assessment. This section of the EMP should generally follow the following steps: 1. Provide a list of the activities to be carried out. This should describe all project activities including those undertaken by subcontractors or suppliers together with ancillary works such as materials transport to and from the site and site establishment 2. Identify the actual and potential environmental impacts associated with each activity 3. Identify which environmental impacts are significant. Methods for risk assessment should be selected that are appropriate to the project and the existing EIA 4. Use this information to design the environmental management activities, control and monitoring to prevent or minimise those environmental impacts appropriately	Section 3.2.1 Appendix A2

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	5. State how often, and when, this risk assessment will be carried out. The function of the risk assessment is not to repeat or supersede a project's EIA or its conditions of approval or consent. Rather it is to ensure that these are effectively translated into actual construction or operation techniques.	
4.3.3.2 Environmental Management Activities and Controls	• The EMP should specify all the environmental management activities, mitigation and control measures that will be used to prevent or minimise environmental impacts • It should include the detailed mitigation measures identified from the risk assessment • This section must assign responsibility for control measures to specific personnel and provide timeframes for their implementation • It may specify the monitoring measures associated with the control measure. Where monitoring measures are identified the EMP should state the minimum performance level or criterion to be achieved • Quantitative criteria are preferred but this may not always be possible in which case qualitative criteria may be used.	Section 4 Environmental Management Documentation (environmental management activities and controls are included in each of the Sub-Plans and/or sections covered in Section 4.1 to Section 4.18) Appendix A2 Environmental aspects and impacts
4.3.3.3 Environmental Control Plans or Maps	Environmental control plans or maps should be included in every EMP.	Section 3.2.4 Environmental Work Method Statement and Sensitive Area Plans Appendix A5 Sensitive area plans Appendix A8 Indicative ancillary facility layouts

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
4.3.3.4 Environmental Schedules	Environmental management schedules are copies of forms, reports or registers used during a project's day-to-day environmental management. Relevant schedules must be included in the EMP.	Appendix A4 Document register includes project schedules including: • Environment & Sustainability Inspection Checklist • Incident Register • Register of Non-Compliances - Environmental Management • ERG Inspection Register and Tracker • Rainfall Records • Sediment Basin Discharge Register • Waste Register.
Monitoring and Review (EMP Guideline Section 4.3.4)		
4.3.4.1 Environmental Monitoring	This section should explain how environmental management activities and controls will be monitored	Section 3.9.2
	A monitoring checklist should be developed specifying when the environmental control activities need to be carried out, who is responsible and what methods will be used to measure effectiveness • The checklist should include space for sign-off to verify that the control action was undertaken and is working effectively • The checklist should also specify if, and when, follow-up action is required and who is responsible • Details of how monitoring records will be collated, distributed and stored should also be provided.	Section 3.9.2

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
4.3.4.2 Environmental Auditing	• A description of the program and procedures for periodic auditing of the EMP's implementation and effectiveness	Section 3.9.3 Section 3.9.4
	• The audit should determine whether or not the EMP was properly implemented and maintained and provide information for the EMP review	Section 3.9.4
	• It should cover both internal and external auditing requirements, including scope, frequency and methods, as well as the responsibilities and requirements for conducting audits and reporting results	Section 3.9.3
	• The frequency of audits should reflect the level of significance of environmental impacts and the results of previous audits.	Table 3-4, Section 3.9.4
4.3.4.3 Corrective Action	• The EMP should define procedures for dealing with non-compliance with environmental management controls, environmental incidents and emergencies	Section 3.9.1 Section 3.10
	• The procedures should also define who is responsible and has the authority for handling and investigating non-compliance, taking action and completing corrective and preventative action	Section 3.10
	• Schedules should be developed for recording environmental incidents, non-compliance and corrective and preventative actions.	Section 3.10 Section 3.11
4.3.4.4 EMP Review	• This section should describe how EMP will be reviewed; including looking at the environmental	Section 3.13

EMP Guideline Section	DIPNR (2004) Required EMP Content	Reference
	controls and procedures to make sure they are still applicable to the activities being carried out It should include:	
	• When/ how often this will be done	Section 3.12 Section 3.13.1
	• Who will be responsible for reviewing the EMP, recording decisions and the reasons for them, and making subsequent changes	Section 3.13.1
	• How the site/project team will be informed of those changes	Section 3.13.1
	• When the reviewed EMP should be submitted to the approval or consent authority.	Section 3.13.1

Appendix A2

Aspects and Impacts Register

M4-M5 Link Mainline Tunnels

February 2020

This Environmental Aspects and Impacts Register has been prepared by LSBJV to supplement the Environmental Risk Analysis conducted as part of the Environmental Impact Statement (EIS) and Submissions and Preferred Infrastructure Report (SPIR).

The identification of significant construction activities and associated impacts that could eventuate during construction of the Project is central to the selection of appropriate environmental safeguards.

The risk management process involved an assessment of all specific project activities/aspects in or near environmentally sensitive areas and resulted in the development of a list of environmental risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking. Each environmental risk was categorised, based on the following:

- The environmental aspect
- Relative scale of the potential impact
- Type of potential impact
- Likelihood of occurrence.

The identification of risks included a review of the proposed works, the CoA, EMM, and review of the environmental risks identified by the EIS and subsequent SPIR. The risk matrix identified in Table 1 has been used to undertake the risk assessment located in Table 2.

An environmental risk assessment workshop was held on 24 August 2018 for the Project to refine this risk assessment. The risk assessment was reviewed in February 2020.

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Table 1 Risk assessment matrix

Risk Analysis Risk Classification = Consequence x Likelihood		LIKELIHOOD				
		5 Very high* Almost certain to happen i.e. could occur daily or more frequently	4 High* Strong anecdotal evidence that it is likely to occur in the identified circumstances without any controls in place;	3 Medium* May occur in the identified circumstances without any controls in place	2 Low* Could occur at some time in the identified circumstances without any controls in place but not expected;	1 Very low* Highly unlikely to occur in the identified circumstances without any controls in place
CONSEQUENCE	5 Very large Major irreversible environmental harm on-site and/or off-site damage.	25 Critical	20 Significant	15 Significant	10 Moderate	5 Minor
	4 Large Major on-site and/or off-site impacts with clean up or remedy requires significant effort.	20 Significant	16 Significant	12 Moderate	8 Minor	4 Minor
	3 Medium Moderate on-site and/or off-site impacts (but no significant irreversible damage) with clean up or remedy work incurring a moderate level of effort	15 Significant	12 Moderate	9 Moderate	6 Minor	3 Minor
	2 Small Treatable on-site impact with clean up or remedy work incurring a small level of effort.	10 Moderate	8 Minor	6 Minor	4 Minor	2 Negligible
	1 Very small Reversible and insignificant environmental impact.	5 Minor	4 Minor	3 Minor	2 Negligible	1 Negligible

* It is necessary to refer to LLE 109 Engineering Risk and Opportunity Management System (ROMS) in order to fully apply this risk assessment matrix. The information provided here is a summary.

Table 2 Aspect and impact register

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
Site establishment including vegetation clearing and demolition	Clearing outside of an approved area, including: • Accidental clearing outside of the project boundaries • Accidental clearing beyond the requirements of the Project Approval	1	4	4 Minor	Direct: • Toolbox talks regarding clearing limits • Clearly delineate the Project footprint prior to clearing • Following measures outlined the Tree Report produced in accordance with CoA E179 Indirect: • Other measures outlined in the Flora and Fauna Management Sub-plan (FFMP)	1	4	4 Minor
	Impacts on unexpected threatened species, including microbats	2	4	8 Minor	Direct: • Toolbox talks regarding the potential for unexpected threatened species • Microbat surveys prior to site establishment activities performed by a suitably qualified ecologist Indirect: • Other measures outlined in the FFMP • Microbat management strategy if required	1	3	3 Minor
	Spreading of noxious weeds via personnel, plant / equipment, topsoil / mulch	2	2	4 Minor	Direct: • Toolbox talks regarding the location and treatment of weeds • Weeds within the construction footprint would be managed in accordance with the measures outlined in Weed Management Protocol Indirect: • Other measures outlined in the FFMP	1	2	2 Negligible
	Generation of dust leading to amenity and/or community nuisance	3	3	9 Moderate	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties • Demolition activities will be planned and carried out to minimise the potential for dust generation • Adequate dust suppression will be applied during all demolition works required to facilitate the Project • Regular site inspections Indirect: • Other measures outlined in the Air Quality Management Sub-plan (AQMP)	3	2	6 Minor
	Erosion and sedimentation impacting downstream waterways due to exposed land, inadequate controls or control failure	4	3	12 Moderate	Direct: • Erosion and Sediment Control Plans (ESCPs) will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • Environmental Work Method Statements (EWMS) will be prepared for high risk activities • 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 • Regular site inspections Indirect:	3	3	9 Moderate

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Other measures outlined in the Soil and Surface Water Management Sub-plan (SSWMP)			
	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) or disposal at an unlicensed waste facility	2	4	8 Minor	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures • Vegetation disposal in accordance with the FFMP and Weed Management Protocol • Hazardous Materials (HAZMAT) surveys and removal of asbestos 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 Indirect: • Other measures outlined in Waste Management Sub-plan (WMP), Site Establishment Management Plan(s) (SEMP), Contaminated Land Management Plan (CLMP) and FFMP	1	4	4 Minor
	Complete / partial loss of heritage value for future generations	3	3	9 Moderate	Direct: • A suitably qualified archaeologist will oversee and advise on matters associated with historic archaeology and to prepare a Historical Archaeological Research Design and Excavation Methodology (HARDEM) • The LSBJV Excavation Director will be consulted where excavation works are required in the vicinity of potential archaeological sites • Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must ensure works are performed in accordance with a HARDEM's • Any item of potential Aboriginal archaeological / cultural heritage conservation significance, or human remains discovered during construction will be managed in accordance with the Unexpected Heritage Items Procedure developed in accordance with CoA E157 • Archival recording in accordance with CoA E163 as required Indirect: • Other measures outlined in the Non-Aboriginal Heritage Management Sub-plan (NAHMP)	1	3	3 Minor
	Missed opportunities to maximise the beneficial re-use of wastes	5	1	5 Minor	Direct: • Resource recovery will be applied to the management of construction waste and will include the recovery of resources for reuse-reusable materials generated by the Project will be segregated for reuse on site, or off site where possible • Recovery of recyclable resources generated during construction and demolition • Recovery of resources for reprocessing, such as the onsite mulching of cleared vegetation for use in landscaping use, in the absence of a higher beneficial use being identified • Segregation of resources for recycling for effective processing at recycling facility Indirect: • Other measures outlined in the Sustainability Management Plan and WMP	3	1	3 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
Site facility establishment and operation	Noise and vibration impacts to sensitive receivers adjoining the compounds	5	4	20 Significant	Direct: • Maximise works within the standard construction hours • Erection of temporary acoustic barriers where required Indirect: • Other measures outlined in the SEMP or Construction Noise and Vibration Impact Statement (CNVIS)	4	3	12 Moderate
	Generation of odours during demolition due to contaminated soils	1	3	3 Minor	Direct: • Staging of works to minimise public exposure Indirect: • Other measures outlined in the CLMP	1	2	2 Minor
	Traffic impacts on local roads	3	2	6 Minor	Direct: • Designated haul routes for heavy vehicles Indirect: • Other measures outlined in the Traffic and Transport and Access Management Sub-plan (TTAMP) • Construction Parking & Access Strategy	2	2	4 Minor
	Amenity and visual impacts on nearby receivers due to compounds, including light spill and overshadowing	5	2	10 Moderate	Direct: • Site establishment works will be conducted to minimise visual impacts. Where there is no noise wall or hoarding in place, boundary fencing will be installed to minimise visual, noise and air quality impacts on adjacent sensitive receivers • Retention of existing vegetation or treatment of key temporary structures • Minimise light spill from the project by directing construction lighting into the construction areas and ensuring the site is not over-lit Indirect: • Other measures outlined in the SEMP or CEMP documents	3	2	6 Minor
	Dust impacts to receivers due to stockpiling, exposed surfaces, material handling	4	3	12 Moderate	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties • Community liaison and notification Indirect: • Other measures outlined in the AQMP and SEMP	4	2	8 Minor
	Noise and vibration impacts on nearby receivers, including out of hours impacts	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training • Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol and EPL • Erection of noise walls • Community liaison and notification	4	3	12 Moderate

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program			
	Contamination of soil or water from spill or leak from plant / equipment	5	2	10 Moderate	Direct: • Hazardous substance handling and use will be conducted away from drainage or stormwater lines and, wherever possible, within defined bundsAny refuelling undertaken on site will be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • Any spills or leakages will be immediately contained and absorbed • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways • Plant and machinery maintenance schedule • All sites are hardstand Indirect: • Other measures outlined in the SSWMP and SEMP	5	1	5 Minor
	Contamination of soil or water from spill or leak of dangerous or hazardous materials from bulk storage	2	4	8 Minor	Direct: • The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds • Appropriately sized bunded containers • Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • All spills or leakages will be immediately contained and absorbed • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways • All sites are hardstand • Inspection regime of bulk storage facility Indirect: • Other measures outlined in the SSWMP and SEMP	1	4	4 Minor
	Erosion and sedimentation impacts on downstream waterways due to exposed land, inadequate controls or failure of controls	2	2	4 Minor	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • A soil conservation specialist will be engaged 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 Indirect: • Other measures outlined in the SSWMP	1	2	2 Negligible
	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) or disposal at an unlicensed waste facility	4	4	16 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures • Vegetation disposal in accordance with the FFMP and Weed Management Protocol • HAZMAT surveys and removal of asbestos 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	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					checked to ensure all details are correct and retained for audit purposes Indirect: • Other measures outlined in WMP, SEMP, CLMP and FFMP			
	Inappropriate disposal of office wastes	5	1	5 Minor	Direct: • All recyclable solid wastes (paper/ cardboard/ plastic/ glass/ timber/ metals/ fluorescent lighting/ printer cartridges/ICT equipment) will be segregated for recycling purposes and volumes reported. Wherever possible, packaging should be avoided or minimised to prevent waste products being unnecessarily brought onto an operation Indirect: • Other measures outlined in the WMP and Sustainability Management Plan	3	1	3 Minor
	Traffic and parking impacts due to increased number of construction vehicles, site access arrangements	5	3	15 Significant	Direct: • Use of the virtual superintendent system • Deployment of surveillance officers • • Staff log-in at designated parking stations • Limiting vehicle movements to designated entries and exits and haulage routes • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures • Communication and adherence to a Worker Code of Conduct • Minimise construction vehicle parking on public roads • Queuing and idling of construction vehicles in residential streets will be minimised • Measures 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 Indirect: • Other measures outlined in the TTAMP, SEMP and Construction Parking and Access Strategy (CPAS)	3	3	9 Moderate
	Tracking of mud at ancillary facilities access points	5	3	15 Significant	Direct: • Site exits will be fitted with hardstand material or other appropriate measures to limit the amount of material transported off site (where required) • Wheel washes at exit points • Street sweepers Indirect: • Other measures outlined in the SEMP and SSWMP	3	3	9 Moderate
	Dust impacts at local businesses at PBR	4	3	12 Moderate	Direct: • Standard dust suppression measures • Community liaison with the brewery Indirect: • Other measures outlined in the SSWMP	3	3	9 Moderate
	Construction fatigue impacting sensitive receivers, and broader community	5	3	15 Significant	Direct: • At-property noise treatment • Community engagement • Goodwill offers Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program, Community Communications Strategy (CCS), CNVIS, TTAMP and CPAS	4	3	12 Moderate

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
Earthworks and Excavation	Generation and mobilisation of dust from construction sites and spoil removal trucks impacting receivers including residents, businesses, vegetation and habitats	5	2	10 Moderate	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties Stockpiling will be undertaken primarily within acoustic sheds • Community liaison and notification Indirect: • Other measures outlined in the AQMP	4	2	8 Minor
	Generation of odour at SPI	3	2	6 Minor	Direct: • In the event of uncovering waste with a noxious odour, or detection of nuisance odours (nuisance to workers or confirmed beyond landfill boundaries), construction personnel will investigate and report the odour source to the Environment and Sustainability Manager and implement of management measures as required following further investigations if required Indirect: • Other measures outlined in the AQMP	3	2	6 Minor
	Disturbance or damage of unidentified Aboriginal heritage artefact	1	3	3 Minor	Direct: • Managing any unexpected heritage finds, including human remains, in accordance with the unexpected heritage finds procedure located in the NAHMP and Aboriginal Cultural Heritage Management Sub-plan (ACHMP) Indirect: • Other measures outlined in the ACHMP	1	3	3 Minor
	Disturbance or damage of non-Aboriginal heritage item, including Sydney Water pressure and city tunnels	3	4	12 Moderate	Direct: • Any excavations, intrusive works or other operations that have the potential to impact known heritage items or areas will be performed in accordance with applicable heritage assessments and regulatory requirements (which may include a dilapidation survey and/or supervision of works by a competent person and/or vibration monitoring) • Any such areas should be signposted and segregated by the erection of physical barriers to prevent authorised entry • Tunnel design will incorporate settlement and vibration measures specific to Sydney Water tunnels • Structural integrity assessments in liaison with Sydney Water • Safe working distances for vibration impacts Indirect: • Other measures outlined in the NAHMP	2	4	8 Minor
	Erosion and sedimentation impacts on downstream waterways due to exposed land, inadequate controls or failure of controls	4	3	12 Moderate	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • A soil conservation specialist will be engaged 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	3	3	9 Moderate

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					Indirect: • Other measures outlined in the SSWMP			
	Incorrect / inappropriate management of unexpected contamination or acid sulfate soils	3	4	12 Moderate	Direct • In the event of unexpected contamination or acid sulfate soils, the unexpected contaminated lands and asbestos finds procedure will be followed • Waste classification in accordance with Environment Protection Authority (EPA) guidelines • Waste tracking register Indirect • Other measures outlined in the SSWMP	1	4	4 Minor
	Incorrect disposal of contaminated spoil (including asbestos)	4	4	16 Significant	Direct: • Waste classification in accordance with EPA guidelines • Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail and commercial wastes for either offsite processing and/or disposal to an appropriately licensed facility. Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes • Waste tracking register Indirect: • Other measures outlined in WMP and CLMP	2	3	6 Minor
	Discharge of water that does not meet discharge criteria	5	3	15 Significant	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • 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 • Weekly inspection of Waste Treatment Plants (WTP) • Trade waste agreement, EPL • Monitoring at WTP's • Utilisation of an interlock when there is pump failure Indirect: • Other measures outlined in the SSWMP	3	3	9 Moderate
	Noise and vibration impacts on nearby receivers, including out of hours impacts	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training • Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol and EPL • Erection of acoustic sheds and noise walls • Community liaison and notification Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
General Construction Activities	Breach of PA or EPL conditions, legal or client requirements leading to PINs, fines, prosecution, loss of reputation, strained relationships, contractual implications	4	4	16 Significant	Direct: • CEMP • CEMP Sub-plans • Training • Monitoring, inspections and auditing • Project induction	3	3	9 Moderate
	Serious incidents, e.g. uncontrolled release of concrete washout water, water treatment plant, major fuel spill, that cause or threaten material harm to the environment	4	4	16 Significant	Direct: • Concrete washout areas will be adequately sized, regularly maintained, and located in designated covered areas. They will be outside of riparian areas and well away from stormwater system inlets • The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds • Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: • Other measures outlined in the SSWMP	2	4	8 Minor
	Generation of dust due to cutting/grinding/sawing equipment, material /waste/spoil handling; and generation of exhaust emissions due to inappropriate plant maintenance	4	2	8 Minor	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties • Demolition activities will be planned and carried out to minimise the potential for dust generation • Adequate dust suppression will be applied during all demolition works required to facilitate the Project Indirect: • Other measures outlined in the AQMP	3	2	6 Minor
	Noise and vibration impacts on nearby receivers, including out of hours impacts resulting in structural damage or community complaints	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training • Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol and EPL • Erection of acoustic sheds and noise walls • Community liaison and notification Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program	3	3	9 Moderate
	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) or disposal at an unlicensed waste facility	4	3	12 Moderate	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Vegetation disposal in accordance with the FFMP and Weed Management Protocol • HAZMAT surveys and removal of asbestos prior to demolition activities • Waste classification in accordance with EPA guidelines • Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail and commercial wastes for either offsite processing and/or disposal to an appropriately licensed facility. Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes • Waste tracking register Indirect: • Other measures outlined in WMP, CLMP and FFMP			
	Visual impacts on nearby receivers due to light spill, construction works, overshadowing	5	2	10 Moderate	Direct: • Site establishment works will be conducted to minimise visual impacts. Where there is no noise wall or hoarding in place, boundary fencing will be installed to minimise visual, noise and air quality impacts on adjacent sensitive receivers • Retention of existing vegetation or treatment of key temporary structures • Minimise light spill from the project by directing construction lighting into the construction areas and ensuring the site is not over-lit Indirect: • Other measures outlined in the SEMP	4	2	8 Minor
	Traffic and parking impacts due to increased number of construction vehicles, site access arrangements	5	2	10 Moderate	Direct: • Use of the virtual superintendent system • Deployment of surveillance officers • Utilisation of the traffic control centre • Staff log-in at designated parking stations • Limiting vehicle movements to designated entries and exits and haulage routes • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures • Communication and adherence to a Worker Code of Conduct • Minimise construction vehicle parking on public roads • Queuing and idling of construction vehicles in residential streets will be minimised • Measures 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 Indirect: • Other measures outlined in the TTAMP and Construction Parking and Access Strategy (CPAS)	3	2	6 Minor
	Contamination of soil or water from spill or leak of dangerous or hazardous materials from plant / equipment	5	2	10 Moderate	Direct: • The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds • Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • All spills or leakages will be immediately contained and absorbed • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways • All sites are hardstand • Inspection regime of bulk storage facility Indirect:	3	1	3 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Other measures outlined in the SSWMP			
	Inappropriate management of concrete wastes, overtopping of washout area (e.g. during a rain event)	5	3	15 Significant	Direct: • Any concrete washout areas will be adequately sized, regularly maintained, and located in designated covered areas. They will be outside of riparian areas and well away from stormwater system inlets in a position where wastewater will not enter any drainage lines or waterways Indirect: • Other measures outlined in the SSWMP	2	2	4 Minor
	Uncontrolled (beyond design) runoff from disturbed areas resulting in uncontrolled discharge to soils or water	5	3	15 Significant	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • 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 Indirect: • Other measures outlined in the SSWMP	2	3	6 Minor
	Litter, inappropriate use of co-mingling and waste receptacles	4	1	4 Minor	Direct: • All staff and subcontractors will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the waste management hierarchy) and energy consumption • All recyclable solid wastes (paper/ cardboard/ plastic/ glass/ timber/ metals/ fluorescent lighting/ printer cartridges/ICT equipment) will be segregated for recycling purposes and volumes reported. Wherever possible, packaging should be avoided or minimised to prevent waste products being unnecessarily brought onto an operation Indirect: • Other measures outlined in the Sustainability Management Plan and WMP	2	1	2 Negligible
	Failure to realise opportunities to recycle water to reduce discharge, beneficial re-use of materials	4	1	4 Minor	Direct: • Resource recovery will be applied to the management of construction waste and will include the recovery of resources for reuse-reusable materials generated by the Project will be segregated for reuse on site, or off site where possible • Recovery of recyclable resources generated during construction and demolition • Recovery of resources for reprocessing, such as the onsite mulching of cleared vegetation for use in landscaping use, in the absence of a higher beneficial use being identified • Segregation of resources for recycling for effective processing at recycling facility Indirect: • Other measures outlined in the Sustainability Management Plan and WMP	2	1	2 Negligible
Tunnelling	Vibration leading to structural damage or cosmetic damage	3	3	9	Direct: • Design review to minimise impacts	2	3	6

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
				Moderate	• Vibration monitoring will be carried out in accordance with the Project's Construction Noise and Vibration Monitoring Program • Alternative equipment to eliminate need to hammer • Notification of residents prior to vibration impacting activities in accordance with CoA E83 • Building Condition Inspection report Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program and NAHMP			Minor
	Vibration impacts leading to human discomfort complaints	5	3	15 Significant	Direct: • Design review to minimise impacts • Vibration monitoring will be carried out in accordance with the Project's Construction Noise and Vibration Monitoring Program • Alternative equipment to eliminate need to hammer • Notification of residents prior to vibration impacting activities as per E83 • Goodwill measures Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program and NAHMP	4	2	8 Minor
	Regenerated noise impacts on nearby receivers, including out of hours impacts, resulting in sleep disturbance or community complaints	5	3	15 Significant	Direct: • Design review to minimise impacts • Noise monitoring will be carried out in accordance with the Project's Construction Noise and Vibration Monitoring Program • Alternative equipment to eliminate need to hammer • Goodwill measures Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program and CCS	4	2	8 Minor
	Vibration leading to damage of heritage items	4	3	12 Moderate	Direct: • Design review to minimise impacts • Vibration monitoring will be carried out in accordance with the Project's Construction Noise and Vibration Monitoring Program • Alternative equipment to eliminate need to hammer • Notification of residents prior to vibration impacting activities in accordance with CoA E83 • Building Condition Inspection report • Safe working distances Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program and NAHMP	2	3	6 Minor
	Changes to groundwater level and quality leading to reduction in yield to users, and/or changes in salinity	2	2	4 Minor	Direct: • Groundwater inflow and levels in and within the vicinity of the tunnels will be monitored during construction and compared to model predictions and groundwater performance criteria applied to the Project. The groundwater model will be updated based on the results of the monitoring as required and proposed management measures to minimise potential groundwater impacts adjusted accordingly to ensure that groundwater inflow performance criteria are met Indirect: • Other measures outlined in the Groundwater Management Sub-plan (GMP) and Construction Groundwater Monitoring Program	1	1	1 Negligible
	Inappropriate disposal of spoil	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Waste classification in accordance with EPA guidelines • 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 Indirect: • Other measures outlined in the WMP			
	Failure of construction water treatment plant leads to uncontrolled discharge or discharge that doesn't meet Infrastructure Approval or EPL conditions	4	4	16 Significant	Direct: • Weekly inspection of Waste Treatment Plants (WTP) • Trade waste agreement • Monitoring at WTP's • Utilisation of an interlock when there is pump failure • Non-return valve prevents water from discharging in event of WTP failure Indirect: • Other measures outlined in the SSWMP and GMP	3	4	12 Moderate
	Inappropriate storage of incompatible chemicals	3	4	12 Moderate	Direct: • Storage of dangerous goods and hazardous materials will be in accordance with guidelines • Incompatible chemicals will be appropriately separated • 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 • Hazardous substances will be stored on site in lockable containers or on a bund within a secure area, in their original receptacles • All hazardous substances will be clearly labelled and will have Safety Data Sheets affixed or available nearby Indirect: • Other measures outlined in the SSWMP	1	4	4 Minor
Spoil transport, deliveries, other plant on public roads	Traffic impacts due to increased number of construction vehicles (heavy and light vehicles) and vehicle movements	5	3	15 Significant	Direct: • Designated haul routes for heavy vehicles • Use of the virtual superintendent system • Deployment of surveillance officers • Utilisation of the traffic control centre • Staff log-in at designated parking stations • Limiting vehicle movements to designated entries and exits and haulage routes • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures • Communication and adherence to a Worker Code of Conduct • Minimise construction vehicle parking on public roads • Queuing and idling of construction vehicles in residential streets will be minimised • Measures identified in the TCP will be implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network Indirect: • Other measures outlined in the WMP, TTAMP, TCP and CPAS	3	2	6 Minor
	Generation of dust due to material / waste / spoil loading and unloading and generation of exhaust emissions due to inappropriate plant maintenance	5	2	10 Moderate	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties Stockpiling will be undertaken primarily within acoustic sheds • Community liaison and notification Indirect: • Other measures outlined in the AQMP			
	Tracking of mud, concrete, or other waste on public roads	4	2	8 Minor	Direct: • Site exits will be fitted with hardstand material or other appropriate measures to limit the amount of material transported off site (where required) Indirect: • Other measures outlined in SSWMP	3	1	3 Minor
	Noise and vibration impacts on receivers near construction site or along haul roads (during standard hours)	4	2	8 Minor	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training • Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • • Erection of acoustic sheds and noise walls • Community liaison and notification Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program	3	2	6 Minor
Utility works and relocation	Damage to existing utility services	5	4	20 Significant	Direct: • Ensuring appropriate precautionary measures are undertaken or in place prior to works such as completing Dial Before You Dig searches • Positive utility identification such as through potholing or non-destructive digging • Utilisation of utility spotters • Ensuring Ground Penetration Permits are obtained • Appointment of a Project Utility Coordination Manager • Liaison with the relevant utility agencies Indirect: • Other measures outlined in the Utilities Management Strategy	3	4	12 Moderate
	Disturbance or damage of unidentified Aboriginal heritage artefact	1	4	4 Minor	Direct: • All on site personnel will be provided with site training in regard to Aboriginal cultural heritage site awareness, key mitigation and management requirements and their responsibilities pertaining to the Aboriginal Heritage provisions of the NPW Act 1974 (NSW) prior to construction commencing. Training will include unexpected heritage finds procedures for heritage items, objects and human remains Indirect: • Other measures outlined in the ACHMP	1	3	3 Minor
	Disturbance or damage of non-Aboriginal heritage item	3	3	9 Moderate	Direct: • Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must ensure works are performed in accordance with a heritage assessment and regulatory requirements (which may include a dilapidation survey and/or	2	3	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					supervision of works by a competent person and/or vibration monitoring) • Any such areas should be signposted and segregated by the erection of physical barriers to prevent authorised entry Indirect: • Other measures outlined in the NAHMP			
	Clearing outside of an approved area, including: • Accidental clearing outside of the project boundaries • Accidental clearing beyond the requirements of the Project Approval	4	2	8 Minor	Direct: • Toolbox talks regarding clearing limits • Clearly delineate the Project footprint prior to clearing • Following measures outlined the Tree Report produced in accordance with CoA E179 Indirect: • Other measures outlined in the Flora and Fauna Management Sub-plan (FFMP)	3	2	6 Minor
	Generation and mobilisation of dust impacting receivers including residents, businesses, vegetation and habitats	4	2	8 Minor	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties Stockpiling will be undertaken primarily within acoustic sheds • Community liaison and notification Indirect: • Other measures outlined in the AQMP	3	2	6 Minor
	Noise and vibration impacts on nearby receivers, including out of hours impacts resulting in structural damage or community complaints	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training • Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • Out of Hours Works are to be carried out in accordance with the Project's Out-of-Hours-Works Protocol and EPL • Erection of acoustic sheds and noise walls • Community liaison and notification Indirect: • Other measures outlined in the Construction Noise and Vibration Monitoring Program	3	3	9 Moderate
	Traffic impacts due to increased number of construction vehicles (heavy and light vehicles) and vehicle movements	4	2	8 Minor	Direct: • Designated haul routes for heavy vehicles • Use of the virtual superintendent system • Deployment of surveillance officers • Utilisation of the traffic control centre • Staff log-in at designated parking stations • Limiting vehicle movements to designated entries and exits and haulage routes • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail traffic, transport and access management measures • Communication and adherence to a Worker Code of Conduct	3	2	6 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Minimise construction vehicle parking on public roads • Queuing and idling of construction vehicles in residential streets will be minimised • Measures identified in the TCP will be implemented for each ancillary facility/construction compound which requires direct access/egress onto the local/arterial road network Indirect: • Other measures outlined in the WMP, TTAMP, TCP and CPAS			
	Serious incidents, e.g. uncontrolled release of concrete washout water, water treatment plant, major fuel spill, that cause or threaten material harm to the environment	3	4	12 Moderate	Direct: • Any concrete washout areas will be adequately sized, regularly maintained, and located in designated covered areas. They will be outside of riparian areas and well away from stormwater system inlets in a position where wastewater will not enter any drainage lines or waterways • The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds • Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: • Other measures outlined in the SSWMP	2	4	8 Minor
	Erosion and sedimentation impacts on downstream waterways due to exposed land, inadequate controls or failure of controls	4	3	12 Moderate	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • 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 Indirect: • Other measures outlined in the SSWMP	3	3	9 Moderate
Surface grouting	Serious incidents, e.g. grout break out, uncontrolled release of water, fuel spill, that cause or threaten material harm to the environment	3	4	12 Moderate	Direct: • Grout injection pressures and volumes to be monitored. If sudden loss of pressure or increased volume of grout injected, then operation is to stop • The use of any hazardous substance that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds • Any refuelling undertaken on site shall be undertaken in designated areas only, outside of riparian areas and well away from stormwater system inlets • Spill containment kits will be placed at locations where there is direct discharge of stormwater to receiving waterways Indirect: • Other measures outlined in the SSWMP	2	4	8 Minor
	Noise and vibration impacts on nearby receivers, including out of hours impacts resulting in structural damage or community complaints	5	3	15 Significant	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail noise and vibration requirements from this plan through inductions, toolboxes and targeted training	3	3	9 Moderate

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					• Noise and vibration monitoring undertaken in accordance with the Project's Construction Noise and Vibration Monitoring Program • The safe working distances for vibration intensive plant would be complied with where feasible and reasonable. This would include the consideration of smaller equipment when working in close proximity to existing structures • Erection of acoustic blankets • Community liaison and notification Indirect: Other measures outlined in the Construction Noise and Vibration Monitoring Program			
	Generation of dust due to cutting/grinding/sawing equipment, material /waste/spoil handling; and generation of exhaust emissions due to inappropriate plant maintenance	4	2	8 Minor	Direct: • Construction activities with the potential to generate dust will be modified or ceased during unfavourable weather conditions to reduce the potential for dust generation • Access roads within Project sites will be maintained and managed to reduce dust generation • Storage of materials that have the potential to result in dust generation will be minimised within Project sites at all times • During high wind and/or dry conditions, programming of dust generating activities is to be considered in order to reduce nuisance to neighbouring properties • Demolition activities will be planned and carried out to minimise the potential for dust generation • Adequate dust suppression will be applied during all demolition works required to facilitate the Project Indirect: • Other measures outlined in the AQMP	3	2	6 Minor
	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) or disposal at an unlicensed waste facility	4	3	12 Moderate	Direct: • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures • Vegetation disposal in accordance with the FFMP and Weed Management Protocol • HAZMAT surveys and removal of asbestos prior to demolition activities • Waste classification in accordance with EPA guidelines • Suitably licensed waste contractors will be used for the collection and transport of all non-domestic, retail and commercial wastes for either offsite processing and/or disposal to an appropriately licensed facility. Receipts for waste transfer and disposal will be checked to ensure all details are correct and retained for audit purposes • Waste tracking register Indirect: • Other measures outlined in WMP, CLMP and FFMP	3	2	6 Minor
	Visual impacts on nearby receivers due to light spill, construction works, overshadowing	5	2	10 Moderate	Direct: • Site establishment works will be conducted to minimise visual impacts. Boundary fencing will be installed to minimise visual, noise and air quality impacts on adjacent sensitive receivers • Retention of existing vegetation or treatment of key temporary structures • Minimise light spill from the project by directing construction lighting into the construction areas and ensuring the site is not over-lit Indirect: • Other measures outlined in the CEMP	4	2	8 Minor
	Disturbance or damage of unidentified Aboriginal heritage artefact	1	4	4 Minor	Direct: • All on site personnel will be provided with site training in regard to Aboriginal cultural heritage site awareness, key mitigation and	1	3	3 Minor

Issue	Potential impact	Likelihood	Consequence	Risk level prior to mitigation	Mitigation Measure	Likelihood	Consequence	Risk level following mitigation
					management requirements and their responsibilities pertaining to the Aboriginal Heritage provisions of the NPW Act 1974 (NSW) prior to construction commencing. Training will include unexpected heritage finds procedures for heritage items, objects and human remains Indirect: • Other measures outlined in the ACHMP			
	Disturbance or damage of non-Aboriginal heritage item	3	3	9 Moderate	Direct: • Any excavations, intrusive works or other operations that have the potential to impact areas of known heritage, cultural or archaeological items must ensure works are performed in accordance with a heritage assessment and regulatory requirements (which may include a dilapidation survey and/or supervision of works by a competent person and/or vibration monitoring) • Any such areas should be signposted and segregated by the erection of physical barriers to prevent authorised entry Indirect: • Other measures outlined in the NAHMP	2	3	6 Minor
	Erosion and sedimentation impacts on downstream waterways due to exposed land, inadequate controls or failure of controls	4	3	12 Moderate	Direct: • ESCPs will be prepared for all work and implemented in advance of site disturbance • All on site personnel will undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Further targeted training to key on site personnel • EWMS will be prepared for high risk activities • 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 Indirect: • Other measures outlined in the SSWMP	3	3	9 Moderate

Appendix A3

Environmental Policy

M4-M5 Link Mainline Tunnels

October 2020

Policy
Environment

WestConnex M4-M5 Link Tunnels

acciona | SAMSUNG C&T | BOUYGUES CONSTRUCTION AUSTRALIA

Effective October 2020

The Acciona Samsung Bouygues Joint Venture (ASBJV) makes a commitment to protect and sustain the natural environment on which we undertake our commercial acitivity on the WestConnex M4-M5 Link Mainline Tunnels Project (the Project). We comply with environmental legislation, regulations and other requirements, as a minimum. We measure and report our performance against internationally recognised standards and we operate and maintain a robust Environmental Management System.

In implementing this policy, our objectives are to:

- Identify and manage risks to, and impacts on, the surrounding environment and communities arising from our work activities and capitalise on identified opportunities
- Implement, monitor and review the Project Environmental Management System including, this policy, environmental objectives, targets and outcomes to ensure continual improvement
- Develop and use construction techniques to achieve a positive environmental outcome
- Deliver the Project in line with the principles of Ecologically Sustainable Development
- Foster environmental awareness and encourage a genuine respect for environmental protection in our employees and subcontractors, and provide ongoing training where necessary
- Deliver the Project in a way so as to achieve an Excellent Infrastructure Sustainability Council of Australia (ISCA) rating
- Implement intiatives to reduce our energy and water consumption, improve efficiency and prevent pollution across the Project
- Minimise waste generation and maximise opportunities for reuse of captured and treated water, recycling and recovery of construction and demolition waste in operation and community projects
- Measure, understand and minimise ecological and heritage impacts as a result of the Project
- Implement an Environmental Risk Management Procedure that aims to minimise the environmental impact of the Project
- Communicate openly with clients, government and engage the community on environment issues
- Develop and deliver training materials that communicate this policy to all employees and subcontractors and make this policy publicly available for stakeholders.

Andrew Marsonet
ASBJV Project Director

Transport
Roads & Maritime
Services

Environment Policy Statement

Roads and Maritime Services commits to undertaking its activities in a safe and environmentally responsible manner while effectively managing any risks that may lead to an impact on the environment. Our benchmark is best practice, cost effective environmental performance for our road and maritime network.

We are accountable

We take personal and collective accountability for addressing and minimising the environmental impacts of our activities and deliver our projects to satisfy the expectations and legislative requirements of the NSW and Federal governments and the NSW community.

We provide solutions

We lead the management of environmental risks and incorporate innovative solutions to ensure that all our activities are undertaken to minimise our environmental footprint.

We collaborate

We deliver our projects within a whole-of-government framework, by working in collaboration with our industry partners and regulatory stakeholders to achieve enhanced environmental outcomes and encourage a culture of environmental responsibility.

We listen and respond

We communicate openly, responsively and empathetically with our customers, partners and stakeholders on environmental matters.

We improve

We deliver continual improvement in environmental performance in all our activities.

Ken Kanofski

Chief Executive

Appendix A4

Document register

M4-M5 Link Mainline Tunnels

February 2019

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Table 1-1 Environmental document register

No.	Document name	Document no.
Management Plans		
1	Construction Environmental Management Plan	M4M5-LSBJ-PRW-GEN-MP01-PLN-0003
2	Traffic Transport and Access Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0001
3	Noise and Vibration Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0002
4	Flora and Fauna Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0003
5	Air Quality Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0004
6	Soil and Surface Water Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0005
7	Groundwater Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0006
8	Non-Aboriginal Cultural Heritage Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0007
9	Aboriginal Cultural Heritage Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0008
10	Waste Management Sub-plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0009
11	Compliance Tracking & Environmental Audit Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0010
12	Noise and Vibration Monitoring Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0011
13	Noise Insulation Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0012
14	Surface Water Quality Monitoring Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0013
15	Groundwater Monitoring Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0014

No.	Document name	Document no.
16	Site Establishment Management Plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0018
17	Contaminated Land Management Plan	M4M5-LSBJ-PRW-EN-MP01-PLN-0021
18	Dust Deposition Monitoring Program	M4M5-LSBJ-PRW-EN-MP01-PLN-0025
19	Parramatta Road East and West Erosion and Sediment Control Plan	M4M5-LSBJ-MUI-EN-MP01-PLN-0001
20	Campbell Road (St Peters Interchange) Erosion and Sediment Control Plan	M4M5-LSBJ-SPI-EN-MP01-PLN-0001
21	Pyrmont Bridge Road Erosion and Sediment Control Plan	M4M5-LSBJ-PBR-EN-MP01-PLN-001
Procedures, protocols and policies		
22	Unexpected Contaminated Land & Asbestos Finds Procedure	M4M5-LSBJ-PRW-EN-GE01-PRC-0001
23	Out of Hours Work Protocol	M4M5-LSBJ-PRW-EN-GE01-PRC-0002
24	Unexpected Threatened Flora / EEC Procedure	M4M5-LSBJ-PRW-EN-GE01-PRC-0003
25	Fauna Handling and Rescue Procedure	M4M5-LSBJ-PRW-EN-GE01-PRC-0004
26	Weed Management Protocol	M4M5-LSBJ-PRW-EN-GE01-PRC-0005
27	Fencing and Signage Protocol	M4M5-LSBJ-PRW-EN-GE01-PRC-0006
28	Environmental Incident Classification Reporting	M4M5-LSBJ-PRW-EN-GE01-PRC-0007
29	Environmental Policy	M4M5-LSBJ-PRW-EN-GE01-POL-0002
Reports, assessments and impact statements		

No.	Document name	Document no.
30	Pre-Construction Compliance Report	M4M5-LSBJ-PRW-EN-GE01-RPT-0001
31	Ancillary Facilities Assessment	M4M5-LSBJ-PRW-EN-GE01-RPT-0004
32	Land Use Survey	M4M5-LSBJ-PRW-EN-GE01-RPT-0005
Permits and other documents		
33	Early Works and Ground Disturbance Permit	M4M5-LSBJ-PRW-EN-GE01-PMT-0001
34	Waste and Spoil Management Register	M4M5-LSBJ-PRW-EN-GE01-REG-0001
35	Spoil Disposal Location Register	M4M5-LSBJ-PRW-EN-GE01-REG-0002
36	Legal Requirements Register	M4M5-LSBJ-PRW-EN-GE01-REG-0003
37	CEMP Document Register	M4M5-LSBJ-PRW-EN-GE01-REG-0004

Project Schedules

Environment & Sustainability Inspection Checklist

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
1. Environmental Documents				
Are approvals in place & approved for area of works? (Circle below) • EWMS • EIR • EWGDP				
2. Water Quality				
Erosion controls required, installed, in good working condition & protected from weathering? (i.e. sediment fences, geofabric)				
Are water collection points operating effectively and do not require maintenance (i.e. removal of sediment, de-watering/ desilting)?				
Is licensed discharge point signage in place and in correct location?				
Is there a plan/procedure for dewatering if groundwater is intercepted during works?				
Emergency ESC materials on site?				
Offsite “clean” water is being appropriately diverted away from site?				
3. Soil Conservation				
Stockpiles are away from drainage lines and water collection points?				
Have long term stockpiles been stabilised or have adequate controls in place to conserve soil?				
Is erosion potential adequately managed for areas of disturbed soils?				
Are controls in place for management of acid sulfate soils (if identified in area)?				

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
Public Roads Clean with Entry/exit points stabilised / wheel cleaning available? Loads covered?				
4. Air Quality				
Are controls in place to minimise visible dust?				
Have daily dust inspections been conducted?				
Vehicle or plant in good working condition? (i.e. no continuous visible emissions for longer than 10 seconds)				
Tunnel portal is free from discoloured emissions or dust?				
5. Weed Management				
No noxious weeds present that require weed management?				
Are work limits in place to prevent encroachment on retained vegetation?				
6. Archaeology & Heritage				
Are Heritage No-Go and exclusion zones established and signed?				
Are works within 50m of heritage buildings? If yes, is initial vibration monitoring required?				
Is initial vibration monitoring at heritage sites required where works are within the 'safe working distances' for structural damage of heritage items?				
Is the "safe working distance" for structural damage poster visible to workers?				
Have any unexpected heritage items been encountered?				

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
7. Noise & Vibration				
Are works in accordance with approved working hours or approved out-of-hours works permits?				
Are required noise mitigation measures implemented?				
Has idle machinery been switched off and is oriented away from sensitive receivers?				
Are controls in place for any high noise impact works occurring?				
Are safe working distances for vibration management being followed? *check NVMP				
Has all vibration-generating plant and equipment been monitored prior to use?				
Are acoustic sheds operating correctly? (i.e. doors being closed, trucks being loaded within sheds)				
Are trucks following the designated traffic route and not queuing on local roads?				
Are all reversing alarms on site squawkers?				
8. Hazardous Substance & Dangerous Goods				
Are spill kits available/accessible and stocked to plant operators?				
No evidence of hydraulic/vehicle oil spills on site?				
Are fuels/ chemicals stored within a bunded area free from excess materials/rainwater?				
Are temporary bunded areas covered to protect from rainfall?				

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
Is the refuelling procedure being followed on site to avoid spills?				
9. Contamination				
Contamination being managed correctly? (i.e. asbestos containing materials segregated)?				
10. Waste Management				
Site clean with segregated and signposted waste bins available?				
Are concrete washouts well maintained and signed?				
Waste removal (including spoil) is being tracked and disposal receipts available for regulated streams?				
11. Resource Use				
Water meters installed and monitored?				
Is non-potable water being reused in place of potable where possible?				
Is the waste hierarchy being followed onsite?				
Is fuel usage being recorded?				
12. OOHW				
Are trucks and plant idling for longer than 15 min?				
13. Miscellaneous				
Community is free from disruption? (i.e. Blocked Driveways, illegal parking, excessive noise)				
Community concerns are considered and feedback is provided to the construction team (i.e. noise and vibration)?				

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
Site security, effective lighting and visibility on pedestrian walkways and temporary diversions are appropriate?				
Are measures in place to prevent light spill? Risk of community and fauna being impacted by light spill?				
14. Code of Considerate Practice				
Appearance: Does the external appearance of the site appear professional and well managed? Is the site organised, clean and tidy? e.g. facilities, stored materials, vehicles and plant. Is the worksite free from graffiti? Does the workforce look professional?				
Respect: Has there been any recent support or contribution to the local community? e.g. charities, school programs.				
Environment: Has the team put in place any additional methods to minimise waste, energy, water or materials?				
Value the Workforce: Has there been any workforce events, training, recognition program, health program or other empowerment program?				

Inspection Item	Acceptable (Y/N or N/A)	Findings/Comments	By	Closed (Date)
Additional Items/Opportunities for Improvement or Innovation?				

Inspection By:		**Signature:**		**Date:**	

M4-M5 Link Mainline Tunnels

Incident Register

Incident Number	Date	Type	Location	Code	Impact	Summary	Response	Preventative Action	Root Causes	Corrective Actions	Reported to OEH/EPA/ Planning?	Status

M4-M5 Link Mainline Tunnels

Register of Non-Compliances - Environmental Management

Number	Date	CoA Reference	EPL Condition	CEMP / Procedure	Incident Report Number (if Required)	Description of Non-Compliance / Non-Conformance	Corrective Action	Status (Open/ Closed)	Date of Close Out	Evidence of Corrective / Preventive Action Location	Further notes

M4-M5 Link Mainline Tunnels

ERG Inspection Register and Tracker

Inspection #	Inspection Date	Low 5 Days	Medium 3 Days	High 1 Day	Closed on Time	Closed Late	ESC	GEN	BS	NV	AIR	FF	DOC	WAS	SPL	BAS	COM	Total Issues Identified	Cumulative	Status	check

M4-M5 Link Mainline Tunnels

Site Name

Rainfall Record

Period: 2018

Rainfall (mm)												
Date	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1												
2												
3												
4												
5												
6												
7												
8												
9												
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M4-M5 Link Mainline Tunnels

Sediment Basin Discharge Register

EPL Discharge Point	Date Sampled	Date data obtained	Turbidity (NTU)		Total Suspended Solids (mg/L)		pH		Oil & Grease		Monitoring Frequency	Comments
			Licence Limit	Results	Licence Limit	Results	Licence Limit	Results	Licence Limit	Results		

M4-M5 Link Mainline Tunnels

Waste Register

Sites		Waste Hierarchy	Supplier details		Purchase details		Consumption details			Waste details		
WCX3A Site	Pick up / Drop Off Site	Waste Hierarchy	Supplier Name	Supplier No	Invoice No	Invoice Date	Weigh Bridge Docket	Start Date	End Date	Waste Type	Unit of Measure	Total Quantity

Appendix A5

Sensitive Area Plans

M4-M5 Link Mainline Tunnels

May 2021

M4-M5 Link Mainline Tunnels (the Project)

Sensitive Area Plan

Northcote Street (C3a), Haberfield (C2b), Parramatta Road East (C3b), Parramatta Road West (C1b) and Wattle Street (C1a) Sites

Legend

- Project Tunnel Alignment
- Ancillary Facilities
- Historical Archaeological Management Unit
- NCA Boundary

Land Use

- Residential
- Garage
- Commercial
- Aged Care
- Cafe/Bar
- Child Care
- Educational
- Hotel
- Medical
- Outdoor Area
- Public Building
- Place of Worship
- Other

Local Environmental Plan

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

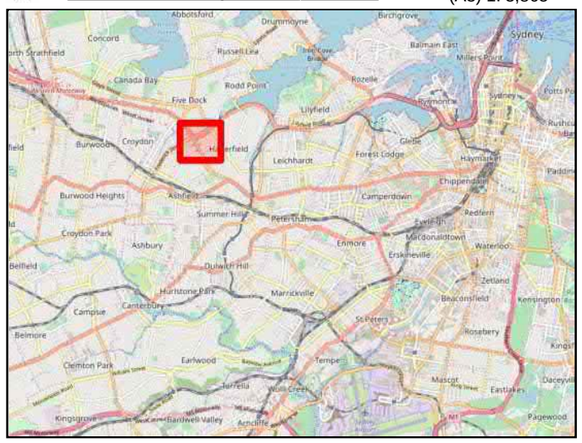
Ecological Survey (03/08/18)

- Broad-leaf Privet (*Ligustrum lucidum*)
- Cockspur Coral Tree (*Erythrina crista-galli*)
- Camphor Laurel (*Cinnamomum camphora*)
- Small-leaved Privet (*Ligustrum vulgare*)
- Potential Microbat Habitat

**Note Refer to Appendix A8 for updated ancillary facility boundaries*

N 0 98.18 196.4 Meters

(A3) 1: 3,865



This map is shown for reference purposes only. Lendlease provides this information "as is" with the understanding that it is not guaranteed to be accurate, correct or complete and conclusions drawn from such information are the responsibility of the user. While every effort is made to ensure the information displayed is as accurate and current as possible, Lendlease will not be held responsible for any loss, damage or inconvenience caused as a result of reliance on such information or data.

Figure A5-1 - Sensitive Area Plan Sheet 1

M4-M5 Link Mainline Tunnels (the Project)

Sensitive Area Plan

Pyrmont Bridge Road Site (C9)

Legend

- Project Tunnel Alignment
- Ancillary Facilities
- Historical Archaeological Management Unit Area
- NCA Boundary
- Potential Heritage Item Area - former Bank of NSW building
- Waterway

Local Environmental Plan

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

Land Use

- Residential
- Garage
- Commercial
- Aged Care
- Cafe/Bar
- Child Care
- Educational
- Hotel
- Medical
- Outdoor Area
- Public Building
- Place of Worship
- Other

N

0 78.09 156.2 Meters

(A3) 1: 3,074

Figure A5-3 - Sensitive Area Plan Sheet 2

WestConnex M4-M5 Link Tunnels

Map Output from 'the GIS'

Legend

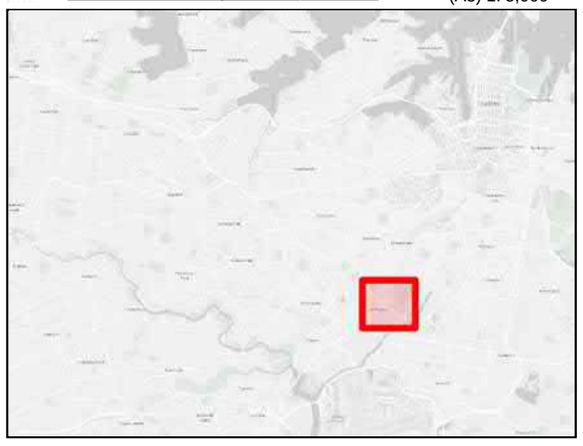
- Ancilliary Facilities (Draft)
- Local Environmental Plan Area
  - Conservation Area - General
  - Item - Archaeological
  - Item - General
  - Item - Landscape
- M4-M5 Link Mainline
- Waterbody
- Roads - Primary
- Roads - Arterial
- Roads - Other
- NCA Names
- NCA boundary
- Buildings
  - Residential
  - Garage
  - Commercial
  - Aged Care
  - Cafe/Bar
  - Child Care
  - Educational
  - Hotel
  - Medical
  - Outdoor Area
  - Public Building
  - Place of Worship
  - Other

*Note Refer to Appendix A8 for up-dated ancillary facility boundaries

N

0 127.00 254.0 Meters

(A3) 1: 5,000



WestConnex M4-M5 Link Tunnels

acciona | SAMSUNG C&T | BOUYGUES CONSTRUCTION AUSTRALIA

Appendix A6

Environmental Incident Classification and Reporting Procedure

M4-M5 Link Mainline Tunnels

August 2018

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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	Environment Manager Performance Improvement	Scott Machar
Reviewed by	Director Environment Operations	Sally Durham
Approved by	Director Environment	Michael Crowley

Document Control			
Version	5.0	**Release date**	September 2017
Publication Number	RMS 17.374	**ISBN**	978-1-925659-57-3

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, administrative 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: ○ 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*).	
		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-existing 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 the 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 Maritime 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 section 5.2). Sites with 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 sections 4.3 and 4.4).	Contractor	Within 3 business days of the 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 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).	Contractor	Within 7 days of the incident	N/A
10	Undertake incident investigation (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 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 corrective actions to be addressed through a management system (e.g. corrective action 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 identifies incident	Immediate	Immediate
2	Advise the Roads and Maritime site management team and the relevant Roads and Maritime Environment Manager and Safety Environment Quality Officer (SEQO) / Safety Environment Quality Co-ordinator (SEQC).	Person who identifies 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 section 5.2). Sites with 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 this 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 investigation (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.

Appendix A7

Emergency Contact Details

M4-M5 Link Mainline Tunnels

October 2018

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List of emergency contact phone numbers

Position	Name	Phone
External Parties		
EPA pollution hotline		131 555
Fire and Rescue NSW		000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
The Ministry of Health		1300 066 055
SafeWork NSW		131 050
City of Sydney Council		9265 9333
Inner West Council		9392 5000
24-hour community information line		1800 660 248
LSBJV Project representatives		
Environment and Sustainability Manager	[redacted]	(02) 9304 8400
Project Director	[redacted]	(02) 9304 8400
Public Liaison Manager	[redacted]	(02) 9304 8400

Appendix A8

Ancillary Facility Indicative Layouts

M4-M5 Link Mainline Tunnels

February 2023

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Northcote Street

REMOVE KIOSK & SWITCH YARD

SITE BOUNDARY

RAMP 1:7

DECLINE BACKFILLED & SEALED

TEMPORARY SITE OFFICE

HV

CH 174.61

SITE BOUNDARY

SITE EXIT

SITE ACCESS

ADIT

REMOVE WHEELWASH

TEMPORARY FENCING

REINSTATEMENT

1. REMOVE LV SWITCHYARD.
2. LEVEL SITE AND CHIPSEAL.
3. REINSTATE NORTHCOTE ST.

HABERFIELD SITE CEMP LAYOUT

SCALE: 1:500 (A3)

DRAWING FILE LOCATION \ NAME	PLOT DATE \ TIME	PLOT BY
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DESIGN LOT CODE: M4M5-LSBJ-SPI-GEN-MTD-DRG-3120

SCALES ON A3 SIZE DRAWING: 5 0 10m — 1:500 FULL SIZE A3

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

DRAWINGS / DESIGN PREPARED BY: WestConnex M4-M5 Link Tunnels — acciona — SAMSUNG C&T — Hochtief Australia

TITLE	NAME	DATE
DRAWN	JJA	14-09-22
DRG CHECK	AGi	14-09-22
DESIGN	-	-
PKG OWNER	-	-
DESIGN CHECK	-	-
DESIGN MNGR	AGi	14-09-22
PROJECT MNGR	-	-

CLIENT: Sydney Motorway Corporation | WestConnex

DOCUMENT NUMBER: M4M5-LSBJ-NCS-GEN-MTD-DRG-1154

M4-M5 LINK MAIN TUNNEL WORKS — A3

HABERFIELD
SITE DECOMMISIONING
CEMP LAYOUT
-

RMS REGISTRATION No. - X

ISSUE STATUS	EDMS No.	SHEET No.	REV
-	-	(4) of 4	A1

Parramatta Road East and West

DISABILITY PATHWAY FOR CIC
M&E FACILITIES
M&E YARD AREA
COMMUNITY CENTRE
M&E WORKSHOP WITH MEETING ROOM INSIDE
PEDESTRIAN ACCESS GATE
PERMIT OFFICE
PEDESTRIAN ACCESS GATE
NO HEAVY VEHICLE ACCESS
EXISTING ENTRY / EXIT
ALT STREET
PEDESTRIAN WALKWAY
EXISTING ENTRY / EXIT
CAR PARKING AREA
PEDESTRIAN ACCESS GATES
NO HEAVY VEHICLE ACCESS
MOTORBIKE PARKING SPACES
PEDESTRIAN ACCESS GATE
DISABLED PARKING SPACE
3m EXISTING BRICK WALL
4m Hoarding
PEDESTRIAN ACCESS GATE
FENCE TO BE INSTALLED
PARRAMATTA ROAD
NO PARKING
LV
4.5
ENTRY / EXIT
12.6
HV
10.0
YARD AREA
AREA = 3,400m²
BLAND STREET
NO PARKING (EXISTING)
NO HEAVY VEHICLE ACCESS
EXISTING OVERHEAD WALKWAY
SIGNALISED CROSSINGS
NO HEAVY VEHICLE ACCESS

1.8m TEMPORARY FENCE
SPEED HUMPS
4m HIGH HOARDING (2 LAYER 19mm PLY)
3m HIGH HOARDING (1 LAYER 19mm PLY)
EXISTING BUILDING WALL
EXISTING DOUBLE BRICK LAYER WALL (3.8 - 4.2m HEIGHT, 46mm WIDE)
PEDESTRIAN PATHWAY
EXISTING FENCE (NO DESIGN REQUIRED)
COVERED PEDESTRIAN PATHWAY
LIGHTING POLE
TURNSTILE

8 x PED. GATE @ 1.1m
5 x SINGLE VEHICLE @ 6.3m
1 x LARGE VEHICLE ACCESS GATE @ 17m

ACCEPTED FOR CONSTRUCTION

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A11	02-08-19	REVISED AS PER COMMENTS	HV
A12	14-04-20	REVISED AS PER NEW INSTRUCTIONS	BEN D.
A13	20-04-20	PARK SPOTS ADDED	BDH
A14	25-06-20	REVISED AS PER NEW COMMENTS	BDH
A15	30-07-20	BUS ROUTE AND STAIRS ADDED	BDH
A16	18-08-20	PEDESTRIAN ROUTE WITHIN CHANGING AREA BEFORE PICK UP	BDH

DESIGN LOT CODE
M4M5-LSBJ-TUN-GEN-MTD-DRG-6001

SCALES ON A3 SIZE DRAWING

CO-ORDINATE SYSTEM
MGA ZONE 56

HEIGHT DATUM
AHD

DRAWINGS / DESIGN PREPARED BY

TITLE	NAME	DATE
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DRG CHECK	B.D'HOOGHE	18-08-20
DESIGN	-	DD-MM-YY
PKG OWNER	-	DD-MM-YY
DESIGN CHECK	-	DD-MM-YY
DESIGN MNGR	MGO	02-09-19
PROJECT MNGR	-	DD-MM-YY

CLIENT
Sydney Motorway Corporation | WestConnex

DOCUMENT NUMBER
M4M5 - LSBJ - MUI - GEN - MTD - DRG - 4001

M4-M5 LINK MAIN TUNNEL WORKS
A3

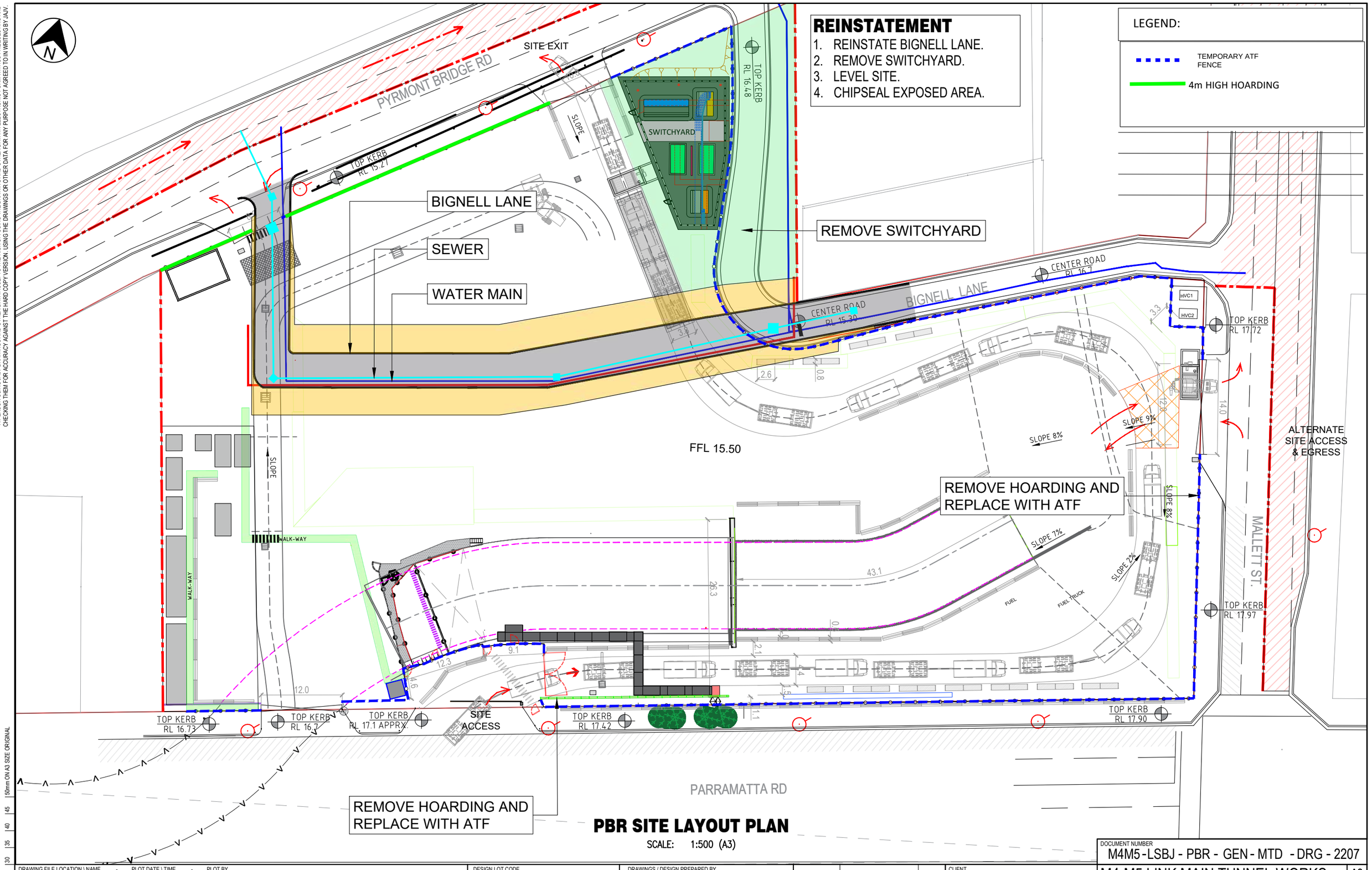
MUIRS
PLAN SITE LAYOUT

SHEET_DETAILS

RMS REGISTRATION No. DSXXXX / XXXXXX X

ISSUE STATUS	EDMS No.	SHEET No.	REV
-	-	1 OF 2	A16

Pyrmont Bridge Road



REINSTATEMENT

1. REINSTATE BIGNELL LANE.
2. REMOVE SWITCHYARD.
3. LEVEL SITE.
4. CHIPSEAL EXPOSED AREA.

LEGEND:

- TEMPORARY ATF FENCE
- 4m HIGH HOARDING

PBR SITE LAYOUT PLAN

SCALE: 1:500 (A3)

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50mm ON A3 SIZE ORIGINAL

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-	A1	14 SEP 22	FIRST ISSUE	AG

SCALES ON A3 SIZE DRAWING: 1:500 (5 0 10m) FULL SIZE A3

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

	TITLE	NAME	DATE
	DRAWN	JJA	14-09-22
	DRG CHECK	AG	14-09-22
	DESIGN	-	-
	PKG OWNER	-	-
	DESIGN CHECK	-	-
	DESIGN MNGR	AG	14-09-22
	PROJECT MNGR	-	-

CLIENT: Sydney Motorway Corporation | WestConnex

DOCUMENT NUMBER: M4M5-LSBJ-PBR-GEN-MTD-DRG-2207

M4-M5 LINK MAIN TUNNEL WORKS — A3

PYRMONT BRIDGE ROAD
SURFACE DEMOB
CEMP LAYOUTS
-

RMS REGISTRATION No. -

ISSUE STATUS	EDMS No.	SHEET No.	REV
-	-	(4) of 04	A1

X

Campbell Road

SPI SITE LAYOUT 2023

N

FLOW:

- MAIN PEDESTRIAN WALKWAYS
- NEW BOUNDARY
- GENERAL DELIVERIES
- TUNNEL AND M&E MAIN ACCESS ROUTE/ CROSS-OVER
- EXIT
- SURFACE DELIVERIES FLOW

SUPPLY SHAFT BUILDING
WORKSHOP WORKING AREA
SWITCH YARD
STORAGE CONTAINERS
EXISTING HV KIOSK
6M RESTRICTION ZONE FROM HV KIOSK SLAB
GATE MAN SHED 2 + COVID MARSHAL CHECKPOINT
ENTRANCE GATE S21 FOR TRUCK AND DOGS
SEE TABLE/ BLOW UP DETAILS FOR OFFICES COORDINATES
PEDESTRIAN TURNSTYLE
DB BOARD 2
TRENCH
SEWER
AREA TO BE LANDSCAPED
TRAPEZOIDAL DRAINAGE CHANNEL
TRAPEZOIDAL DRAINAGE CHANNEL
EXIT GATE PS22 FOR TRUCK AND DOGS
RAMP FOR FLOAT TRUCKS (6% GRADE)
2020 LAND LOW POINT SUMP
NEW SEDIMENTATION TANK
ORIGINAL SEDIMENTATION TANK
DB BOARD 1
TUNNEL STORAGE AREA
WEIGH BRIDGE
SMOKING AREA
~1100m²
TURBICLEAR FLOCULENT
WHEEL WASH TO BE REMOVED
CATTLE GRID TO BE REMOVED
2019 LAND LOW POINT SUMP
TEMPORARY WATER TREATMENT PLANT - DECONSTRUCTED
DECLINE CLOSED

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50mm ON A3 SIZE ORIGINAL

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-	A29	22-03-22	REVISED AS PER ADDED BASIN AREA	AG
-	A30	03-06-22	REVISED AS PER COMMENTS	AG
-	A31	07-06-22	UPDATED AS PER NEW STAGE	AG
-	A24	18-01-21	UPDATE AS PER INSTRUCTIONS	HRE
-	A25	01-06-21	UPDATE AS PER EXISTING SITE LAYOUT	HRE

DESIGN LOT CODE: M4M5-ASBJ-SPI-GEN-MTD-DRG-3001

SCALES ON A3 SIZE DRAWING: 1:300 FULL SIZE A3

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

DRAWINGS / DESIGN PREPARED BY: WestConnex M4-M5 Link Tunnels — acciona — SAMSUNG C&T — Hochtief

TITLE	NAME	DATE
DRAWN	MBA	14-08-18
DRG CHECK	THU	14-08-18
DESIGN	-	DD-MM-YY
PKG OWNER	-	DD-MM-YY
DESIGN CHECK	-	DD-MM-YY
DESIGN MNGR	MGO	DD-MM-YY
PROJECT MNGR	-	DD-MM-YY

CLIENT: Sydney Motorway Corporation | WestConnex

DOCUMENT NUMBER: M4M5-ASBJ-SPI-GEN-MTD-DRG-3001

M4-M5 LINK MAIN TUNNEL WORKS

A3

CONSTRUCTION SITE ESTABLISHMENT
SPI SITE COMPOUND LAYOUT
TUNNEL & CIVIL OPERATIONS

-

RMS REGISTRATION No. - X

ISSUE STATUS	EDMS No.	SHEET No.	REV
-	-	3 of 3	A31

Burrows Road Minor Ancillary Facility

LAYOUT FOR ADDITIONAL LAND ON BURROWS ROAD SCALE: 1:1000

DRAWING FILE LOCATION \ NAME - PLOT DATE \ TIME - PLOT BY
C:\Users\dguj484\Documents\SPI\M4M5-ASBJ-SPI-GEN-MTD-DRG-3404-A1 - SPI-LAY-OUT FOR ADDITIONAL LAND ON BURROWS ROAD.dwg - 3/12/2020 3:27:02 PM - dguj484

DESIGN MODEL FILE(S) USED FOR DOCUMENTATION OF THIS DRAWING

REV	DATE	AMENDMENT / REVISION DESCRIPTION	APPROVAL
A1	03-12-20	FIRST ISSUE	HRE

DESIGN LOT CODE: M4M5-ASBJ-SPI-GEN-MTD-DRG-3404

SCALES ON A3 SIZE DRAWING: 1:1000 FULL SIZE A3

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

DRAWINGS / DESIGN PREPARED BY

TITLE	NAME	DATE
DRAWN	JDG	03-12-20
DRG CHECK	HRE	03-12-20
DESIGN	-	DD-MM-YY
PKG OWNER	-	DD-MM-YY
DESIGN CHECK	-	DD-MM-YY
DESIGN MNGR	MGO	DD-MM-YY
PROJECT MNGR	-	DD-MM-YY

CLIENT: Sydney Motorway Corporation | WestConnex

DOCUMENT NUMBER: M4M5-ASBJ- SPI - GEN- MTD - DRG - 3404

M4-M5 LINK MAIN TUNNEL WORKS A3

SAINT PETERS INTERCHANGE

LAYOUT FOR ADDITIONAL LAND ON BURROWS ROAD

-

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RMS REGISTRATION No. - X

ISSUE STATUS	EDMS No.	SHEET No.	REV
-	-	1 OF 1	A1

Appendix A9

Other Conditions of Approval relevant to this Plan

M4-M5 Link Mainline Tunnels

September 2018

Other Conditions of Approval relevant to the development of this Plan

CoA	Requirement	Reference
A17	Works must not commence until an Environmental Representative (ER) has been approved by the Secretary and engaged by the Proponent.	Section 3.3.1
A21	For the duration of the works until the completion of construction, the approved ER must: (a) receive and respond to communication from the Secretary in relation to the environmental performance of the CSSI (b) consider and inform the Secretary on matters specified in the terms of this approval (c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community (d) review documents identified in Conditions C1, C4 and C9 and any other documents that are identified by the Secretary, to ensure they are consistent with requirements in or under this approval and if so: (i) make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary), or (ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary / Department for information or are not required to be submitted to the Secretary / Department) (e) regularly monitor the implementation of the documents listed in Conditions C1, C4 and C9 to ensure implementation is being carried out in accordance with the document and the terms of this approval (f) as may be requested by the Secretary, help plan, attend or undertake audits of the development commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A36 of this approval (g) as may be requested by the Secretary, assist the Department in the resolution of community complaints	Section 3.3.1

CoA	Requirement	Reference
	(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 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 (j) prepare and submit to the Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading "Environmental Representative Monthly Reports." The Environmental Representative Monthly Report must be submitted within seven (7) calendar days following the end of each month for the duration of the ER's engagement for the CSSI, or as otherwise agreed with the Secretary.	
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 3.3.1
A26	The approved AA must:	Section 3.3.1

CoA	Requirement	Reference
	(a) receive and respond to communication from the Secretary in relation to the performance of the CSSI in relation to noise and vibration (b) consider and inform the Secretary on matters specified in the terms of this approval relating to noise and vibration (c) consider and recommend, to the Proponent, improvements that may be made to avoid or minimise adverse noise and vibration impacts (d) review all noise and vibration documents required to be prepared under the terms of this approval and, should they be consistent with the terms of this approval, endorse them before submission to the Secretary (if required to be submitted to the Secretary) or before implementation (if not required to be submitted to the Secretary) (e) regularly monitor the implementation of all noise and vibration documents required to be prepared under the terms of this approval to ensure implementation is in accordance with what is stated in the document and the terms of this approval (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	

CoA	Requirement	Reference
	(iv) review the noise impacts of minor construction ancillary facilities (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 3.7.4 Section 3.8
A41	Notification of an incident under Condition A40 of this approval must include the time and date of the incident, details of the incident and must identify any consequent non-compliance with this approval.	Section 3.8
A42	All written requirements of the Secretary or relevant public authority, which may be given at any point in time, to address the cause or impact of an incident must be complied with, within any timeframe specified by the Secretary or relevant public authority.	Section 3.8
A43	If statutory notification is given to the NSW Environment Protection Authority (EPA) as required under the POEO Act in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.	Section 3.7.2 Section 3.8
A45	Signage and hoardings surrounding construction ancillary facilities must include the CSSI name and application number.	Section 4.16.4
C3	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of construction, or where construction is staged no later than one (1) month prior to the commencement of that stage.	Section 2.2

CoA	Requirement	Reference
C4	The following CEMP Sub-plans must be prepared in consultation with the relevant authorities identified for each CEMP Sub-plan and be consistent with the CEMP referred to in the EIS. (a) Traffic and Transport and access: Port Authority of NSW, Sydney Coordination Office and relevant council(s) *Port Authority of NSW to be consulted when considering impacts on port land.	(a) TTAMP– Appendix B1
	(b) Noise and vibration: EPA and relevant council(s)	(b) NVMP – Appendix B2
	(c) Flora and fauna: OEH and relevant council(s)	(c) FFMP – Appendix B3
	(d) Air quality: EPA and relevant council(s)	(d) AQMP – Appendix B4
	(e) Soil and surface water: DPI Water; OEH; EPA; Sydney Water; and relevant council(s)	(e) SSWMP – Appendix B5
	(f) Groundwater: DPI Water	(f) GMP – Appendix B6
	(g) Non-Aboriginal Heritage: Heritage Council of NSW; Heritage Division; and relevant council(s)	(g) NAHMP – Appendix B7
	(h) Aboriginal Heritage: OEH	(h) ACHMP – Appendix B8
	(i) Waste Management: N/A	i) WMP – Appendix B9
C5	The CEMP Sub-plans must state how: (a) the environmental performance outcomes identified in the EIS and SPIR as modified by these conditions will be achieved;	Appendix B1-B9
	(b) the mitigation measures identified in the EIS and SPIR as modified by these conditions will be implemented;	
	(c) the relevant terms of this approval will be complied with; and	

CoA	Requirement	Reference
	(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed.	
C6	The CEMP Sub-plans must be endorsed by the ER and then submitted to the Secretary for approval no later than one (1) month prior to the commencement of the construction activities to which they apply.	Section 2.2
C7	Any of the CEMP Sub-plans may be submitted to the Secretary along with, or subsequent to, the submission of the CEMP.	Section 2.2
C23	The operation of a construction ancillary facility must not commence until the CEMP required by Condition C1, relevant CEMP Sub-plans required by Condition C4 and relevant Construction Monitoring Programs required by Condition C9 have been approved by the Secretary.	Surface Water Monitoring Program Groundwater Monitoring Program Noise and Vibration Monitoring Program Table 2-1 Section 3.9.2
C25	Boundary fencing that incorporates screening must be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of site establishment and construction unless otherwise agreed with relevant council(s), and affected residents, business operators or landowners.	Section 4.16.4
C26	Boundary fencing required under Condition C25 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.	Section 4.16.4