

Construction Environmental Management Plan

M6 Stage 1: *Preliminary construction
including commencement activities*

Transport for New South Wales

November 2021

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Construction Environmental Management Plan

M6 Stage 1
SSI-8931

*M6 Stage 1: Preliminary construction including
commencement activities*

November 2021

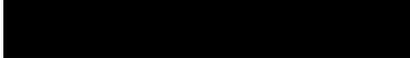
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Document control

Approval

In approving this CEMP, the Project Manager is confirming this document has been prepared in accordance with the requirements of the relevant EMP guidance as specified by the NSW Department of Planning, Industry and Environment and in consultation with relevant stakeholders, as outlined by conditions of approval.

Title	M6 Stage 1 Construction Environmental Management Plan
Endorsed by Environment Representative	
Signed	
Dated	05/11/2021
Approved on behalf of TfNSW by	
Signed	
Dated	04/11/2021
Approved on behalf of CGU by	
Signed	
Dated	04/11/2021

Version control

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A.02	19/08/2021	Issued for consultation	
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03	3/11/2021	Minor administrative updates	

Distribution of controlled copies

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 and on the Project website.

Copy number	Issued to	Version

Emergency and key contacts

Position	Name	Phone
EPA pollution hotline	N/A	131 555
Fire and Rescue NSW	N/A	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 (NSW Health)	N/A	(02) 9391 9000
SafeWork NSW	N/A	131 050
Bayside Council	N/A	1300 581 299
Georges River Council	N/A	02 9330 6400
Canterbury-Bankstown Council	N/A	02 9707 9000
24-hour community information line	N/A	1800 789 297
Environmental and Sustainability Manager	[REDACTED]	
Project Director	[REDACTED]	
Environmental Representative	[REDACTED]	
Acoustic Advisor	[REDACTED]	
TfNSW Environmental Representative	[REDACTED]	

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Appendix B4 – Soil and Surface Water Management Procedure

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Appendix B6 – Not used

Appendix B7 – Air Quality and Odour CEMP Sub-plan and Air Quality Monitoring Program

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* Appendices which appear greyed out are not applicable to this CEMP for preliminary construction including commencement activities. These plans will be developed with the CEMP for the Construction Stage.

Glossary/Abbreviations

Abbreviation	Expanded text
ASS	Acid Sulfate Soils
CEMP	Construction Environmental Management Plan
CEMS	Contractors Environmental Management System
CGU	CPB Contractors, Ghella, UGL Engineering joint venture
Compliance audit	Verification of how implementation is proceeding with respect to a Construction Environmental Management Plan (CEMP) (which incorporates the relevant approval conditions).
CNVIA	Construction Noise and Vibration Impact Assessment
DPIE	Department of Planning, Industry and Environment
EES	NSW Department of Environment, Energy and Science
EIS	Environmental Impact Statement
EMM	Updated Environmental Management Measures
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 incident	An unexpected event that has, or has the potential to, cause harm to the environment and requires some action to minimise the impact or restore the environment.
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.
Environmental 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	<i>Environmental Planning and Assessment Act 1979</i> (NSW)
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence.
ER	Environmental Representative - suitably qualified and experienced person independent of project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental work method statement

Abbreviation	Expanded text
Hold point	Is a verification point that prevents work from commencing prior to approval from Transport for New South Wales Services
IC	Independent Certifier
CoA	Planning Minister's Conditions of Approval
Minister	Minister of the NSW Department for Planning and Public Spaces
NML	Noise Management Level
Non-compliance	Failure to comply with the requirements of the Project approval or any applicable licence, permit or legal requirements
Non-conformance	Failure to conform to the requirements of Project system documentation including this CEMP or supporting documentation.
PESCP	Progressive Erosion and Sediment Control Plan
PIR	Preferred Infrastructure Report
PIRMP	Pollution Incident Response Management Plan
POEO Act	<i>Protection of the Environment Operations Act 1997 (NSW)</i>
Principal, the	Transport for New South Wales Services
Project, the	M6 Stage 1
ROL	Road occupancy licence
SAP	Sensitive Area Plan
SEARs	Secretary's Environmental Assessment Requirements
TfNSW	Transport for New South Wales Services

1 Introduction

1.1 Background

The M6 Stage 1 Project comprises a new twin motorway tunnel (approximately four kilometres in length) between the M8 Motorway at Arncliffe to President Avenue at Kogarah with a tunnel portal and entry and exit ramps connecting the tunnels to the surface (the Project).

Works include connection to the M8 Motorway, line marking of additional travel lanes between the St Peters interchange to the M6 Stage 1 tunnels, an intersection with President Avenue (including widening and raising of President Avenue), and intersection improvements at the President Avenue/Princes Highway intersection. Mainline tunnel stubs would be constructed to allow for connections to future stages of the M6 Extension.

An Environmental Impact Statement (EIS) for the Project was prepared in 2018 to assess potential impacts of construction and operation of the Project. The EIS was placed on public exhibition between 7 November to 14 December 2018. A Preferred Infrastructure Report (PIR) was subsequently prepared to address impacts to the local road network which was then publicly exhibited from 17 April 2019 to 8 May 2019.

The Project was declared Critical State Significant Infrastructure (CSSI) by virtue of Schedule 5, clause 11 of the *State Environmental Planning Policy (State and Regional Development) 2011* (SEPP) and was granted infrastructure approval under Section 5.19 of the *Environmental Planning and Assessment Act 1979* (EP&A Act) by the Minister for Planning and Public Spaces on 18 December 2019.

To facilitate delivery of the Project, the CPB Contractors, Ghella, UGL Engineering (CGU) Joint Venture has elected to stage construction of the Project. A Staging Report (M6S1-CGU-NWW-ENPE-PLN-000401) has been prepared and details the strategy for staging and the compliance requirements for each of the two construction stages. The stages of construction for the Project include:

- Stage 1 - Preliminary Construction
 - Installation of environmental controls at construction compounds (C1, C2 & C3) such as fencing, hoarding and noise walls;
 - Removal of existing structures where required;
 - Establishment of site facilities such as offices, amenities and storage, including the installation and connection of services such as water, sewer and power;
 - Delivery of Plant and construction equipment;
 - Construction commencement activities such as site levelling, construction of haul roads and hardstands;
 - Installation of construction facilities such as water treatment plants; and
 - Repair, refurbishment and replacement (if required) of existing M8 construction facilities and services at the C1 site, to facilitate reuse for the M6 Stage 1 Project.
- Stage 2 - Construction
 - Operation of ancillary facilities;
 - Bulk excavation including shafts; tunnels; and civil structures;
 - Construction of motorway operations complexes and facilities;
 - Mechanical and electrical fit-out of built structures as required;
 - Permanent power supply works (Earlwood to Rockdale);
 - Reinstatement and rehabilitation of construction areas; and

- Other works as required to fulfil project objectives.

This CEMP applies only to preliminary construction (Stage 1) of the Project.

1.2 Purpose of CEMP

This CEMP has been prepared to describe how the CGU will comply with the New South Wales (NSW) Minister for Planning's Conditions of Approval (CoA) during preliminary construction of the Project. The CEMP details how CGU will minimise environmental risk and achieve environmental outcomes for preliminary construction of the Project through the application of CGU's Environmental Management System (EMS) which will ensure appropriate Environmental Management Measures (EMM) and associated controls are implemented.

Implementing the CEMP and CEMP Sub-plans effectively will ensure that the Project meets the requirements of the CoA, Environmental Protection Licence (EPL) (pending) and EMMs. The requirements of these approvals and where they have been met in this CEMP are shown in Appendix A1: Legal requirements and compliance tracking, whilst agency consultation requirements for each CEMP Sub-plan are outlined in Appendix A5.

This CEMP has been prepared in accordance with the:

- Transport for NSW (TfNSW) QA Specification G36, G38 and G40;
- Infrastructure Approval (SSI 8931);
- Requirements of EMP guidance as specified by the Department of Planning, Industry and Environment (DPIE);
- The Staging Report (M6S1-CGU-NWW-ENPE-PLN-000401); and
- AS/NZS ISO 14001.

This CEMP is an overarching document in the EMS for the Project and includes a number of management documents. These are applicable to all staff, workforce and sub-contractors associated with preliminary construction of the Project.

1.3 Project description

The CGU was appointed by TfNSW as the construction contractor for the Project. The Project will comprise a new four kilometre, multi-lane underground road link between the M8 Motorway and a surface intersection at President Avenue, Kogarah (Figure 1). Key components of the Project include:

- Mainline tunnels approximately 3.0km in length, sized for three lanes of traffic and line marked for two lanes on opening of the motorway;
- Entry and exit ramp tunnels approximately 1.5km in length and a tunnel portal connecting the tunnels to a surface intersection with President Avenue;
- Provision of a new intersection at President Avenue including the widening and raising of President Avenue at this location;
- Upgrade of the President Avenue and Princes Highway intersection to improve capacity and network integration;
- Provision of a new shared cycle and pedestrian pathways;
- Mainline tunnel stubs for a future connection to extend the Project to the south;
- Two motorway operation complexes (MOCs) as follows:
 - Arncliffe: including mechanical and electrical fit-out of the ventilation facility built by the M8 Motorway project, and provision of a new water treatment plant and substation.

- Rockdale (south): including a ventilation building, Disaster Recover Site (DRS), substation and power supply, deluge tanks.
- A tunnel ventilation system, including ventilation facilities located at Marsh Street, Arncliffe and West Botany Street, Rockdale, and in-tunnel ventilation systems (jet fans and ventilation ducts);
- New utility services, and modifications and connections to existing Utility Services;
- A permanent power supply connection to the Rockdale Ventilation Facility Site MOC from Ausgrid's Canterbury Sub-Transmission Substation;
- Emergency access and evacuation facilities, including pedestrian and vehicular cross passages, long passages, fire and safety life systems;
- Ancillary infrastructure for motorway operations including operations management and control systems, permanent power supply, communications, lighting, electronic toll collection system, toll gantries and traffic control and signage (both fixed and variable signage);
- Drainage infrastructure to collect surface water and groundwater inflows for treatment;
- Reinstatement of Bicentennial Park and recreation facilities;
- Reinstatement and rehabilitation of construction leased areas within the Arncliffe Site;
- Minor adjustments to local roads in the Project area; and
- Development and implementation of systems integration and operating procedures with WestConnex Motorways to ensure safe operation of the interfaces between the Project and the WestConnex Motorways.

Preliminary construction is anticipated to commence in October 2021. Full construction activities (under an updated CEMP) are anticipated to commence in December 2021. Construction completion and operation of the motorway are anticipated in 2025.

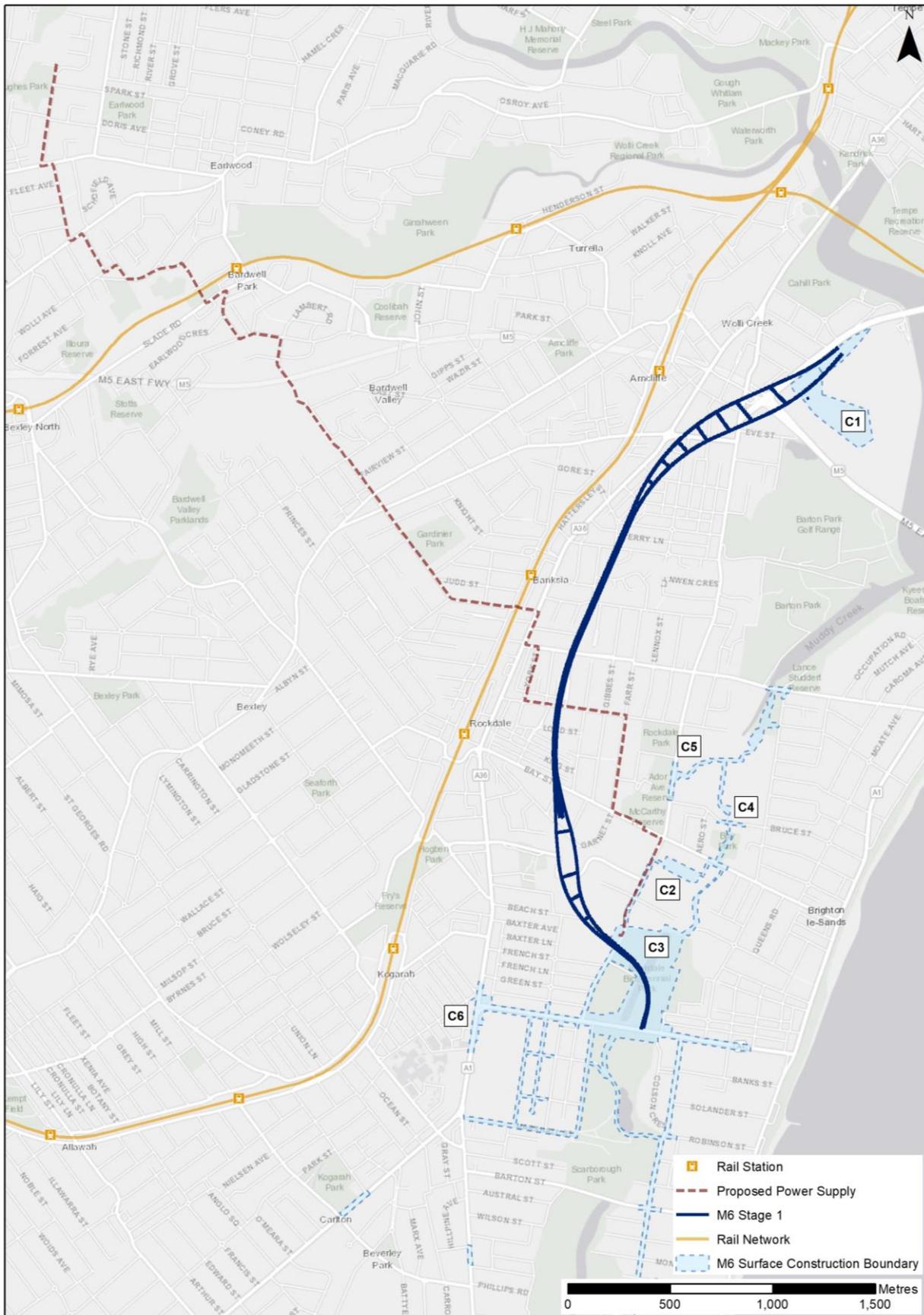


Figure 1: Project Overview

1.4 Scope of the CEMP

This CEMP:

- Describes the Project in detail, including activities to be undertaken during preliminary construction;
- Addresses the requirements of the CoA, the EMMs listed in the Preferred Infrastructure Report (PIR) and EIS, contractual requirements and applicable legislation;
- Provides specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts;
- Provides specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation;
- Describes the environmental management related roles and responsibilities of personnel;
- States objectives and targets for issues that are important to the environmental performance of the Project; and
- Outlines a monitoring regime to check the adequacy of controls as they are implemented during construction.

The Legal and Compliance Tracking checklist in Appendix A1 demonstrates how the CEMP complies with the environmental requirements. The CEMP provides for the environmental management of preliminary construction including commencement activities for the Project, and the establishment of temporary construction ancillary facilities.

This CEMP applies to the first stage of construction only, which includes preliminary construction and commencement activities at three construction compounds. Preliminary construction is anticipated to commence in October 2021. An indicative schedule for each construction compound including location / access requirements and applicable works is provided in Appendix A4 (Site Establishment Management Plan). A detailed list of preliminary construction activities proposed to commence in accordance with this CEMP are listed in Table 1. The locations where preliminary construction activities would occur are included in Figure 2, Figure 3 and Figure 4.

Table 1: Preliminary Construction Activities

Location	Preliminary Construction Activities
<p>Arncliffe construction ancillary facility (C1)</p>	<ul style="list-style-type: none"> • Installation and/or repair of environmental mitigation measures (wheel baths, site hoarding and noise walls, frog fencing and for the ongoing management of the pre-existing stockpile) • Upgrade, refurbishment and use of site offices and amenities • Refurbishment and use of workshops to facilitate delivery and assembly of construction equipment and plant • Assessment and refurbishment of site services (sewer, low and high voltage power, water, dewatering facilities and compressed air) • Assessment and refurbishment of existing equipment such as the water treatment plant, shaft access equipment (alimak and gantry crane), spoil bunds and acoustic sheds (some repairs required) • Assessment and repair of existing M8 tunnel access structures (dive, shaft and adits) and services including: <ul style="list-style-type: none"> ○ Geotechnical safety assessments ○ Repair and replacement of temporary tunnel support systems as required ○ Invert repairs (to facilitate subsequent construction access) ○ Repair and refurbish tunnel services such as lighting, ventilation, power supply and communication equipment ○ Upgrade or replace exiting construction service pipes (dewater, air) and emergency equipment (call points, caches etc).
<p>Rockdale Depot construction ancillary facility (C2)</p>	<ul style="list-style-type: none"> • Demolition of existing depot structures and property adjustments where required for access and site establishment • Installation of mitigation measures including noise walls, fencing, hoarding, wheel bath, sediment and erosion control devices, and drainage • Removal of vegetation in depot, which does not include any Plant Community Types (PCTs) or Threatened Ecological Communities (TECs) • Installation of site offices, amenities, workshop and parking • Connection of services such as water, sewer and power to offices and amenities • Minor site levelling and installation of haul roads and hardstands

Location	Preliminary Construction Activities
	<ul style="list-style-type: none"> • Delivery and assembly of plant and equipment including water treatment plant • Creation of working platforms and pads for subsequent construction activities • Construction of footings for noise walls, bentonite plant and construction water treatment plant (which may include some bored piling due to poor ground conditions)
<p>President Avenue construction ancillary facility (C3)</p>	<p>MOC area (west of West Botany Street):</p> <p>Demolition of existing structures and property adjustments including:</p> <ul style="list-style-type: none"> • Disconnection of existing services to buildings requiring removal • Adjustments to services, including sewer and overhead wiring • Installation of fencing and crib sheds • Creation of working platforms and pads for subsequent construction activities <p>Within areas of Bicentennial Park (east of West Botany Street):</p> <ul style="list-style-type: none"> • Install pedestrian pathway between West Botany Street and Brighton-Le-Sands Public School • Installation of mitigation measures including fencing, noise walls, hoarding, wheel bath, sediment and erosion control • Demolition of existing structures (picnic and barbeque shelter) and property adjustments including minor vegetation clearing in compound area (no clearing of any PCTs or TECs for Stage 1) • Site levelling, which will include: <ul style="list-style-type: none"> ○ Removal of existing kerbs and garden beds; ○ Installation of geofabric; and ○ Spreading and compaction of imported material to design levels. • Installation of site offices, amenities including establishment and use of workshop to facilitate delivery, inspection and assembly of construction plant and equipment • Installation of site equipment such as a water treatment plant and bentonite plant • Other commencement activities related to site establishment including construction of stabilised site access (but not operation of a construction compound)

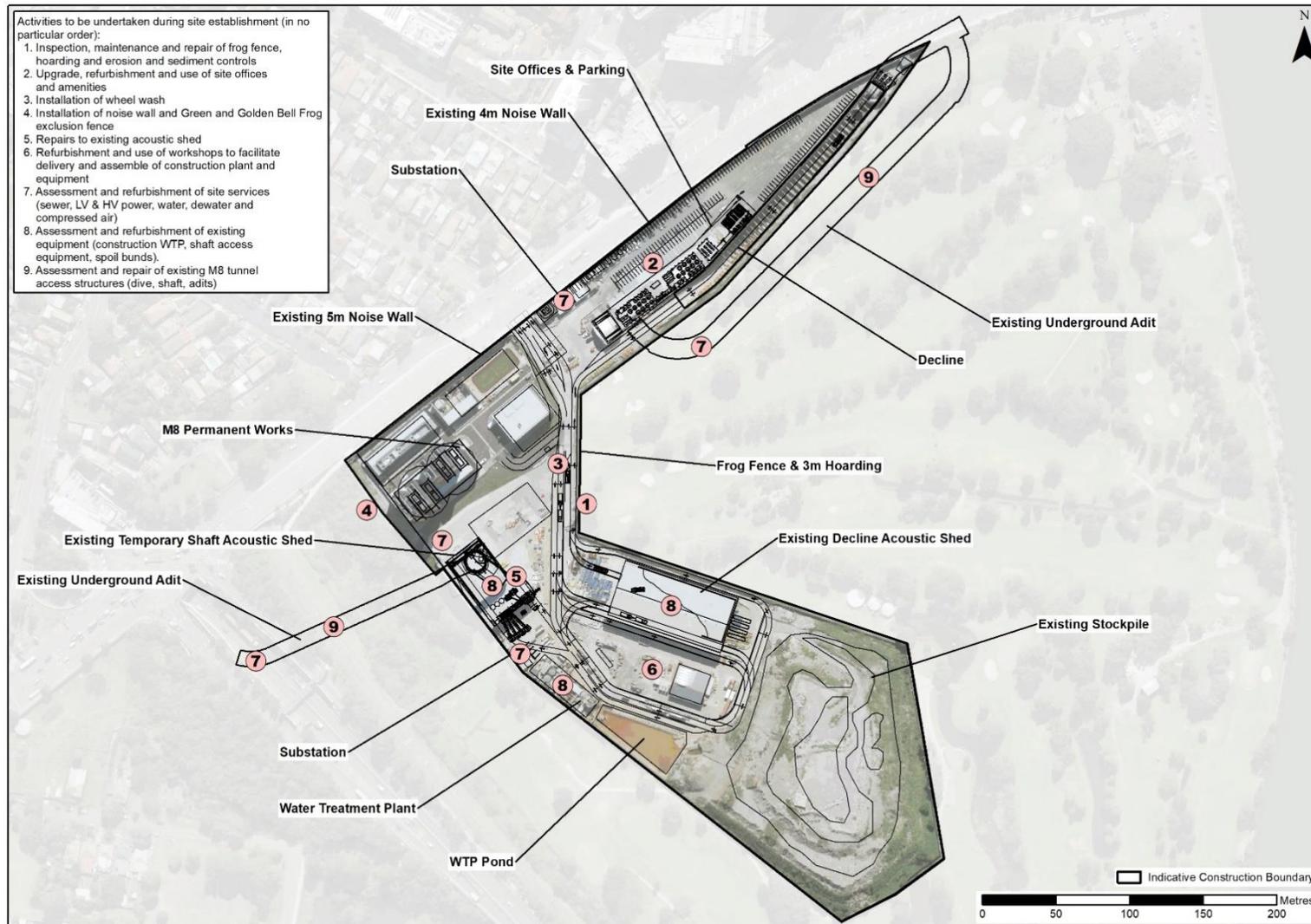


Figure 2: Preliminary construction at Arncliffe construction ancillary facility (C1)

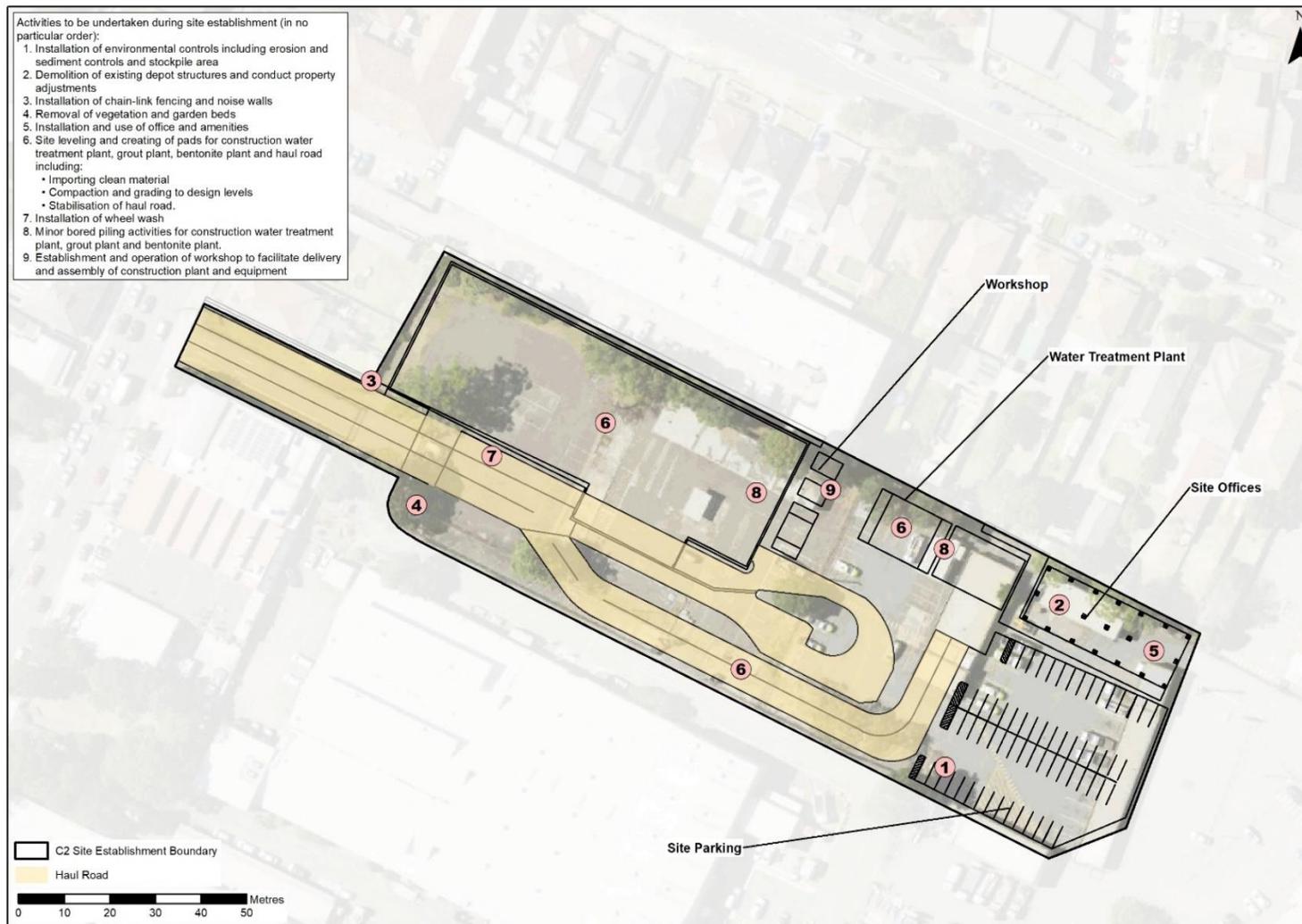


Figure 3: Preliminary construction at Rockdale Depot construction ancillary facility (C2)

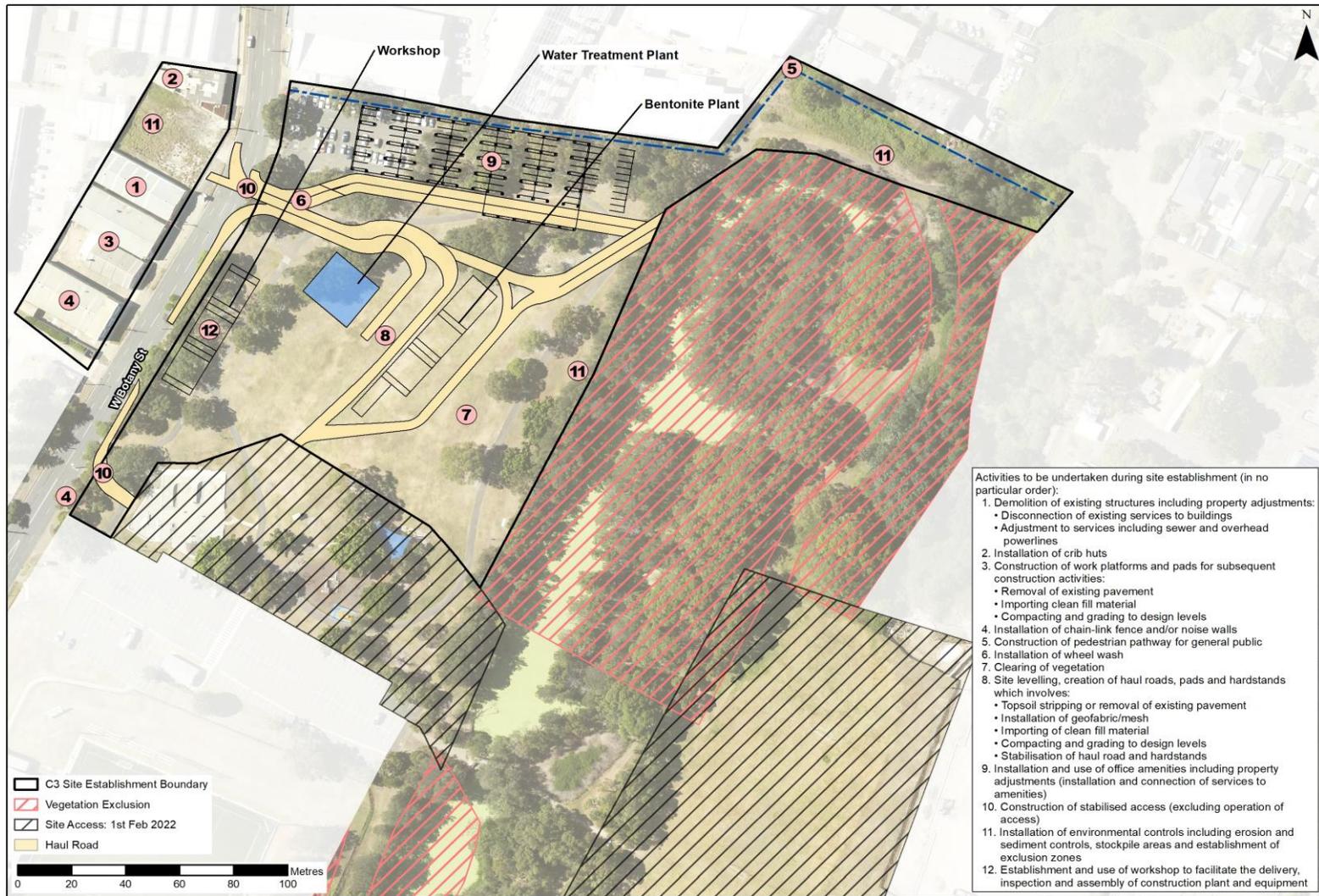


Figure 4: Preliminary construction at President Ave construction ancillary facility (C3)

1.5 Environmental Management System overview

This CEMP establishes the system for implementation, monitoring and continuous improvement to minimise environmental impacts from preliminary construction of the Project. This CEMP and associated CEMP Sub-plans will be provided to TfNSW for submission to the ER for endorsement and DPIE for approval prior to commencing preliminary construction. As a key Project document, the CEMP for preliminary construction (including commencement activities) integrates environmental management requirements, TfNSW obligations and community expectations during project delivery. It provides environmental management protocols for the preliminary construction stage of the Project.

Specifically, the CEMP:

- Identifies environmental management obligations relevant to preliminary construction of the Project and lists all applicable environmental legislation, permits and approvals;
- Identifies environmental hazards (aspects), potential impacts and risks associated with the works;
- Identifies reasonable and feasible measures to reduce the environmental impact of the works;
- Assists in prevention of unauthorised environmental impacts; and
- Fulfils CGU's EMS requirements, enabling continued certification to ISO14001.

This CEMP and associated CEMP Sub-Plans were prepared in accordance with TFNSW Specifications G36, G38, G40 and the *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004). This CEMP describes how CGU will manage environmental issues during the preliminary construction stage of the project. Legal requirements and compliance tracking (Environmental Obligations) are listed in a register in Appendix A1. The register lists the following environmental management obligations and how the obligations will be achieved:

- Applicable legislation;
- Contract requirements;
- Project approval requirements; and
- Other obligations or commitments.

The register will be reviewed regularly, and updates will be made as necessary.

1.5.1 Governance documentation

CGU's EMS is based on the requirements of the CPB Contractors Construction Management System (CMS). The CMS is certified to conform to AS/NZS ISO 14001:2016 *Environmental management systems – Requirements with guidance for use*. Evidence of certification is included in Appendix A3.

As shown in Figure 5, CGU's management system comprises the following components:

- Board Governance – Overarching board governance.
- Policies – A Policy is a statement of commitment and lists the mandatory requirements for individuals of the organisation to comply with.
- Procedures and Work Instructions – Procedures and work instructions specify how to undertake and control specific activities.
- Tools - Preformatted documents such as forms and templates that are required to be completed as part of following a Procedure.

- Knowledge - Reference material to provide context, additional information or guidance to a Policy or Procedure.
- Business Applications - Software tools used to support CPB activities and Procedures.

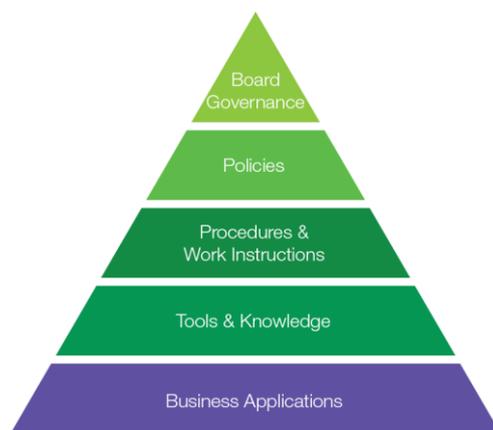


Figure 5: CPB Management System

The CMS has been developed to ensure a consistent approach to project delivery and foster continual improvement. Implementation of the CEMP demonstrates due diligence by monitoring and ensuring that:

- Contractual environmental requirements are being fulfilled;
- The Project is compliant with all relevant environmental legislation; and
- Environmental impacts are avoided (where possible) or minimised.

1.5.2 Embedding environmental requirements in the design development process

Workshops were held during Project development with the design and construction teams to ensure that environmental and sustainability requirements were identified, considered and fully integrated into the tender design and construction methodology. Initiatives will be incorporated into the design where practicable. Any additional initiatives and compliance with environment and sustainability requirements will be documented within the Design Reports.

This CEMP as part of the EMS, will be implemented with compliance and performance monitored. A complete list of guidelines, legislation and other relevant documents can be found in Appendix A1.

2 Consultation, endorsement and approval

This CEMP and associated CEMP Sub-plans and procedures will be authorised by the CGU Project Director and TfNSW Environmental Lead prior to submission to the ER and DPIE. In accordance with the CoA, this CEMP for preliminary construction must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one month before the commencement of that stage of construction.

Details of agency consultation as required by CoA A5 will be provided in a consultation summary with the revision of the CEMP submitted for endorsement (ER) and Approval (DPIE). Copies of all relevant correspondence, undertaken as part of this consultation process will be available with the consultation summary.

In accordance with the Staging Report, CEMP Sub-plans have only been prepared for environmental aspects and impacts with moderate (or higher) residual risk (refer to Section 3.2.1.). Low risk environmental aspects would be managed during preliminary construction through the implementation of Environmental Management Procedures which are listed in Table 2.

Table 2: Environmental Management Procedures applicable to this CEMP

Environmental Management Procedure	Document
Traffic and Access Management Procedure	M6S1-CGU-NWW-PE-PRO-000418 (CEMP Appendix B1)
Flora and Fauna Management Procedure	M6S1-CGU-NWW-PE-PRO-000419 (CEMP Appendix B2)
Soil and Surface Water Management Procedure	M6S1-CGU-NWW-PE-PRO-000421 (CEMP Appendix B4)

CEMP Sub-plans have been prepared in consultation with required stakeholders and government agencies. These Sub-plans are listed in Table 3.

Table 3: Relevant government agencies to be consulted for approval of CEMP Sub-plans related to the preliminary construction stage

Required CEMP Sub-plans	Consultation Agencies	Approval Pathway
Noise and Vibration	NSW Health, Bayside Council and Sydney Water (vibration has the potential to impact on Sydney Water assets)	ER (and AA) for endorsement.
Air Quality and Odour	NSW Health, Bayside Council, Georges River Council and Canterbury/Bankstown Council	
Contamination	Bayside Council, Georges River Council and Canterbury/Bankstown Council	DPIE for Approval
Waste	Bayside Council, Georges River Council and Canterbury/Bankstown Council	

To support genuine and efficient consultation activities, this CEMP has been provided to agencies listed in Table 3 for review with these CEMP Sub-plans.

3 Construction Environmental Management Plan

3.1 Preparation and availability of the CEMP

The CEMP has been prepared in accordance with requirements of the *Guideline for the Preparation of Environmental Management Plans* (October, 2004). It incorporates all requirements of the EIS documentation and all relevant licences, permits and approvals for the preliminary construction stage of the Project. This CEMP would be available on the M6 Stage 1 Project website and the Environment Policy (with Appendix A3) will be on display at the site office and communicated to staff and other interested parties via inductions and ongoing awareness programs.

This CEMP will be available to all workers, subcontractors, visitors or anyone working on the project throughout the duration of preliminary construction for the Project.

3.2 Planning

3.2.1 Environmental Risk Assessment Workshop

Risk identification and management processes are a key focus in developing and implementing all EMS documentation. The objective of these processes is to confirm that the Project is designed and constructed within acceptable limits of risk to personnel and the environment.

To assist in environmental risk identification, a review of potentially significant environmental aspects and impacts was undertaken to determine the specific CEMP Sub-plans required for preliminary construction of the Project. This included completing an assessment on the scope of work and the relevant CoAs and EMMs requirements, to determine the overall risk for each environmental management category (as listed in Table 4 of the Planning Approval).

The CEMP Sub-plans that would be used to manage the requirements associated with the preliminary construction stage of the Project was determined using a risk-based approach. For preliminary construction (as included in the scope of this CEMP), where the risk assessment concluded:

- An environmental category had a moderate (or greater) risk after mitigation and management measures had been applied, then it was determined that a CEMP Sub-plan would be required.
- An environmental category had a low (or negligible) risk after mitigation and management measures had been applied, then it was determined that a procedure within the CEMP would be required.
 - A low or negligible risk of an environmental category is assigned where the risks related to the scope of works, can be effectively managed through existing management and mitigation measures required under the TfNSW General Specifications (i.e. G36, G38, G40) and the CGU's Environmental and Safety Management Systems (based on the CPB Contractors Environmental Management System).
 - In addition to the above, the Management Procedures would be developed to address requirements identified in the EIS, CoA and EMMs appropriate to the scope of work for the identified stage (refer to Appendix A and Appendix B of this document).

Table 4 is a summary of the outcome of the risk assessment displaying the management tool applicable to this CEMP for preliminary construction. The full risk assessment is included in Appendix A2 of this CEMP. A risk assessment was also conducted for additional plans, programs and requirements identified in the CoA, which are listed in Table 5.

Table 4: Environmental Management Category and corresponding Management Tool for this CEMP

Environmental Management Category	CoA	Management Tool
Construction Environmental Management Plan (CEMP)	C1	CEMP: Preliminary construction and commencement activities
Traffic and Access	C4(a)	Procedure (Appendix B1)
Noise and Vibration	C4(b)	Noise and Vibration preliminary Sub-plan and CNVIA (Appendix B3)
Flora and Fauna	C4(c)	Procedure (Appendix B2)
Air Quality and Odour	C4(d)	CEMP Sub-plan (Appendix B7)
Soil and Surface Water	C4(e)	Procedure (Appendix B4)
Groundwater	C4(f)	Not applicable
Contamination	C4(g)	CEMP Sub-plan (Appendix B8)
Waste	C4(h)	CEMP Sub-plan (Appendix B9)
Leachate and Landfill Gas	C4(i)	Not applicable

Table 5: Additional plans, programs and requirements for this CEMP

Requirements	CoA	Outcome of applicability assessment
Staging report	A11	Applicable
Site Establishment Management Plans	A17	Applicable (C1, C2, C3 only)
Communication Strategy	B1	Applicable
Green and Golden Bell Frog PoM	E44	Applicable (for location C1)
Construction Parking and Access Strategy	E130	Applicable
Surface Water Monitoring Program	C13(a)	Not applicable - preconstruction monitoring to continue
Groundwater Monitoring Program	C13(b)	Not applicable - preconstruction monitoring to continue
Noise and Vibration Monitoring Program	C13(c)	Monitoring in accordance with CNVIA
Blast Monitoring Program	C13(d)	Not Applicable
Air Quality Monitoring Program	C13(e)	Monitoring Program
Flora and Fauna Monitoring Program	C13(f)	Not Applicable
Leachate and Landfill Gas Monitoring Program	C13(g)	Not Applicable
Wetland Monitoring Program	C13(h)	Not Applicable

Ongoing environmental risk and opportunities identification will be a key consideration and will be completed and captured using the following methods:

- Project Risk Register (as per the Risk Management Plan: M6S1-CGU-NWW-PCRM-MPL-000800);
- Construction Area Plan Risk Assessments (CAPRAs);
- Work Packs, including Work Pack Risk Assessment;
- Environmental Work Method Statements (EWMS) or Safe Work Method Statements (SWMSs), which address environmental risks (as applicable); and
- Pre-start meetings.

CGU will prepare the risk assessment and the planning documents detailed in Table 6 to ensure the Project is constructed safely, minimising environmental impacts and in compliance with approvals, licences and contractual obligations. This robust process will include a cross-functional review and sign-off at key stages.

Table 6 Key construction planning documents

Key planning document	Description
Construction Area Plan	The planning document for each construction area, Construction Area Plans (CAPs) will include overall construction approach and methodology, Construction Area Plan Risk Assessment (CAPRA), constructability reviews and associated Work Pack listing.
Work Pack	<p>A Work Pack is a document containing all the information required to manage an activity. There will be multiple Work Packs referenced in each CAP. Each Work Pack will include a step-by-step breakdown of the activity to be undertaken, work method statement, sequencing, inspection and test plans (ITPs), SWMSs, relevant drawings, and environmental controls.</p> <p>Work Packs will be developed to provide an integrated approach to the management of safety, quality and environmental risks, as set out in our Construction Management Plan. During construction planning for each work area, work methods will be reviewed, the risks identified during the design phase will be re-assessed, and new risks identified and recorded in the Work Pack for communication to field staff. All controls necessary to ensure compliance will be included in the Work Packs, which will reference the relevant SEPs, procedures, checklists and forms. Work Packs may identify the need for amendment to an existing SEP or preparation of a new SEP. Work Packs will be approved by the Project Environment Representative or delegate prior to commencement of works described in their scope. Relevance and adequacy of environmental controls identified in Work Packs will be reviewed and where required, updated.</p>
SWMS or EWMS	<p>A SWMS or EWMS description of methodology will be required to complete an activity. It will describe the prescriptive sequence of tasks to be undertaken. Depending on the activity's complexity or if the same activity is being repeated elsewhere, the work method statement may be a separate document included in the Work Pack.</p> <p>The development of EWMSs or SWMSs will be conducted and formally recorded for relevant activities prior to their commencement. They will include environmental hazards and their mitigation for that task. Its purpose will be to communicate task methodology in detail to the</p>

	<p>workplace personnel who are completing the task. Field staff will review and sign onto these documents, including the risk assessment and safe work systems, as part of a pre-start meeting.</p> <p>EWMS/ SWMS task-specific information will include work steps (in sequence) with work-step precautions, associated hazard(s) and hazard control(s), specific personal protective equipment, equipment available onsite, responsibilities, competencies and where applicable, permit conditions.</p> <p>The environmental context of a SWMS will be included to prompt consideration in the task steps, to address the positive actions of environmental care (i.e. dust control, erosion prevention, waste recycling, etc.) and address negative actions that may introduce an environmental impact (i.e. contamination, pollution, etc.).</p>
Pre-start meeting	<p>A pre-start meeting is a review of work progress and activities planned for the incoming shift focused on creating a positive environment, safety and quality culture and continually improving work habits, generating greater workforce involvement and increasing accountability. It will:</p> <ul style="list-style-type: none"> • Identify any changes that are to be made to the work or work environment, including impacts of nearby or interfacing work • Include any environment or safety hazards reported and incidents that were reported on previous shifts. <p>Construction directors and Project managers will ensure that site supervisors conduct daily pre-start meetings with all members of the work team prior to commencing work for each shift. These meetings will typically be conducted by a Supervisor or his/her approved delegate with individual work crews. Attendance at the pre-start meeting will be mandatory. Content of the pre-start meeting will be recorded, including any issues raised as well as attendance. Pre-start meetings will be held to ensure all workers are informed about hazards in their work area prior to start of the work. It will be used in conjunction with the SWMS document to ensure current on-site conditions (and hazards) are considered with those identified in the SWMS document, particularly looking for what conditions have changed (e.g. new workers, weather, changed materials, etc.) since the work was previously undertaken, i.e. the day or shift before. The pre-start meetings will contribute to implementing a safe work habit of checking the immediate surroundings and workplace conditions before starting, including considering potential environmental impacts.</p>
Site Environment Plans (SEPs)	<p>SEPs are site specific A3 Plans that include detailed illustrations and descriptions of key environmental controls, and tables documenting key requirements. These will inform and fully integrate with detailed construction planning.</p>

Identified environmental risks, controls and accountabilities will be communicated to all relevant personnel through preparation and communication of the CEMP, CEMP Sub-plans, CAPs, Work Packs, SWMSs/EWMSs, SEPs, toolbox meetings, and pre-start meetings.

3.2.2 Continual improvement

In addition to specifying the day-to-day environmental management of a project, this CEMP details activities to be performed to deliver continual improvement in environmental performance. The continual improvement process is illustration in Figure 6 and achieved through;

- CEMP audits and compliance reviews;
- Design and construction technique refinements and improvement of project environmental management outcomes; and
- Audit and review of individual components of CGU's EMS.

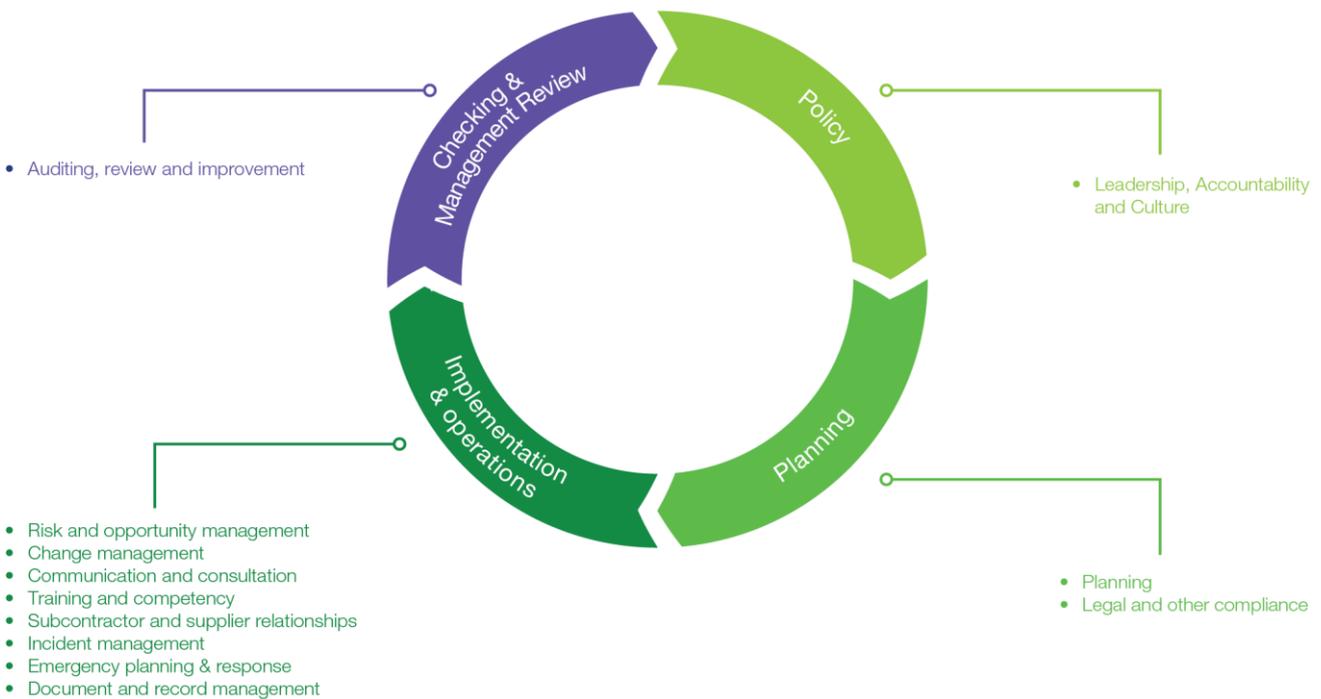


Figure 6 Continual Improvement Process

3.2.3 Regulatory requirements and compliance

Legislation

A register of legal and other requirements for the Project is provided in Appendix A1. This register is maintained as a checklist. This register will be reviewed at regular intervals, such as during management reviews, compliance reviews and audits. The register will be updated with any applicable changes. 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 3.6 of this CEMP.

Approvals, permits and licences

Several approvals, permits and licenses have and/or will be obtained for the Project. Appendix A1 provides a register of all relevant environmental approvals, permits and licenses and the conditions required for compliance monitoring or auditing. The register will be maintained by CGU's Environmental and Sustainability Manager and will be reviewed prior to the commencement of the preliminary construction stage of the Project, and at regular intervals during any subsequent stages of construction (at least annually as part of the management review).

The environmental assessment recognised that the following approvals and licences are required for preliminary construction to commence:

- An Environment Protection Licence (EPL) for road construction; and
- Road Occupancy Licences (where/if required).

In accordance with CoA A2, all necessary licences, permits and approvals required for development of the Project will be obtained and maintained. No condition of the Project Approval removes the obligation to obtain, renew or comply with such necessary licences, permits or approvals except as provided under Section 5.23 of the EP&A Act.

3.3 Compliance tracking

The CoA and EMM that apply to the preliminary construction stage of the Project are listed in Appendix A1 and provide a reference to where each requirement is addressed by this CEMP or other Project documentation.

3.3.1 Environmental objectives and targets

As a means of assessing environmental performance during preliminary construction of the Project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of the requirements of the Project's CoA and EMM, and key issues identified through the environmental assessment and risk assessment process. The performance during preliminary construction of the Project will be monitored against the objectives and targets. The use of lead and lag indicators (Table 7 and Table 8) will be reported in the Project's monthly construction reports and as part of management reviews.

Table 7: Leading indicators

Key Performance Indicator	Target	When	How measured	Accountability
Environmental training	100% of scheduled training completed on time	Prior to relevant activities	Based on environmental risks and the qualifications and experience of the Project workforce	Support Services Director
Environmental management review of Work Packs	100%	Prior to activity commencement	WP sign-off Review register	Project Engineer
Completion of Environmental inspections	100%	Each month	Inspections of environmental controls are scheduled and completed	Environmental Manager

Table 8: Lagging Indicators

Key Performance Indicator	Target	Time Frame	How measured	Accountability
Level 1 & 2 environmental incidents	Zero	Ongoing	Incident reporting	Project Director / Support Services Director / Environmental Manager
Number of actions taken by regulators and/or client	Zero	At all times	Implementation of the CEMP	Project Director / Support Services Director / Environmental Manager
Area of land cleared or disturbed without authorisation	Zero ha	At all times	Implementation of the Fauna and Fauna Management Procedure	Environmental Manager
Number of unauthorised discharges	Zero	At all times	Implementation of Soil and Surface Water Management Procedure	Environmental Manager

Additional environmental objectives and targets for the Project are incorporated into relevant environmental documents and a summary is provided in Table 9. Additional aspect specific objectives are listed in relevant CEMP Sub-plans.

Table 9: Environmental objectives and targets

Objective	Target	Measurement tool
Construction of the Project in accordance with environmental approvals	<ul style="list-style-type: none"> Full compliance with statutory approvals 	<ul style="list-style-type: none"> Audits Construction compliance reporting Management reviews
Compliance with all legal requirements	<ul style="list-style-type: none"> No regulatory infringements (PINs or prosecutions) 	<ul style="list-style-type: none"> No formal regulatory warning Audits Construction compliance reporting Management reviews
Implement a rigorous and comprehensive EMS that meets the requirements of AS/NZS ISO 14001	<ul style="list-style-type: none"> Address non-conformances and corrective actions within specific timeframes 	<ul style="list-style-type: none"> Audits Management reviews
Continuously improve environmental performance	<ul style="list-style-type: none"> Develop and maintain a program of ongoing environmental training 	<ul style="list-style-type: none"> Construction compliance report Management review

Objective	Target	Measurement tool
	<ul style="list-style-type: none"> • Capture lessons learnt from environmental incidents to minimise repeat issues • Encourage and reward innovation and effort throughout the workforce 	
Ensure all environmental management measures are effectively implemented	<ul style="list-style-type: none"> • Nil non-conformances in relation to implementation of the CEMP and CEMP sub-plans 	<ul style="list-style-type: none"> • Results of external and internal audits and site inspections
Consultation – The project is developed with meaningful and effective engagement during project delivery	<ul style="list-style-type: none"> • Disseminate regular project updates and other information through the project website and other tools identified in the Communication Strategy • Record and respond to complaints in a timely and appropriate manner, and within the timeframe specified in the Communication Strategy. 	<ul style="list-style-type: none"> • Review complaints register • Construction compliance report • Audits
Socio-economics, land use and property - 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 use activities, dwellings and infrastructure	<ul style="list-style-type: none"> • Minimise impacts to businesses during construction 	<ul style="list-style-type: none"> • Review complaints register • Construction compliance report • Audits

3.3.2 Environmental Work Method Statement and Sensitive Area Plans

Environmental Work Method Statements (EWMS) will be prepared to manage and control all high-risk activities that have the potential to negatively impact on the environment. EWMS will be prepared for high risk activities including those outlined in the EIS and those identified through the Environmental Risk Assessment Workshop (refer Section 3.2.1). EWMS will be prepared prior to the commencement relevant construction activities and will incorporate relevant mitigation measures and controls. They will be specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

Based on the scope of preliminary construction, EWMS are not anticipated to be required during preliminary construction. However, if an EWMS is identified as being required it will be prepared progressively in the lead up to and throughout preliminary construction in consultation with relevant members from the Project team, and in consultation with the TfNSW Environmental Lead. EWMS for activities identified as having high environmental risk will undergo a period of consultation with

stakeholders (including the ER, IC and AA). In accordance with G36 Section 4.13, an EWMS will be submitted to TfNSW and the IC 5 days prior to works commencing within an Environmentally Sensitive Area for a Hold Point release.

To assist pre-construction planning and on-site management of preliminary construction activities, Sensitive Area Plans (SAPs) have been prepared and are included in Appendix A6. SAPs will be reviewed quarterly, or when there is a significant change in work activities.

3.3.3 Performance Outcomes

Performance Outcomes are addressed in the appropriate project Sub-plans and Procedures. Table 10 demonstrates where performance outcomes related to the CEMP/EMS are addressed.

Table 10: Performance outcomes

Performance Outcomes	Document Reference
<p>Environmental Impact Statement</p> <p>The project is described in sufficient detail to enable clear understanding that the project has been developed through an iterative process of impact identification and assessment and project refinement to avoid, minimise or offset impacts so that the project, on balance, has the least adverse environmental, social and economic impact, including its cumulative impacts.</p>	CEMP Sections 1.1 and 1.3
<p>Assessment of Key Issues</p> <p>Key issue impacts are assessed objectively and thoroughly to provide confidence that the project will be constructed and operated within acceptable levels of impact.</p> <p>Key issues include:</p>	CEMP Appendix A2
<ul style="list-style-type: none"> • Air Quality 	Air Quality and Odour CEMP Sub-plan
<ul style="list-style-type: none"> • Noise and Vibration – Amenity 	Noise and Vibration CEMP Sub-plan
<ul style="list-style-type: none"> • Noise and Vibration – Structural 	Noise and Vibration CEMP Sub-plan
<ul style="list-style-type: none"> • Biodiversity 	Flora and Fauna Management Procedure
<ul style="list-style-type: none"> • Socio-economic, Land Use and Property 	Communications Strategy
<ul style="list-style-type: none"> • Water Quality 	Soil and Surface Water Management Procedure
<ul style="list-style-type: none"> • Soils 	Soil and Surface Water Management Procedure, Contamination CEMP Sub-plan
<ul style="list-style-type: none"> • Waste 	Waste CEMP Sub-plan
<p>Consultation</p> <p>The project is developed with meaningful and effective engagement during project design delivery.</p> <p>The Construction Contractors will respond to complaints in a timely and appropriate manner so that stakeholders' concerns are managed effectively and promptly.</p>	CEMP Sections 2, 3.7.2 and 4

3.4 Resources, responsibilities and authority

Key environmental management roles and responsibilities for the preliminary construction phase of the Project are described in Table 11.

Table 11: Environmental resources and responsibilities

Role	Responsibilities
Environmental Representative (ER)	<p>The ER was engaged by TfNSW and CGU and has been approved by the Planning Secretary. The primary role of the ER is to independently oversee compliance with the Project Planning Approval and be the principal point of advice on the environmental performance of the works. The role and responsibilities of the ER are outlined in CoA A22 – A27. In accordance with CoA A26, roles and responsibilities of the ER include but are not limited to the following:</p> <ul style="list-style-type: none"> • Receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI • Consider and inform the Planning Secretary on matters specified in the terms of the approval • Consider and recommend to the Contractor and/or Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community • Review documents identified in Condition A17, C1, C4 and C13 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so: Make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or Make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary / Department for information or are not required to be submitted to the Planning Secretary/Department) • Regularly monitor the implementation of the documents listed in Condition A17, C1, C4 and C13 to ensure implementation is being carried out in accordance with the document and the terms of this approval • As may be requested by the Planning 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 A37 • As may be requested by the Planning Secretary, assist in the resolution of community complaints • Consider or assess the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities as required by Condition A19 of this approval • Consider any minor amendments to be made to the CEMP, CEMP Sub-plans and monitoring programs without increasing impacts to nearby receivers or 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 Planning Secretary

Role	Responsibilities
	<p>and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval</p> <ul style="list-style-type: none"> • Prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report in accordance with CoA A26(j) • Assess the impacts of activities as required by the Low Impact Works definition • Generally fulfil all requirements under CoA A26.
Acoustics Advisor (AA)	<p>The independent AA was engaged by TfNSW with a deed accession to CGU, and the appointment was been approved by the Planning Secretary. The primary role of the AA is to independently oversee construction noise and vibration planning, management and mitigation in accordance with the Project Planning Approval. The responsibilities of the Acoustics Advisor are outlined in Conditions A28 – A31. The role and responsibilities include the following:</p> <ul style="list-style-type: none"> • (receive and respond to communication from the Planning Secretary in relation to the performance of the CSSI in relation to noise and vibration; • consider and inform the Planning Secretary on matters specified in the terms of this approval relating to noise and vibration; • consider and recommend, to the Proponent, improvements that may be made to avoid or minimise adverse noise and vibration impacts; • 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 Planning Secretary (if required to be submitted to the Planning Secretary) or before implementation (if not required to be submitted to the Planning Secretary); • 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) in conjunction with the ER, the AA must: <ul style="list-style-type: none"> • (i) as may be requested by the Planning Secretary or Community Complaints Mediator (required by Condition B11), 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 required under Condition B1 to attempt to resolve the conflict, and if it cannot be resolved, notify the Planning Secretary, • (iii) consider relevant minor amendments made to the CEMP, relevant CEMP 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 Planning Secretary and, if satisfied

Role	Responsibilities
	<p>such amendment is necessary, endorse the amendment, (this does not include any modifications to the terms of this approval),</p> <ul style="list-style-type: none"> • (iv) review the noise impacts of minor construction ancillary facilities, and • (v) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, a Monthly Noise and Vibration Report detailing the AA's 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 approved by the Planning Secretary. • Generally fulfil all other requirements in accordance with CoA A28 – A31.
TfNSW Environmental Lead	<p>The responsibilities of the TfNSW Environmental Lead include, but are not limited to:</p> <ul style="list-style-type: none"> • Review any environmental management plans and related documents prepared for the project • Review and consider minor project refinements that are consistent with the project environmental assessment • Monitor the environmental performance of the project in relation to the Approval, CEMP and associated sub-plans and procedures and TfNSW requirements • Liaise with the ER, AA and other government authorities as required • Approve all project documents prepared by the contractor for submission to DPIE • Assess compliance with the approval and other statutory instruments and conformance with the CEMP and CEMP Sub-plans
CGU Project Director	<p>The environmental responsibilities of the CGU Project Director include, but are not limited to:</p> <ul style="list-style-type: none"> • Be an emergency contact and available to be contacted by EPA and TFNSW Representative on a 24 hour basis • Endorse and support the project's Environmental Policy and this CEMP • Provide environmental leadership and ensure adequate resources are provided to effectively implement this construction environmental management plan • Liaise with ER as required
CGU Support Services Director	<p>The environmental responsibilities of the CGU Support Services Director include, but are not limited to:</p> <ul style="list-style-type: none"> • Provide environmental oversight, direction and leadership regarding the environmental management of the project • Liaise with ER as required
CGU Environmental and Sustainability Manager	<p>The environmental responsibilities of the CGU Environmental and Sustainability Manager include, but are not limited to:</p> <ul style="list-style-type: none"> • Be an emergency contact and available to be contacted by EPA and TfNSW Environmental Lead on a 24-hour basis

Role	Responsibilities
	<ul style="list-style-type: none"> • Notify TfNSW, ER, AA and agencies as required in response to environmental incidents and potential incidents • Act as the main point of contact for the ER, AA, TfNSW Environmental Lead and approval authorities • Identify and maintain a register of relevant legal, CGU EMS requirements and other requirements • Obtain all necessary approvals prior to commencing relevant works • Advise TfNSW of any amendments to CEMS or CEMP • Ensure the project induction includes appropriate training regarding the requirements of this CEMP • Ensure identified risks are analysed and evaluated according to agreed criteria • Regularly review identified risks and controls and maintain a risk register • 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 • Review subcontractors' performance and compliance with CGU environmental requirements • Enter and close out all incidents in the HSE Reporting System (Synergy) • Identify and implement corrective and preventative actions after incidents and share lessons learned within the CGU team or other projects, as applicable • Provide input to the monthly project progress report
CGU Environment Advisors	<p>The environmental responsibilities of the CGU Environment Advisors include, but are not limited to:</p> <ul style="list-style-type: none"> • Assist the Environmental and Sustainability Manager to implement, maintain and review this CEMP and associated documents • Act as the first source of environmental advice and information for the CGU design and construction teams • Conduct regular inspections and monitoring in accordance with this CEMP and sub-plans • Respond to incidents and manage investigations as directed by the Environment, Approvals and Sustainability Manager • Assist in the development and/or delivery of environmental training and awareness, e.g. project inductions, toolbox talks, pre-start, etc. • Undertake inspections, observations, monitoring and audits as required • Maintain regular communication with the Environment and Sustainability Manager regarding environmental performance and conformance • Liaise with ER as required

Role	Responsibilities
CGU Design Director	<p>The environmental responsibilities of the CGU Design Manager include, but are not limited to:</p> <ul style="list-style-type: none"> • Ensure work is planned and executed to ensure compliance with environmental requirements • Define and implement processes to identify environmental risks at all stages of the Project • Ensure environmental controls appropriate to the level of risk are identified, documented and implemented • Identify design changes that have potential environmental and consistency consequences and ensure environmental risks associated with identified changes are assessed and controlled • Liaise with ER as required
CGU Construction Directors	<p>The environmental responsibilities of the CGU Construction Directors include, but are not limited to:</p> <ul style="list-style-type: none"> • Manage the delivery of the construction process • Ensure work is planned and executed to maintain compliance with environmental requirements • Liaise with ER as required
CGU Construction Managers	<p>The environmental responsibilities of the CGU Construction Managers include, but are not limited to:</p> <ul style="list-style-type: none"> • Ensure work is planned and executed to ensure compliance with environmental requirements • Liaise with ER as required
CGU Engineers	<p>The environmental responsibilities of CGU Engineers include, but are not limited to:</p> <ul style="list-style-type: none"> • Ensure appropriate mitigation and management measures are implemented and maintained on site • Implement corrective or preventative actions as required to fulfil the requirements of this plan Liaise with ER as required
CGU Supervisors	<p>The environmental responsibilities of the CGU Supervisors include, but are not limited to:</p> <ul style="list-style-type: none"> • Ensure appropriate mitigation and management measures are implemented and maintained on site • Ensure regular inspections and monitoring requirements are undertaken to check effectiveness of environmental controls • Report environmental incidents and complaints immediately • Liaise with ER as required
CGU Spoil Manager	<p>The environmental responsibilities of the CGU Spoil Manager include, but are not limited to:</p> <ul style="list-style-type: none"> • Identify and assess spoil reuse opportunities in consultation with the Environmental and Sustainability Manager

Role	Responsibilities
	<ul style="list-style-type: none"> • Ensure compliance with designated haul routes and for the day-to-day operation of the spoil management task in conjunction with the Traffic and Transport Manager • Reporting on spoil disposal and reuse • Manage review and continual improvement of the Spoil Management Plan • Liaise with ER as required
CGU Community and Stakeholder Manager	<p>The environmental responsibilities of the CGU Community and Stakeholder Manager include, but are not limited to:</p> <ul style="list-style-type: none"> • Ensure environmental complaints and enquiries regarding construction works are recorded and responded to appropriately • Effectively manage relationships with external stakeholders and ensure stakeholders are informed of upcoming works • Liaise with ER as required
Independent Certifier	<p>The environmental responsibilities of the Independent Certifier include, but are not limited to:</p> <ul style="list-style-type: none"> • Receive a copy of this CEMP and provide requirements and recommendations where applicable on the CEMP and associated documents (D&C Deed) • Liaise with ER as required
Project team (including sub-contractors)	<p>The environmental responsibilities of the wider project team (including sub-contractors) include (but are not limited to) the following:</p> <ul style="list-style-type: none"> • Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the Project's management • Participate in all mandatory Project/site training, including induction program • Report any environmental incidents to the supervisor 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 • Liaise with ER as required • Stop activities where there is an actual or immediate risk of harm to the environment and immediately advise the Supervisor, Construction Manager, Construction Director or Construction Environmental Manager

Role	Responsibilities
Utility Coordination Manager	<p>The environmental responsibilities of the Utility Coordination Manager comprise:</p> <ul style="list-style-type: none"> • 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 Conditions E69 and E71 • Investigating complaints received from the Community Complaints Mediator relating to utility works • Providing a response to the Community Complaints Mediator

3.5 Selection and management of subcontractors

The Environmental and Sustainability Manager, or delegate, will participate in the tender assessment and selection process where it is deemed necessary due to associated environmental risks. CGU will be responsible for the environmental performance of the sub-contractor. CGU will specify environmental requirements and responsibilities to sub-contractors in the contract documentation.

All sub-contractors are required to work in accordance with the approved CEMP. All sub-contractors are required to attend Project and/or site inductions where the requirements and obligations of the CEMP are communicated. A record of all sub-contractors inducted will be maintained as part of the Project induction and training register. A standard monitoring form will be developed that will be used to assess:

- Sub-contractors' general work practices;
- Effectiveness of the sub-contractor's environmental protection measures;
- Sub-contractor's compliance with the requirements of this CEMP; and
- Maintenance of environmental measures.

All environmental documentation submitted by contractors will be subject to review and approval by CGU staff to ensure compliance with TfNSW contract requirements, the CoA and EPL before works may begin. Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation. As part of the selection process, consideration will also be given to their past environmental performance.

3.6 Competence, training and awareness

To ensure that this CEMP is effectively implemented during preliminary construction, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The Environmental and Sustainability Manager and HR Manager will coordinate environmental training in conjunction with other training and development activities.

3.6.1 Environmental induction

All personnel (including subcontractors) are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site to ensure all personnel are aware of the requirements of the CEMP, Planning Approval, EPL and the implementation of these requirements.

Visitors to site for purposes such as deliveries and undertaking inspections will be required to be accompanied by inducted personnel at all times. The environmental component of the induction must cover all elements of the CEMP and would include as a minimum:

- Requirements of due diligence and duty of care;

- Environmental and compliance obligations under the terms of the approval, EPL and other statutory instruments;
- Potential environmental emergencies on site and the emergency response procedures;
- Reporting and notification requirements for pollution and other environmental incidents;
- High risk activities and associated environmental safeguards;
- The existence of EWMS for high risk activities, including working in or near environmentally sensitive areas;
- Requirements of the Driver's Code of Conduct; and
- Information about the community the project is working in and what to do when approached by a member of the public or media.

A record of all environment inductions will be maintained. The Environmental and Sustainability Manager may authorise amendments to the induction at any time.

3.6.2 Toolbox talks, training and awareness

Toolbox talks are used to raise environmental awareness throughout construction and educate personnel on environmental issues. They will be tailored to specific environmental issues relevant to upcoming works, including details of EWMSs for relevant personnel.

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 also provided to workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact.

Awareness of environmental issues will also be communicated through posters, booklets, or similar and will be used to inform the broader workforce through either daily pre-starts meeting (refer to Section 3.2.1) or provision in worker crib sheds / break facilities.

3.6.3 Daily Pre-Start Meetings

The pre-start meeting is a used to inform the workforce of the day's activities, environmental protection practices, work area restrictions, coordination issues with other trades, hazards and other information that may be relevant to the day's work.

The Supervisor 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.

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

3.6.4 Working hours

In accordance with CoA E62 and E63 works included within the scope of preliminary construction are permitted during the following standard hours:

- 7:00am to 6:00pm Mondays to Fridays, inclusive;
- 8:00am to 6:00pm Saturdays; and
- at no time on Sundays or public holidays.

Except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable Noise Management Level (NML) at the same receiver must only be undertaken:

- Between the hours of 8:00 am to 6:00 pm Monday to Friday;
- Between the hours of 8:00 am to 1:00 pm Saturday; and
- If continuously blocks not exceeding three (3) hours each with a minimum respite from those activities or works of not less than one (1) hour.

In accordance with CoA E65 'continuously' includes any period during which there is less than one hour between ceasing and recommencing works.

Work may be undertaken outside the hours specified in specific circumstances. In all cases of works outside of the Standard Working Hours specified above, the Noise and Vibration preliminary Sub-plan and CNVIA must be followed, including the implementation of the OOHW permit system. Circumstances where OOHW may be considered include:

- For delivery of materials required by the NSW Police Force or other authority for safety reasons; or
- Where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or
- Where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or
- Works which are not subject to an EPL that are approved under an Out-of-Hours Work Protocol required by Condition E70; or
- Construction that causes LAeq(15 minute) noise levels:
 - No more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009); and
 - No more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses; and
 - Continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of Assessing Vibration: a technical guideline (DEC, 2006); and
 - Intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of Assessing Vibration: a technical guideline (DEC, 2006).

Any Out-of-Hours works that are regulated by the EPL will be conducted in accordance with the conditions of the EPL and CoA E68 and E69. Out of hours works will only be conducted in accordance with E70 if an EPL is not applicable to the works.

At the time of preparing this CEMP, the *Environmental Planning and Assessment (COVID-19 Development – Infrastructure Construction Work Days) Order 2020* is in effect. Under that order, the carrying out of work on a Saturday, Sunday or public holiday is permitted, noting that infrastructure construction projects:

- Must be the subject of an approval granted before the commencement of this Order; and
- Must comply with all conditions of the approval other than any condition that restricts the hours of work or operation on a Saturday, Sunday or public holiday; and
- For work or operation on a Saturday, Sunday or public holiday:
 - Comply with the conditions of the approval that restrict the hours of work or operation on any other day as if the conditions applied to work or operation on a Saturday, Sunday or public holiday; and

- Not involve the carrying out of rock breaking, rock hammering, sheet piling, pile driving or similar activities during the hours of work or operation that would not be permitted but for this Order; and
- Take all feasible and reasonable measures to minimise noise.

The above changes to construction work hours are only applicable while the *Environmental Planning and Assessment (COVID-19 Development – Infrastructure Construction Work Days) Order 2020* is in effect (until 24 December 2021). If this order ceases to have effect, construction hours would revert back to those specified in Conditions E62, E63, E64 and E65.

3.7 Communication

Regular meetings will be scheduled with the ER, AA, and relevant TfNSW and CGU personnel to communicate ongoing environmental performance and to identify and address any issues. A Communication Strategy (M6S1-CGU-NWW-CYCG-MPL-000900) has been prepared and provides details on the mechanisms to facilitate communication between project parties, stakeholders and the community in accordance with the CoA B1.

3.7.1 Liaison with EPA, government authorities or other relevant stakeholders

The Environmental and Sustainability Manager will report the ongoing environmental performance of the preliminary construction of the Project to TfNSW, the ER, AA and relevant government agencies. Relevant government agencies will be consulted throughout preliminary construction in accordance with the Communication Strategy.

The CGU Project Director and the Environmental and Sustainability Manager are the key emergency response personnel during an environmental site emergency. The CGU Project Director and Environmental and Sustainability Manager are the authorised contact person for communications with TfNSW, ER, AA, DPIE and the EPA on environmental matters.

TfNSW will be notified regarding site inspections from environmental regulators and will be provided with a written notice following one working day of the visit.

3.7.2 Community liaison and/or notification

Consultation and engagement with the community will be in accordance with the Communication Strategy. Community liaison officers will be available at all times that works occur and will be available to assist the public with questions and complaints they may have in accordance with the Complaints Management System as specified under CoA B6.

Key stakeholders and the community will be consulted during the preliminary construction stage in accordance with the Communication Strategy. Regular meetings will be held to discuss environmental performance, upcoming works, and any planned high-risk activities.

3.7.3 Complaints management

A Complaints Management System has been developed for the project, in accordance with CoA B6 to B14. The Communications Strategy contains further detail on the Complaints Management System, the complaints register and the Community Complaints Mediator.

A toll free number is available to the community to make a complaint: **1800 789 297**

The Environmental and Sustainability Manager will apply an adaptive approach to ensure that corrective actions are applied in consultation with the appropriate construction staff to allow modifications and improvements to work methods in the management of any environmental issues resulting in community complaints. The Environmental and Sustainability Manager will also manage compliance with complaint management conditions associated with the EPL.

3.8 Emergency and Incident Planning

An environmental incident is an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. This may be as a consequence of which pollution (air, water, noise, and land) or an adverse environmental impact has occurred, is occurring, or is likely to occur.

Adverse environmental impact includes contamination, harm to flora and fauna (either individual species or communities), damage to heritage items and adverse community impacts. The management and reporting of an environmental incident, including pollution incidents will follow the TfNSW Environmental Incident Procedure, refer to Appendix A7. This document sets out the procedure to be followed if, during any activity being carried out on or no behalf of TfNSW, there is:

- A report only event;
- A non-compliance event;
- Regulatory action received; and/or
- An environmental incident.

The requirements of the procedure must be communicated to all project personnel and contractors (e.g. during inductions) who undertake work activities associated with the Project Environmental incidents must be classified as per Table 12.

Table 12: TfNSW environmental incident classification

C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
			<i>Significant Incident</i>		
No appreciable changes to environment	Change from existing conditions that can be rectified immediately (<1 day) with available resources.	Short-term (<1 year) and/or well-contained environmental impact. Minor remedial actions probably required.	Short to medium term (between 1 and <5 years) environmental impact. Considerable remedial actions probably required.	Medium-term (>5 years) environmental impact. Extensive remedial actions probably required.	Long-term (>10 years) large-scale environmental impact. Extensive and ongoing remedial actions probably required.

Note: This table has been modified to show only classification by environmental impact. Incident classification categories related to risk areas, reputation and integrity, and regulations and compliance, have been excluded from this table for the purposes of this CEMP, but will still be applied in accordance with Appendix A7.

Environmental incidents that have the potential to be classified as significant incidents (C3, C2 or C1) as per Table 12 will be notified immediately (verbally) to the TfNSW Environmental Lead and relevant regulatory authorities as per Section 3.2 of the procedure located in Appendix A7. Incident reports will be provided to TfNSW Environment Lead and the Environmental Representative in accordance with the procedure, including lessons learnt from each environmental incident and proposed measures to prevent the re-occurrence of a similar incident. All reasonable efforts will be implemented to avoid and reduce impacts of incidents, with suitable controls enacted. Incidents will be closed out as quickly as possible, taking required action to resolve each environmental incident.

This notification process is in addition to other regulatory incident reporting requirements including CoA A39 and A40; requiring immediate written notification to be made to DPIE (compliance@planning.nsw.gov.au) after becoming aware of an incident. The notification must identify the CSSI (including the application number and the name of the CSSI if it has one), and set out the time, date, location and nature of the incident. It must also describe any consequent non-

compliance with this approval (SSI 8931). In accordance with CoA A40, subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix A of the Infrastructure Approval which requires a report to be provided within 7 days, and a more detailed report to be provided within 30 days.

Environmental incidents that are classified as C6, C5 or C4 (as per Table 12) will be notified to the TfNSW Environmental Lead on the day of the incident as per Section 3.2 of the procedure. Other relevant regulatory agencies will be notified as required by CoA A39 and A40, and an incident report will also be prepared and submitted to the TfNSW Environmental Lead within 3 business days of the incident.

The EPA will be notified of any pollution incidents on (or around) the site within 24-hours of the pollution incident occurring. Notification will be completed 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; or
- 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).

In accordance with the requirements of the EPL for the works, a Pollution Incident Response Management Plan (PIRMP) will be prepared and implemented. CGU will provide all records of environmental incidents and regulatory action to the TfNSW Environmental Lead.

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

3.9 Monitoring, inspections and auditing

3.9.1 Environmental inspections

Weekly and post rainfall site inspections

The Environmental and Sustainability Manager (or delegate) will undertake weekly and post rainfall inspections (as per Soil and Surface Water Management Procedure requirements) of work sites during preliminary construction to evaluate the effectiveness of environmental controls using an inspection checklist form.

Any required maintenance and/or deficiencies in environmental controls will be recorded on the checklist, including any actions required following an implementation priority. Actions will be closed out in accordance with the identified priority and evidence of close out would be kept on file.

ER and TfNSW inspections

The ER and TfNSW staff will undertake regular inspections of works sites, in particular critical activities, throughout the preliminary construction stage. Inspections by the ER and TfNSW project staff would occur on a fortnightly basis depending on the complexity and anticipated risks associated with the works. A member of the CGU environment team will participate in all ER and TfNSW inspections.

Deficiencies and required actions will be analysed and prioritised at the completion of the inspection and timeframes for implementation of corrective actions agreed.

Daily inspections

A daily inspection will be carried out by the supervisor of each work area and will include a check of relevant environmental controls and resources required to ensure effective operation and maintenance.

3.9.2 Environmental monitoring

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. Environmental monitoring required for the preliminary construction stage of the project is detailed in the Air Quality and Odour CEMP Sub-plan and associated Air Quality Monitoring Program and the Noise and Vibration Preliminary Sub-plan and CNVIA for commencement activities. Where a non-conformance is detected or monitoring results are outside of the expected range the process described in Section 3.10 will be implemented.

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

3.9.3 Auditing

All Project activities will be assessed for compliance in accordance with CGU's Environmental Management System (based upon CPB Contractors Environmental Management System).

Independent Audits will be conducted to provide an independent and objective assessment of the environmental performance and compliance status of the Project. Independent audits will be undertaken in accordance with the DPIE letter advice dated 10 June 2020 and DPIE Independent Audit Post-Approval Requirements May 2020 (PAR 2020). Proposed independent auditors will be agreed to in writing by the Planning Secretary prior to the commencement of an Independent Audit. The commencement of the independent audit program will coincide with the commencement of Stage 2 Construction, with all other compliance monitoring commencing from the start of Stage 1 preliminary construction and continuing through both construction stages.

Internal parent company auditing will also be undertaken on an annual basis over the duration of the Project.

The purpose of auditing is to verify compliance with:

- This CEMP and CEMP Sub-plans;
- Approval requirements (CoA, EMM); and
- Any relevant legal and other requirements (e.g. licences, permits, regulations, TfNSW contract documentation including G36, G38 and G40 specifications).

Auditing requirements on the Project are summarised in Table 13.

Table 13: Audit requirements

No.	Audit	Requirement	Timing	Responsibility
1	Independent audit (CoA A37)	Verify compliance with approval and legal requirements, TfNSW specifications, construction documentation and any other commitments	Independent Audits will commence 12 weeks after Stage 2: Construction then at six monthly intervals there-after.	Environmental and Sustainability Manager
2	Internal audit	Verify compliance with approval and legal requirements, TfNSW specifications and construction documentation	Annually	Environmental and Sustainability Manager

3.9.4 Construction Phase Compliance tracking

CGU has elected to implement the PAR 2020 (as detailed in Section 3.9.3) on the Project in line with DPIE letter advice dated 10 June 2020. The PAR 2020 has removed the requirement for construction reporting, which was mandated under the DPIE Compliance Reporting Post Approval Requirements 2018 and CoA A35. CGU will carry out a compliance monitoring and reporting program in accordance with CoA C13 and will continue to monitor compliance against the Legal and Compliance Tracking Register located in Appendix A1.

In accordance with CoA A34 the construction compliance report must provide details of any review of, and minor amendments made to, the CEMP (which must be approved by the ER), resulting from construction carried out during the reporting period.

3.9.5 Other reporting

Prior to, during and following the preliminary construction stage, various reports will be prepared to fulfil TfNSW's reporting needs, and requirements under the Project approval. Table 14 details reporting requirements applicable to the preliminary construction stage of the Project, timing of the reporting, and who is responsible for managing preparation of the reports.

Table 14: Reporting requirements

No.	Report	Requirement	Timing	Responsibility
1	Monthly environmental report	For incorporation in Project Monthly Reports including environmental statistics (i.e. incidents, regulatory action, complaints on environmental issues), regulatory and authority considerations, monitoring program performance and key environmental issues.	Monthly	Environmental and Sustainability Manager
2	EPL monthly report	Pollution monitoring data as required by section 66(6) of the POEO Act.	Monthly	Environmental and Sustainability Manager
3	EPL annual returns	Report on compliance with EPL.	Annually	Environmental and Sustainability Manager
4	ER monthly report	Report of including information required by CoA A26.	Monthly	Environmental Representative
5	Environmental risk assessment	Conducted for each construction stage, Project changes and significant issues.	Prior to construction during development of CEMP and as required thereafter	Environmental and Sustainability Manager
6	Monitoring results	Report on monitoring data as required for CEMP Sub-plans and Monitoring Programs.	As required	Environmental and Sustainability Manager
7	Monthly Noise and Vibration Report	Report on noise and vibration monitoring data as required by CoA A31.	Monthly	Environmental and Sustainability Manager

3.10 Environmental non-conformities

3.10.1 Non-compliance

An environmental non-compliance is a breach with any condition of approval, licence condition or any other statutory approval relevant to the activity and/or area where the activity occurs. Potential and actual non-compliances will be classified and reported in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure (Appendix A7). DPIE will be notified in an environmental non-compliance as described above occurs.

The ER will also report environmental non-compliances within the ER Monthly Report.

3.10.2 Non-conformance

An environmental non-conformance is failure to conform with EMS documentation including this CEMP and supporting documentation. Any member of the project team, ER, AA, public authority or TfNSW may raise a non-conformance or improvement opportunity. The Quality Management Plan describes the process for managing non-conforming work practices and initiating corrective, preventative actions or system improvements.

In the event of a non-conformance the contributing factors of the failure will be investigated to determine the source. If it is determined the source of the non-compliance is outside CGU's control the contributor will be notified.

For each non-conformance identified, suitable corrective or preventative action (or actions) must be identified and implemented to rectify the non-conformance and prevent reoccurrence. In addition, any environmental management improvement opportunities can be initiated as a result of incidents or emergencies, monitoring and measurement, audit findings or other reviews. Improvement opportunities may also result in the implementation of corrective/preventative actions.

Corrective/preventative actions and improvement opportunities will be entered into the contractor's quality system database and include detail of the issue, action required and timing and responsibilities. The record will be updated with date of close out and any necessary notes. The database will be reviewed regularly to ensure actions are closed out as required.

Non-conforming activities may be stopped, if necessary, by the Environmental and Sustainability Manager, Environmental Advisors or Project / Site Engineers following consultation with the Construction Manager (or delegate). The works will not commence until a corrective / preventative action has been closed out. The Environmental Representative may also stop works in these circumstances. In such circumstances a non-conformance report must be prepared in accordance with the Quality Management Plan.

In accordance with CoA A40, all non-conformance reporting against the CEMP or Sub-plans must comply with the requirements provided in Appendix A of the Infrastructure Approval.

3.11 Records of environmental activities

3.11.1 Environmental records

The Environmental and Sustainability Manager is responsible for maintaining all environmental management documents and records including:

- Monitoring, inspection and compliance reports/records;
- Correspondence with public authorities;
- Induction and training records;
- Regulatory licences and permits;

- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action;
- Minutes of review meetings and evidence of any action taken;
- CEMP, CEMP Sub-plans and procedures;
- EWMS; and
- Any relevant reports submitted to the regulatory authorities or government agencies.

All environmental management documents are subject to ongoing review and continual improvement. This includes times of change to scheduled activities or to legislative or licencing requirements.

3.12 Management review

Management reviews will be undertaken as part of the continual improvement process. Management reviews will include:

- A review of the aspects and impacts register, legal register and environmental induction;
- A review of the environmental risk assessment;
- Analysis of the causes of non-conformances and deficiencies, including those identified in environmental inspections;
- Consideration of incidents and lessons learnt;
- A review of the effectiveness of environmental controls;
- Effectiveness of environmental management documentation implementation;
- Potential improvements to the environmental management documentation;
- Adequacy of resources and organisation changes;
- Compliance with legal and other requirements and consideration of new issues; and
- Effectiveness of training and inductions.

Where the change identified as necessary to avoid non-compliance or significant environmental risks, the amendments will be prioritised to be undertaken as soon as possible. A project risk register, incorporating relevant environment risks, will also be maintained to ensure that key environmental risks are documented.

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

3.13.1 CEMP Revision

Continual improvement is achieved through constant measurement and evaluation, and audit and review of the effectiveness of this CEMP and associated Sub-plans and Procedures. Should document review processes identify issues or items within the documents that are either redundant or in need of updating, the Environmental and Sustainability Manager will prepare changes to the revised documents.

The revised document will then be issued to the TfNSW and to the ER or DPIE to review and approve changes. Where changes are minor they may be approved by the ER. Minor changes would typically include those that:

- Are administrative in nature (e.g. staff and agency/authority name changes);
- Are consistent with the CoA;

- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively;
- Are in response to audit findings or periodic reviews;
- Are in response to the approval of a consistency assessment or a modification to the project Planning Approval; and
- Do not comprise the ability of the project to meet approval or legislative requirements.

Where the ER deems that a change is not minor it will be provided to the Secretary of DPIE for review and approval (following endorsement by the ER).

3.13.2 Changes to the Project

Refinements to the project may result from detailed design or changed circumstances during construction. The Environmental and Sustainability Manager will undertake an assessment and consistency assessment in consultation with TfNSW to determine if a project modification may be required.

Should the consistency assessment determine that a project modification may be required, the ER will be informed and modification application under Section 5.25 of the EP&A Act prepared and lodged by TfNSW to the Planning Secretary for determination.

Following the approval of consistency assessments and/or project modifications this CEMP, the CEMP Sub-plans and Procedures will be reviewed to assess if an update is required. Where the plan requires revision the process in Section 3.13 would be followed.

3.14 Directions from DPIE

All written requirements or directions received from DPIE shall be complied with at all times (CoA A4), including in relation to:

- The environmental performance of the CSSI;
- Any document or correspondence in relation to the CSSI;
- Any independent appointment or dismissal made in relation to the CSSI;
- Any notification given to the Secretary under the terms of this approval;
- Any audit of the construction or operation of the CSSI;
- The terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval);
- The carrying out of any additional monitoring or mitigation measures; and
- In respect of ongoing monitoring and management obligations, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under this approval.

4 Construction control

A number of CEMP Sub-plans and Procedures support this CEMP. These documents were prepared identifying requirements and processes applicable to specific aspects and impacts of the activities described in CSSI assessment documentation. They address requirements of the CoA, EMM and other measures identified in the environment assessment documentation as they relate to the preliminary construction stage of the Project. References to the relevant CEMP Sub-plans and Procedures are provided in the sections below.

The Project's Staging Report (M6S1-CGU-NWW-ENPE-PLN-000401) documents the required Project-wide environmental documentation to be prepared for construction stages and the timing required for submission where required. A list of CEMP Sub-plans required for the preliminary construction stage of the Project and their approval requirements, are provided in Table 15.

Table 15: CEMP Sub-plans and Monitoring Programs for the preliminary construction stage.

Document name	Document number	Consultation and approval requirements
Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA for preliminary construction including commencement activities	M6S1-CGU-NWW-ENNV-PLN-000403	Consultation with NSW Health, Bayside Council and Sydney Water. Endorsement by ER and AA Approval by DPIE
Appendix B7 Air Quality and Odour CEMP Sub-plan	M6S1-CGU-NWW-ENPE-PLN-000407	Consultation with NSW Health, Bayside Council, Georges River Council and Canterbury Bankstown Council Endorsement by ER Approval by DPIE
Appendix B7 Air Quality Monitoring Program	M6S1-CGU-NWW-ENPE-PLN-000408	Consultation with EPA Endorsement by ER Approval by DPIE
Appendix B8 Contamination CEMP Sub-plan	M6S1-CGU-NWW-ENPE-PLN-000413	Consultation with Bayside Council, Georges River Council and Canterbury/Bankstown Council Endorsement by ER Approval by DPIE
Appendix B9 Waste CEMP Sub-plan	M6S1-CGU-NWW-ENPE-PLN-000414	Consultation with Bayside Council, Georges River Council and Canterbury/Bankstown Council Endorsement by ER Approval by DPIE

Where a separate CEMP Sub-plan is not required for the preliminary stage of the Project, information regarding environmental management and control of specific areas are outlined in the sections below.

4.1 Soil and Surface Water Management

A Soil and Surface Water Management Procedure (Appendix B4) was developed to manage the soil and surface water risks for the preliminary construction stage of the Project. This Procedure describes effective management, monitoring and event response procedures which will be implemented to mitigate soil and surface water impacts associated with preliminary construction (including commencement activities). The Soil and Surface Water Management Procedure includes the following set of procedures for:

- Erosion and sediment control;
- Stockpile management;
- Construction site dewatering and water reuse; and
- Spill prevention and response.

Preliminary construction including commencement activities will be managed to minimise dewatering requirements at C2 and C3 (as detailed in Water Reuse and Discharge Management Procedure) and no dewatering activities are anticipated to occur at these construction ancillary facilities. It is noted that the existing construction water treatment plant at the C1 Arncliffe construction ancillary facility will continue to operate in accordance with existing M8 requirements. Operation of the water treatment plant following handover from the M8 contractor will be subject to operating procedures and the project's EPL.

No works within waterways will occur during the preliminary construction stage, and there are no sediment basins required for the Project. Pre-construction monitoring of waterways within the Project location will continue (as per the EIS monitoring) throughout the preliminary construction stage.

4.2 Flora and Fauna Management

A Fauna and Flora Management Procedure (Appendix B2) has been developed to manage the risks related to flora and fauna during the preliminary construction stage of the Project. The Procedure includes:

- Clearing and Grubbing Procedure for minor tree clearing at locations C2 and C3;
- Fauna Handling Procedure in case fauna is encountered;
- Weed Management Procedure; and
- Green and Golden Bell Frog Stop Works Procedure (specific to C1).

Occupation of the Arncliffe construction ancillary facility (C1) triggers the requirement to implement the Green and Golden Bell Frog Plan of Management (GGBF PoM) in accordance with CoA E44. In conjunction with the GGBF PoM, a stop work Procedure has also been developed in the unlikely event a GGBF is encountered during the CEMP activities.

4.3 Heritage Management

A Heritage Management Plan has been developed which includes the TfNSW Unexpected Finds Procedure and a procedure for the unexpected find of human remains. This document is available at <https://caportal.com.au/rms/m6/documents>.

4.4 Site Establishment Management Plan

A Site Establishment Management Plan (SEMP) has been prepared (Appendix A4) that details the ancillary facilities that will be established during preliminary construction and commencement activities. The Site Establishment Management Plan (Appendix A4) includes:

- The location of ancillary facilities;
- A map of ancillary facilities;
- Requirements for the management of the ancillary facilities such as fencing, bunded storage, environmental controls etc.; and
- Processes which need to be undertaken if changes to the SEMF are required.

4.5 Traffic and Access Management

A Traffic and Access Management Procedure (Appendix B1) has been developed to manage the risks related to traffic and access during preliminary construction and commencement activities. CEMP activities also trigger the requirement for the Construction Access and Parking Strategy (CoA E130).

List of Appendices

Appendix A1 – Legal and Compliance Tracking

Appendix A2 – Aspect and Impacts Register

Appendix A3 – Environmental Policy

Appendix A4 – Site Establishment Management Plan

Appendix A5 – Document register

Appendix A6 – Sensitive Area Plans

Appendix A7 – TfNSW Environmental Incident Procedure

Appendix B1 – Traffic and Access Management Procedure

Appendix B2 – Flora and Fauna Management Procedure

Appendix B3 – Noise and Vibration Sub-plan and CNVIA for preliminary construction including commencement activities

Appendix B4 – Soil and Surface Water Management Procedure

Appendix B5 – Groundwater CEMP Sub-plan

Appendix B6 – Not used

Appendix B7 – Air Quality and Odour CEMP Sub-plan and Air Quality Monitoring Program

Appendix B8 – Contamination CEMP Sub-plan

Appendix B9 – Waste CEMP Sub-plan

Appendix B10 – Leachate and Landfill Gas CEMP Sub-plan

* Greyed out plans are not applicable to this CEMP for preliminary construction including commencement activities. These plans will be developed with the CEMP for the Construction Stage.



Appendix A1

Legal Requirements and Compliance Tracking Register

M6 Stage 1: Preliminary construction including commencement activities

November 2021

Minister's Conditions of Approval and Environmental Management Measures

Table 1: Minister's Conditions of Approval

CoA	Condition Requirements	Document Reference
General		
A1	The CSSI must be carried out in accordance with the terms of this approval and generally in accordance with the description of the CSSI in the EIS, the Response to Submissions on the EIS, the PIR and Response to Submissions on the PIR.	This CEMP
A2	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance outcomes and mitigation measures set out in the documents identified in Condition A1 unless otherwise specified in, or required under, this approval.	This CEMP and Section 3.3.3
A3	In the event of an inconsistency between the EIS, as amended by the description in the Response to Submissions and PIR, or any other document required under this approval, and a term of this approval, the term of this approval prevails to the extent of the inconsistency. Note: For the purpose of this condition, there will be an inconsistency between a term of this approval and any document if it is not possible to comply with both the term and the document.	Noted
A4	The Proponent must comply with the written requirements or directions of the Planning Secretary, including in relation to: <ul style="list-style-type: none"> (a) the environmental performance of the CSSI; (b) any document or correspondence in relation to the CSSI (including the provision of such documentation or correspondence); (c) any independent appointment or dismissal made in relation to the CSSI; (d) any notification given to the Planning Secretary under the terms of this approval; (e) any audit of construction or operation; (f) the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); (g) the carrying out of any additional monitoring or mitigation measures; and (h) in respect of ongoing monitoring and management obligations, and following consultation with the Proponent, compliance with an updated or revised version of a guideline, protocol, Australian Standard or policy required to be complied with under this approval. 	Section 3.14
A5	Where the terms of this approval require a document or monitoring program to be prepared, or a review to be undertaken, in consultation with identified parties, evidence of the consultation undertaken must be submitted to the Planning Secretary with the document. The evidence must include:	Section 2

CoA	Condition Requirements	Document Reference
	<ul style="list-style-type: none"> (a) documentation of the engagement with the party identified in the condition of approval that has occurred before submitting the document for approval; (b) a log of the dates of engagement or attempted engagement with the identified party and a summary of the issues raised by them; (c) documentation of the follow-up with the identified party where engagement has not occurred to confirm that they do not wish to engage or have not attempted to engage after repeated invitations; (d) outline of the issues raised by the identified party and how they have been addressed; and (e) a description of the outstanding issues raised by the identified party and the reasons why they have not been addressed. 	
A6	This approval lapses five (5) years after the date on which it is granted, unless works are physically commenced on or before that date.	Noted
A7	References in the terms of this approval to any guideline, protocol, Australian Standard or policy are to such guidelines, protocols, Standards or policies in the form they are in as at the date of this approval.	Noted
A8	<p>Any document that must be submitted within a timeframe specified in or under the terms of this approval may be submitted within a later timeframe approved by the Planning Secretary. This condition does not apply to the immediate written notification required in respect of an incident under Condition A39.</p> <p>Note: Inaction and/or expedience will not be supported as justifications for need unless it can be demonstrated that there is beneficial environmental impacts associated with the request.</p>	Noted
A9	All Independent Appointments required by this approval must hold current membership of a relevant professional body, unless otherwise approved by the Planning Secretary.	Noted
A10	<p>The Planning Secretary may at any time commission an audit of how an Independent Appointment has exercised their functions. The Proponent must:</p> <ul style="list-style-type: none"> (a) facilitate and assist the Planning Secretary in any such audit; and (b) make it a term of their engagement of an Independent Appointment that the Independent Appointment facilitate and assist the Planning Secretary in any such audit. <p>The Planning Secretary may dismiss an Independent Appointment should they consider the Independent Appointment has not exercised their functions in accordance with this approval.</p>	Noted
Staging		

CoA	Condition Requirements	Document Reference
A11	The CSSI may be constructed and operated in stages. Where staged construction or operation is proposed, a Staging Report (for either or both construction and operation as the case may be) must be prepared and submitted to the Planning Secretary for information. The Staging Report must be submitted to the Planning Secretary no later than one month before the commencement of construction of the first of the proposed stages of construction (or if only staged operation is proposed, one month before the commencement of operation of the first of the proposed stages of operation).	Staging Report Section 1.1
A12	The Staging Report must: <ul style="list-style-type: none"> (a) if staged construction is proposed, set out how the construction of the whole of the CSSI will be staged, including details of work and other activities to be carried out in each stage and the general timing of when construction of each stage will commence and finish; (b) if staged operation is proposed, set out how the operation of the whole of the CSSI will be staged, including details of work and other activities to be carried out in each stage and the general timing of when operation of each stage will commence and finish (if relevant); (c) specify how compliance with conditions will be achieved across and between each of the stages of the CSSI; and set out mechanisms for managing any cumulative impacts arising from the proposed staging.	Staging Report
A13	The CSSI must be staged in accordance with the Staging Report, as submitted to the Planning Secretary	Staging Report
A14	Where staging is proposed, the terms of this approval that apply or are relevant to the works or activities to be carried out in a specific stage must be complied with at the relevant time for that stage.	Staging Report Section 3.2.1
A15	Where changes are proposed to the staging of construction or operation, a revised Staging Report must be prepared and submitted to the Planning Secretary for information no later than one (1) month prior to the proposed change in the staging.	Staging Report
Ancillary Facilities		
A16	Ancillary facilities that are not identified by description and location in the EIS and PIR can only be established and used in each case if: <ul style="list-style-type: none"> (a) they are located within or immediately adjacent to the construction boundary; and (b) they are not located next to a sensitive receiver (including where an access road is between the facility and the receiver), unless the sensitive receiver landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and (c) they have no impacts on heritage items (including areas of archaeological sensitivity), threatened 	Appendix A4 – Site Establishment Management Plan

CoA	Condition Requirements	Document Reference
	<p>species, populations or ecological communities beyond the impacts approved under the terms of this approval; and</p> <p>the establishment and use of the facility can be carried out and managed within the performance outcomes set out in the terms of this approval, including in relation to environmental impacts.</p>	
Site Establishment Management Plan		
A17	<p>The Proponent must prepare and submit for approval to the Planning Secretary one (1) month before the establishment of any construction ancillary facility (excluding minor construction ancillary facilities established under Condition A19) a Site Establishment Management Plan. The Plan must be prepared in consultation with the relevant council and government agencies and must include:</p> <ul style="list-style-type: none"> (a) an outline of the environmental management practices and procedures to be implemented at the facility(ies); (b) a description of activities to be undertaken during establishment of the construction ancillary facility (including scheduling and duration of works to be undertaken at the site); (c) figures illustrating the proposed operational site layout; (d) a program for ongoing analysis of the key environmental risks arising from the site establishment activities described in subsection (b) of this condition, including an initial risk assessment undertaken prior to the commencement of site establishment works; (e) details of how the site establishment activities described in subsection (b) of this condition will be carried out to: <ul style="list-style-type: none"> (i) meet the performance outcomes stated in the documents listed in Condition A1, and (ii) manage the risks identified in the risk analysis undertaken in subsection (d) of this condition; and (f) a program for monitoring the performance outcomes, including a program for noise monitoring of site establishment activities. <p>The establishment of the construction ancillary facilities cannot commence until the Planning Secretary has approved the Site Establishment Management Plan for the relevant ancillary facility or facilities. Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each construction ancillary facility or one Site Establishment Management Plan for all facilities. The approved Site Establishment Management Plan(s) must be implemented.</p>	Appendix A4 – Site Establishment Management Plan
Minor Construction Ancillary Facilities		

CoA	Condition Requirements	Document Reference
A19	<p>Lunch sheds, office sheds, portable toilet facilities, and the like, can be established and operated where they satisfy the following criteria:</p> <ul style="list-style-type: none"> (a) are located within the construction boundary; and (b) have been assessed by the ER to have - <ul style="list-style-type: none"> (i) low 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, and (ii) low environmental impact with respect to waste management and flooding, and (iii) no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval. 	Appendix A4 – Site Establishment Management Plan
Boundary Screening		
A20	Boundary screening must be erected around all ancillary facilities that are adjacent to sensitive receivers for the duration of construction unless otherwise agreed with the relevant council and affected residents, business operators or landowners.	Appendix 4 – Site Establishment Management Plan
A21	Boundary screening required under Condition A20 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers	Appendix 4 – Site Establishment Management Plan
Environmental Representative		
A22	Works must not commence until an ER has been approved by the Planning Secretary and engaged by the Proponent	Completed
A23	The Planning Secretary's approval of an ER must be sought no later than one month before the commencement of works.	Completed
A24	The proposed ER must be a suitably qualified and experienced person who was not involved in the preparation of the documents listed in Condition A1, and is independent from the Proponent and companies involved in the design and construction of the CSSI.	Noted
A25	The Proponent may engage more than one ER for the CSSI, in which case the functions to be exercised by an ER under the terms of this approval may be carried out by any ER that is approved by the Planning Secretary for the purposes of the CSSI.	Noted

CoA	Condition Requirements	Document Reference
A26	<p>For the duration of the works, or as approved by the Planning Secretary, the approved ER must:</p> <ul style="list-style-type: none"> (a) receive and respond to communication from the Planning Secretary in relation to the environmental performance of the CSSI; (b) consider and inform the Planning 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 A17, C1, C4 and C13 and any other documents that are identified by the Planning Secretary, to ensure they are consistent with requirements in or under this approval and if so: <ul style="list-style-type: none"> i. make a written statement to this effect before submission of such documents to the Planning Secretary (if those documents are required to be approved by the Planning Secretary); or ii. ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Planning Secretary / Department for information or are not required to be submitted to the Planning Secretary / Department); (e) regularly monitor the implementation of the documents listed in Conditions A17, C1, C4 and C13 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 Planning Secretary, help plan, attend or undertake audits of the CSSI commissioned by the Department including scoping audits, programming audits, briefings and site visits, but not independent environmental audits required under Condition A37 of this approval; (g) as may be requested by the Planning Secretary, assist the Department in the resolution of community complaints; (h) assess the impacts of minor construction ancillary facilities as required by Condition A19 of this approval; (i) consider any minor amendments to be made to the CEMP, CEMP Sub-plans and Construction 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 Construction Monitoring Programs approved by the Planning Secretary and, if satisfied such amendment is necessary, approve the amendment. This does not include any modifications to the terms of this approval; and (j) prepare and submit to the Planning 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 	<p>Section 2 Section 3.4 Section 3.9.5</p>

CoA	Condition Requirements	Document Reference
	Monthly Reports". The Environmental Representative Monthly Report must be submitted within seven (7) days following the end of each month for the duration of the ER's engagement for the CSSI.	
A27	<p>The Proponent must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition A26 (including preparation of the ER monthly report), as well as:</p> <ul style="list-style-type: none"> (a) the complaints register - to be provided for any complaints received (on any day they are received); and (b) a copy of any assessment carried out by the Proponent of whether proposed work is consistent with the approval (which must be provided to the ER before the commencement of the subject work). 	Communication Strategy Section 3.4
Acoustics Advisor		
A28	<p>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.</p> <p>The details of the nominated AA must be submitted to the Planning Secretary for approval no later than one (1) month before commencement of works.</p> <p>The Proponent must cooperate with the AA by:</p> <ul style="list-style-type: none"> (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 3.4
A29	<p>Notwithstanding Condition A28 above, the Proponent can apply to the Planning Secretary to review and amend the duration of the engagement of the AA:</p> <ul style="list-style-type: none"> (a) at no less than 18 months after the commencement of works; and (b) following the installation of at-property construction noise management treatments at all properties that have accepted the offer for treatment and verification of this is provided in a statement endorsed by the AA. <p>In seeking the review, the Proponent must provide to the Planning Secretary:</p> <ul style="list-style-type: none"> (a) details on any non-compliances specific to noise and vibration, including the nature, duration, location and timing of the non-compliances and the actions implemented to avoid future non-compliances; and 	Noted

CoA	Condition Requirements	Document Reference
	(b) a summary of all noise and vibration complaints received up to the time of submitting the application, including the nature, location and timing of the complaint and the measures implemented to address each complaint.	
A30	Any activities generating noise in excess of the 'Noise affected' Noise Management Levels derived from the Interim Construction Noise Guideline must not commence until an AA, nominated under Condition A28 of this approval, has been approved by the Planning Secretary.	Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works
A31	<p>The approved AA must:</p> <ul style="list-style-type: none"> (a) receive and respond to communication from the Planning Secretary in relation to the performance of the CSSI in relation to noise and vibration; (b) consider and inform the Planning 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 Planning Secretary (if required to be submitted to the Planning Secretary) or before implementation (if not required to be submitted to the Planning 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) in conjunction with the ER, the AA must: <ul style="list-style-type: none"> (i) as may be requested by the Planning Secretary or Community Complaints Mediator (required by Condition B11), 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 required under Condition B1 to attempt to resolve the conflict, and if it cannot be resolved, notify the Planning Secretary, (iii) consider relevant minor amendments made to the CEMP, relevant CEMP 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 Planning Secretary and, if satisfied such amendment is necessary, endorse the amendment, (this does not include any modifications to the terms of 	Section 2 Section 3.4

CoA	Condition Requirements	Document Reference
	<p>this approval),</p> <p>(iv) review the noise impacts of minor construction ancillary facilities, and</p> <p>(v) prepare and submit to the Planning Secretary and other relevant regulatory agencies, for information, a Monthly Noise and Vibration Report detailing the AA's 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 approved by the Planning Secretary.</p>	
Compliance monitoring and reporting program		
A32	No later than one (1) month before the commencement of construction, a Compliance Monitoring and Reporting Program prepared in accordance with the Compliance Reporting Post Approval Requirements (Department of Planning and Environment, 2018) must be endorsed by the ER and submitted to the Department for information.	NA 2020 revision to be adopted negating the requirement for construction activities
A33	Compliance reporting must be carried out in accordance with the Compliance Reporting Post Approval Requirements (Department of Planning and Environment, 2018). The Department must be notified of the commencement dates of construction and operation in the preconstruction and pre-operational compliance reports.	Refer to A32
A34	The construction compliance report must provide details of any review of, and minor amendments made to, the CEMP (which must be approved by the ER), resulting from construction carried out during the reporting period	Refer to A32
A35	The Compliance Monitoring and Reporting Program in the form required under Condition A32 of this approval must be implemented for the duration of construction and for a minimum of one (1) year following commencement of operation, or for a longer period as determined by the Planning Secretary based on the outcomes of independent audits, Environmental Representative Reports and regular compliance reviews submitted through Compliance Reports. If staged operation is proposed, or operation is commenced of part of the CSSI, the Compliance Monitoring and Reporting Program must be implemented for the relevant period of each stage or part of the CSSI.	Refer to A32
Auditing		

CoA	Condition Requirements	Document Reference
A36	No later than four (4) weeks before the date notified for the commencement of construction (in the pre-construction compliance report), an Independent Audit Program prepared in accordance with the Independent Audit Requirements (Department of Planning and Environment, 2018) must be submitted to the Planning Secretary for information.	Section 3.9.3
A37	Independent Audits of the CSSI must be carried out in accordance with: <ul style="list-style-type: none"> (a) the Independent Audit Program submitted to the Department under Condition A36 of this approval; and (b) the requirements for an Independent Audit Methodology and Independent Audit Report in the Independent Audit Requirements (Department of Planning and Environment, 2018). 	Section 3.9.3
A38	In accordance with the specific requirements in the Independent Audit Requirements (Department of Planning and Environment, 2018), the Proponent must: <ul style="list-style-type: none"> (a) review and respond to each Independent Audit Report prepared under Condition A37 of this approval; and (b) submit the response to the Planning Secretary for information. 	Section 3.9.3
Incident notification, reporting and response		
A39	The Department must be notified in writing to compliance@planning.nsw.gov.au immediately after the Proponent becomes aware of an incident. The notification must identify the CSSI (including the application number and the name of the CSSI if it has one), and set out the time, date, location and nature of the incident. It must also describe any consequent non-compliance with this approval.	Section 3.4 Section 3.8
A40	Subsequent notification must be given and reports submitted in accordance with the requirements set out in Appendix A.	Section 3.8 Section 3.9.5 Table 11
Identification of workforce and compounds		
A42	Signage on hoardings surrounding construction ancillary facilities must include the CSSI name and application number	Appendix A4 Site Establishment Management Plan
Communication Strategy		
B1	A Communication Strategy must be prepared to provide mechanisms to facilitate communication about construction and operation with: <ul style="list-style-type: none"> (a) the community (including adjoining affected landowners and businesses, and others directly impacted by the CSSI), and 	Communication Strategy

CoA	Condition Requirements	Document Reference
	<p>(b) the relevant councils and government agencies. The Communication Strategy must address who - the Proponent, Independent Appointments and/or construction contractor - will engage with the community and relevant councils and government agencies, how they will engage and the timing of engagements.</p>	
B2	<p>The Communication Strategy must:</p> <ul style="list-style-type: none"> (a) identify people, organisations, councils and agencies to be consulted during the design and work phases; (b) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the CSSI including use of construction hoardings to provide information regarding construction. The information to be distributed must include information regarding current site construction activities, schedules and milestones at each construction site; (c) identify opportunities and make provision for the community to visit construction sites (taking into consideration on-site activities and workplace, health and safety requirements); (d) detail the measures for advising the community in advance of upcoming utility works including the schedule of out-of-hours works as required in Condition E69(a); (e) provide for the formation of issue or location-based community forums that focus on key environmental management issues of concern to the relevant community(s) for the CSSI; and (f) set out procedures and mechanisms for consulting with relevant council(s) and government authorities/agencies, as required under the terms of this approval, including procedures for repeated requests for engagement / feedback and nil responses; and (g) set out procedures and mechanisms - <ul style="list-style-type: none"> (i) through which the community can discuss or provide feedback to the Proponent, (ii) through which the Proponent will respond to enquiries or feedback from the community, and <p>to resolve any issues and mediate any disputes that may arise in relation to the environmental management and delivery of the CSSI, including disputes regarding rectification or compensation.</p>	Communication Strategy
B3	The Communication Strategy must be submitted to the Planning Secretary for approval no later than one (1) month prior to commencement of works	Communication Strategy
B4	Work for the purposes of the CSSI must not commence until the Communication Strategy has been approved by the Planning Secretary	Communication Strategy
B5	The Communication Strategy, as approved by the Planning Secretary, must be implemented for the duration of the works and for 12 months following the completion of construction.	Communication Strategy
Complaints Management System		

CoA	Condition Requirements	Document Reference
B6	A Complaints Management System must be prepared prior to the commencement of any works in respect of the CSSI and be implemented and maintained for the duration of construction and for a minimum for 12 months following completion of construction	Communication Strategy
B7	<p>The following information must be available to facilitate community enquiries and manage complaints prior to the commencement of works and for 12 months following the completion of construction and appropriately broadcast to the community:</p> <ul style="list-style-type: none"> (a) a 24- hour telephone toll-free number for the registration of complaints and enquiries about the CSSI; (b) a postal address to which written complaints and enquires may be sent; (c) an email address to which electronic complaints and enquiries may be transmitted; (d) a mechanism for community members to make enquiries in common community languages of the area; and (e) a mediation system for complaints unable to be resolved. <p>This information must be made publicly available.</p>	<p>Communication Strategy</p> <p>Section 3.7.3 of the CEMP</p>
B8	The telephone number, postal address and email address required under Condition B7 of this approval must also be made available on site hoarding at each construction site prior to the commencement of works. This information must also be provided on the website required under Condition B15 of this approval.	Communication Strategy
B9	<p>The Complaints Management System must include a Complaints Register which must be maintained and record information on all complaints received about the CSSI during the carrying out of any works and for a minimum of 12 months following the completion of construction. The Complaints Register must record the:</p> <ul style="list-style-type: none"> (a) number of complaints received; (b) number of people affected in relation to a complaint; and <p>nature, location and time of the complaint and means by which the complaint was addressed and whether resolution was reached, with or without mediation.</p>	<p>Communication Strategy</p> <p>Section 3.7.3 of the CEMP</p>
B10	The Complaints Register must be provided to the Planning Secretary upon request, within the timeframe stated in the request.	Communication Strategy
B11	A Community Complaints Mediator that is independent of the design and construction personnel must be nominated by the Proponent, approved by the Planning Secretary and engaged during all works. The nomination of the Community Complaints Mediator must be submitted to the Planning Secretary for approval no later than one (1) month prior to the commencement of works.	Communication Strategy

CoA	Condition Requirements	Document Reference
B12	The role of the Community Complaints Mediator is to address any complaint where a member of the public is not satisfied by the Proponent's response. Any member of the public that has lodged a complaint which is registered in the Complaints Management System identified in Condition B6 may ask the Community Complaints Mediator to review the Proponent's response. The application must be submitted in writing and the Community Complaints Mediator must respond within 28 days of the request being made or other specified timeframe agreed between the Community Complaints Mediator and the member of the public.	Communication Strategy
B13	The Community Complaints Mediator must: <ul style="list-style-type: none"> (a) review any unresolved disputes if the procedures and mechanisms under Condition B2(g)(iii) do not satisfactorily address complaints; and (b) make recommendations to the Proponent to satisfactorily address complaints, resolve disputes or mitigate against the occurrence of future complaints or disputes. 	Communication Strategy Section 3.7.3 of the CEMP
B14	The Community Complaints Mediator must not act before the Proponent has provided an initial response to a complaint and must not consider issues such as property acquisition, or where other dispute processes are provided for in this approval, or clear government policy and resolution processes are available, or matters which are not within the scope of the CSSI.	Communication Strategy
Provision of electronic information		
B15	A website providing information in relation to the CSSI must be established prior to commencement of works and maintained for the duration of works, and for a minimum of 24 months following the completion of construction. The following up-to-date information (excluding confidential, private and commercial information) must be published prior to works commencing and maintained on the website or dedicated pages: <ul style="list-style-type: none"> (a) the current implementation status of the CSSI; (b) a copy of the documents listed in Condition A1 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval; (c) a copy of this approval in its original form, a current consolidated copy of this approval (that is, including any approved modifications to its terms), and copies of any approval granted by the Minister to a modification of the terms of this approval; (d) a copy of each statutory approval, licence or permit required and obtained in relation to the CSSI; and (e) a copy of each document required to be made publicly available under this approval must be published within 14 days of the finalisation or approval of the relevant document, unless an alternate timeframe is prescribed by another condition of this approval. 	Communication Strategy

CoA	Condition Requirements	Document Reference
	Where a condition(s) of this approval requires a document(s) be prepared prior to a work or construction or operational activity being undertaken, a current copy of the relevant document(s) must be published on the website before the work / activity is undertaken.	
Construction Environmental Management Plan		
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.	This CEMP Appendix A1
C2	<p>The CEMP must provide:</p> <ul style="list-style-type: none"> (a) a description of all activities to be undertaken during construction (including the scheduling of construction); (b) details of environmental policies, guidelines and principles to be followed in construction; (c) 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 prior to the commencement of construction; (d) details of how the activities described in subsection (a) of this condition will be carried out to: <ul style="list-style-type: none"> (i) meet the performance outcomes stated in the documents listed in Condition A1; and (ii) manage the risks identified in the risk analysis undertaken in subsection (c) of this condition; (e) an inspection program detailing the activities to be inspected and frequency of inspections; (f) a protocol for managing and reporting any: <ul style="list-style-type: none"> (i) incidents; and (ii) non-compliances with this approval and with statutory requirements; (g) procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction; (h) a list of all the CEMP Sub-plans required in respect of construction, as set out in Condition C4. Where staged construction is proposed, the CEMP must also identify which CEMP Sub-plan applies to each of the proposed stages of construction; (i) a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER; (j) an outline of the training and induction for employees, including contractors and subcontractors, in relation to environmental and compliance obligations under the terms of this approval; (k) the process for periodic review and update of the CEMP and all associated plans and programs; and 	<ul style="list-style-type: none"> (a) Section 1.3, 1.4 and Table 1, Figures 2 to 4 (b) Appendix A1 Legal and Compliance Tracking Register (c) Section 3.2.1, 3.2.2 and Section 3.12 (d) Section 3.3.3 and relevant Sub-plans (e) Section 3.9 (f) Sections 3.8 and 3.10 (g) Section 3.10 (h) Table 2 (i) Section 3.4

CoA	Condition Requirements	Document Reference																								
	(l) relevant details from the Site Establishment Management Plan(s).	(j) Section 3.6 (k) Section 3.2.2 (l) Sections 2 and 4.4 and Sub-plans																								
C3	The CEMP must be endorsed by the ER and then submitted to the Planning 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																								
C4	<p>CEMP Sub-plans must be prepared in consultation with the relevant government agency(s) and council(s) as identified for each CEMP Sub-plan in Table 4.</p> <p>Table 4: CEMP Sub-plan and relevant public authorities</p> <table border="1"> <thead> <tr> <th></th> <th>Required CEMP Sub-plan</th> <th>Relevant government agencies and council(s) to be consulted for each CEMP Sub-plan</th> </tr> </thead> <tbody> <tr> <td>(a)</td> <td>Traffic and Access</td> <td>Relevant council(s)</td> </tr> <tr> <td>(b)</td> <td>Noise and Vibration</td> <td>NSW Health, relevant council(s) and Sydney Water (where vibration has the potential to impact on Sydney Water assets)</td> </tr> <tr> <td>(c)</td> <td>Flora and Fauna</td> <td>EES and relevant council(s)</td> </tr> <tr> <td>(d)</td> <td>Air Quality and Odour</td> <td>NSW Health and relevant council(s)</td> </tr> <tr> <td>(e)</td> <td>Soil and Surface Water</td> <td>DPIE Water, EES, Sydney Water (if Sydney Water's assets are affected) and relevant council(s)</td> </tr> <tr> <td>(f)</td> <td>Groundwater</td> <td>DPIE Water and Sydney Water (where it is proposed to discharge groundwater into Sydney Water assets)</td> </tr> <tr> <td>(g)</td> <td>Contamination</td> <td>Relevant council(s)</td> </tr> </tbody> </table>		Required CEMP Sub-plan	Relevant government agencies and council(s) to be consulted for each CEMP Sub-plan	(a)	Traffic and Access	Relevant council(s)	(b)	Noise and Vibration	NSW Health, relevant council(s) and Sydney Water (where vibration has the potential to impact on Sydney Water assets)	(c)	Flora and Fauna	EES and relevant council(s)	(d)	Air Quality and Odour	NSW Health and relevant council(s)	(e)	Soil and Surface Water	DPIE Water, EES, Sydney Water (if Sydney Water's assets are affected) and relevant council(s)	(f)	Groundwater	DPIE Water and Sydney Water (where it is proposed to discharge groundwater into Sydney Water assets)	(g)	Contamination	Relevant council(s)	Section 2 Table 2
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CoA	Condition Requirements			Document Reference
	(h)	Waste	Relevant council(s)	
	(i)	Leachate and Landfill Gas	EPA and relevant council(s)	
C5	<p>The CEMP Sub-plans must state how:</p> <ul style="list-style-type: none"> (a) the environmental performance outcomes identified in the documents listed in Condition A1 as modified by these conditions will be achieved; (b) the mitigation measures identified in the documents listed in Condition A1 as modified by these conditions will be implemented; (c) the relevant terms of this approval will be complied with; and (d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed. 			Appendices B1 to B9
C6	<p>The Contamination CEMP Sub-plan must include, but not be limited to:</p> <ul style="list-style-type: none"> (a) details of construction activities and their locations which have the potential to expose areas known to contain, or potentially contain, contaminated soils and/or materials; (b) measures for the handling, treatment and management of hazardous and contaminated soils and materials including measures to manage and/or minimise worker and public health and safety with regards to exposure to contamination; and (c) a description of how the effectiveness of the actions and measures for managing contamination impacts would be monitored during the proposed works, clearly indicating how often this monitoring would be undertaken, the locations where monitoring would take place, and how the results of the monitoring would be recorded and reported. <p>The Contamination CEMP Sub-plan must be reviewed and considered satisfactory by an EPA accredited site auditor. The Contamination CEMP Sub-plan and any Interim Audit Advice prepared by the EPA accredited site auditor regarding the sub-plan must be submitted to the Planning Secretary prior to undertaking any works which may result in the disturbance of contaminated soil, land or materials.</p> <p>Nothing in this condition prevents the Proponent from preparing separate Contamination CEMP Sub-plans for specific areas of work, rather than a single plan which addresses the entire CSSI.</p>			Appendix B8 Contamination CEMP Sub-plan
C9	<p>The Waste CEMP Sub-plan must include, but not be limited to:</p> <ul style="list-style-type: none"> (a) details of the types of waste to be generated by the CSSI; (b) details of the waste tracking register required by Condition 0, including methods of record 			Appendix B9 Waste CEMP Sub-plan

CoA	Condition Requirements	Document Reference									
	keeping; and (c) a process for verifying that all waste is being managed, transported, reused, recycled or disposed of in a lawful manner.										
C10	The CEMP Sub-plans must be endorsed by the ER and then submitted to the Planning Secretary for approval no later than one (1) month prior to the commencement of the construction activities to which they apply.	Section 2 Appendices B1 to B9									
C11	Any of the CEMP Sub-plans may be submitted to the Planning Secretary along with, or subsequent to, the submission of the CEMP .	Section 2 Appendices B1 to B9									
C12	Construction must not commence until the CEMP and all relevant CEMP Sub-plans for such construction activities to which they apply have been approved by the Planning Secretary. The CEMP and CEMP Sub-plans , as approved by the Planning Secretary, including any minor amendments approved by the ER , must be implemented for the duration of construction. Where construction is staged, construction of a stage must not commence until the relevant CEMP and CEMP Sub-plans for that stage have been endorsed by the ER and approved by the Planning Secretary.	Section 1.1 Section 1.2									
Construction Monitoring Programs											
C13	<p>The Construction Monitoring Programs set out in Table 5 must be prepared and implemented to enable comparison of the actual construction performance against the predicted performance. The Construction Monitoring Programs must be prepared in consultation with the relevant government agencies and councils as identified for each Construction Monitoring Program.</p> <p>Table 5: Construction Monitoring and relevant public authorities</p> <table border="1" data-bbox="405 986 1514 1316"> <thead> <tr> <th data-bbox="405 986 499 1107"></th> <th data-bbox="499 986 990 1107">Required Construction Monitoring Programs</th> <th data-bbox="990 986 1514 1107">Relevant government agencies to be consulted for each Construction Monitoring Program</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 1107 499 1230">(a)</td> <td data-bbox="499 1107 990 1230">Surface Water Monitoring Program</td> <td data-bbox="990 1107 1514 1230">DPIE Water, Sydney Water (if any Sydney Water assets are affected), EPA</td> </tr> <tr> <td data-bbox="405 1230 499 1316">(b)</td> <td data-bbox="499 1230 990 1316">Groundwater Monitoring Program</td> <td data-bbox="990 1230 1514 1316">DPIE Water</td> </tr> </tbody> </table>		Required Construction Monitoring Programs	Relevant government agencies to be consulted for each Construction Monitoring Program	(a)	Surface Water Monitoring Program	DPIE Water, Sydney Water (if any Sydney Water assets are affected), EPA	(b)	Groundwater Monitoring Program	DPIE Water	Section 2
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(a)	Surface Water Monitoring Program	DPIE Water, Sydney Water (if any Sydney Water assets are affected), EPA									
(b)	Groundwater Monitoring Program	DPIE Water									

CoA	Condition Requirements			Document Reference
	(c)	Noise and Vibration Monitoring Program	EPA	
	(d)	Blast Monitoring Program	EPA	
	(e)	Air Quality Monitoring Program	EPA	
	(f)	Flora and Fauna Monitoring Program	EES	
	(f)	Leachate and Landfill Gas Monitoring Program	EPA	
	(g)	Wetland Monitoring Program	EES	
C14	<p>Construction Monitoring Programs must provide:</p> <ul style="list-style-type: none"> (a) details of baseline data available; (b) details of baseline data to be obtained and when; (c) details of all monitoring that will be undertaken; (d) the parameters of the project to be monitored; (e) the frequency of monitoring; (f) the location of monitoring; (g) the reporting of monitoring and analysis results against relevant criteria, including details of the timing and frequency for reporting the results to the Planning Secretary and relevant government agencies; (h) details of the methods that will be used to analyse the monitoring data; (i) procedures to identify and implement additional mitigation measures where results of monitoring indicate adverse impacts or levels above relevant criteria; (j) any consultation to be undertaken in relation to the monitoring programs; and (k) any specific requirements as required by Conditions C15 to C18, as relevant. 			Section 3.9.2 and applicable CEMP Sub-plans
C16	<p>The Noise and Vibration Monitoring Program must include:</p> <ul style="list-style-type: none"> (a) noise and vibration monitoring at agreed representative sensitive receiver locations adjacent to the construction ancillary facilities in Arncliffe and Rockdale to confirm construction noise and vibration levels; 			Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works

CoA	Condition Requirements	Document Reference
	<p>(b) for the purposes of (a), noise monitoring during the day, evening and night-time periods must be undertaken within the first month of operation of the construction ancillary facilities and must cover the range of activities (excluding activities associated with site establishment) being undertaken at the sites; and</p> <p>(c) provision of real time noise and vibration monitoring data. The data must be readily available to the construction team, Proponent, ER and AA. The Department and EPA must be provided with access to the real-time monitoring data, on request.</p>	
C19	The Construction Monitoring Programs must be developed in consultation with the relevant government agencies as identified in Condition C13 of this approval, and must identify information, including monitoring parameters, requested by a relevant agency to be included in a monitoring program.	Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works and Appendix B7- Air Quality and Odour CEMP Sub-plan
C20	The Construction Monitoring Programs must be endorsed by the ER and then submitted to the Planning Secretary for approval at least one (1) month prior to the commencement of construction.	Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works and Appendix B7- Air Quality and Odour CEMP Sub-plan
C21	Construction, which is required to be monitored under the Construction Monitoring Programs, must not commence until the Planning Secretary has approved all of the required Construction Monitoring Programs and all relevant baseline data for the specific construction activity has been collected.	Staging Report, Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works and Appendix B7- Air Quality and Odour CEMP Sub-plan
C22	The Construction Monitoring Programs, as approved by the Planning Secretary and including any minor amendments approved by the ER, must be implemented for the duration of construction and for any	Appendix B3 - Noise and Vibration Sub-plan and CNVIA for

CoA	Condition Requirements	Document Reference
	longer period set out in the monitoring program or specified by the Planning Secretary, whichever is the greater.	Preliminary Construction Works and Appendix B7- Air Quality and Odour CEMP Sub-plan
C23	The results of the Construction Monitoring Programs must be made publicly available in the form of a Construction Monitoring Report at the frequency identified in the relevant Construction Monitoring Program. Note: Where a relevant CEMP Sub-plan exists, the relevant Construction Monitoring Program may be incorporated into that CEMP Sub-plan.	Appendix B3 - Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works and Appendix B7- Air Quality and Odour CEMP Sub-plan
Air Quality and Odour		
E1	Measures must be implemented to minimise and manage the emission of dust, odour and other air pollutants during construction and operation.	Appendix B7 - Air Quality and Odour CEMP Sub-plan
Biodiversity		
E38	Any work associated with the CSSI must limit the clearing of native vegetation to the greatest extent practicable.	Appendix B2 – Flora and Fauna Management Procedure
E39	Impacts to plant community types must not exceed those identified in the documents listed in Condition A1 , unless otherwise approved by the Planning Secretary. In requesting the Planning Secretary's approval, the Proponent must provide to the Planning Secretary an assessment of the additional impact(s) to plant community types and an updated ecosystem and/or species credit requirement under Condition E40 , if required.	Appendix A2 - Aspects and Impacts Register and Appendix B2 - Flora and Fauna Management Procedure
E42	Construction must demonstrate how: (a) noxious weeds are managed; and (b) contamination by pathogens, non-indigenous regenerative plant material and seeds can be prevented by the movement of all tools, vehicles, machinery and personnel. <i>Note: These additional requirements must be addressed in the Flora and Fauna CEMP Sub-plan required under Condition C4.</i>	Appendix B2 – Flora and Fauna Management Procedure

CoA	Condition Requirements	Document Reference
Pre-clearing surveys		
E43	Before the removal or clearing of any vegetation, or the demolition of structures identified as potential roosting sites for microbats commences, pre-clearing/demolition inspections for the threatened species must be undertaken. The inspections, and any subsequent relocation of fauna and associated management/offset measures, must be undertaken under the guidance of a suitably qualified and experienced ecologist. Survey and relocation methodologies and management/offset measures must be included in the Flora and Fauna CEMP Sub-plan required under Condition C4 and the Site Establishment Management Plan required by Condition A17 .	Appendix B2 – Flora and Fauna Management Procedure
Green and Golden Bell Frog		
E44	<p>The Proponent must prepare a Green and Golden Bell Frog Plan of Management. The Plan must be approved by the Planning Secretary prior to commencing construction at the Arncliffe construction compound. The Plan must be developed by a suitably qualified and experienced frog specialist, in consultation with EES.</p> <p>The Plan must detail:</p> <ul style="list-style-type: none"> (a) the on-site management and mitigation measures for limiting impacts on Green and Golden Bell Frogs; (b) the monitoring that would be undertaken during construction to ascertain the effectiveness of the on-site management and mitigation measures; and (c) measures to re-instate habitat affected by the Arncliffe construction compound within the returned open space post construction. 	Green and Golden Bell Frog Plan of Management
Heritage		
E57	<p>The Proponent must prepare and implement an interpretive strategy to recognise the prior presence of Aboriginal people, within and adjoining the project area and in particular Patmore Swamp and Kings Wetland. The strategy must be prepared in accordance with relevant NSW Government guidelines and in consultation with relevant Aboriginal Stakeholders including the local Aboriginal community through an experienced Aboriginal facilitator.</p> <p>The outcomes of the Strategy must be incorporated into the UDLP required under by Condition E154.</p>	Design Management Plan
E59	Before conducting acoustic treatment at any building listed as a heritage item within the relevant LEP, the advice of a suitably qualified and experienced built heritage expert must be obtained and implemented to ensure any such work does not have an adverse impact on the heritage significance of the item.	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary

CoA	Condition Requirements	Document Reference
		Construction Works
E60	<p>An Unexpected Heritage Finds and Human Remains Procedure must be prepared and implemented to manage unexpected heritage finds in accordance with any guidelines and standards prepared by the Heritage Council of NSW or EES.</p> <p><i>Note: Human remains that are found unexpectedly during the carrying out of works may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.</i></p>	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
Noise and Vibration		
Land Use Survey		
E61	<p>A detailed land use survey must be undertaken to confirm sensitive receivers (including critical working areas such as operating theatres and precision laboratories) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise. The survey may be undertaken on a progressive basis but must be undertaken in any one area prior to the commencement of works which generate construction or operational noise, vibration or ground-borne noise in that area. The results of the survey must be included in the Noise and Vibration CEMP Sub-plan required by Condition C4.</p>	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Work Hours		
E62	<p>Works (except for tunnelling (excluding cut and cover tunnelling)) must only be undertaken during the following standard construction hours:</p> <p>(a) 7:00 am to 6:00 pm Mondays to Fridays, inclusive;</p> <p>(b) 8:00 am to 1:00 pm Saturdays; and</p> <p>(c) at no time on Sundays or public holidays.</p>	Section 3.6.4 Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E63	Notwithstanding Condition E62 , works may be undertaken between 1:00 pm to 6:00 pm on Saturday.	Section 3.6.4
Highly Noise Intensive Works		

CoA	Condition Requirements	Document Reference
E65	<p>Except as permitted by an EPL, highly noise intensive works that result in an exceedance of the applicable NML at the same receiver must only be undertaken:</p> <ul style="list-style-type: none"> (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) in continuous blocks not exceeding three (3) hours each with a minimum respite from those activities or works of not less than one (1) hour. <p>For the purposes of this condition, 'continuous' includes any period during which there is less than a one (1) hour respite period between ceasing and recommencing any of the work.</p>	Section 3.6.4 Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Variation to Works Hours		
E66	<p>Notwithstanding Conditions E62 to E65, works may be undertaken outside the hours specified in the following circumstances:</p> <ul style="list-style-type: none"> (a) for the delivery of materials required by the NSW Police Force or other authority for safety reasons; or (b) where it is required in an emergency to avoid injury or the loss of life, to avoid damage or loss of property or to prevent environmental harm; or (c) where different construction hours are permitted or required under an EPL in force in respect of the CSSI; or (d) Works which are <u>not</u> subject to an EPL that are approved under an Out-of-Hours Work Protocol required by Condition E70; or (e) construction that causes Laeq(15 minute) noise levels: <ul style="list-style-type: none"> (i) no more than 5 Db(A) above the rating background level at any residence in accordance with the <i>Interim Construction Noise Guideline</i> (DECC, 2009), and (ii) no more than the 'Noise affected' noise management levels specified in Table 3 of the <i>Interim Construction Noise Guideline</i> (DECC, 2009) at other sensitive land uses, and (iii) continuous or impulsive vibration values, measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.2 of <i>Assessing Vibration: a technical guideline</i> (DEC, 2006), and (iv) intermittent vibration values measured at the most affected residence are no more than the maximum values for human exposure to vibration, specified in Table 2.4 of <i>Assessing Vibration: a technical guideline</i> (DEC, 2006). 	Section 3.6.4 Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works

CoA	Condition Requirements	Document Reference
	<p><i>Note: Section 5.24(1)© of the EP&A Act requires that an EPL be substantially consistent with this approval. Out-of-Hours works considered under Conditions ©(c) and (d) must be justified and include an assessment of the potential impacts and effectiveness of the proposed mitigation measures.</i></p>	
E67	<p>On becoming aware of the need for emergency works in accordance with Condition E66(b), the Proponent must notify the AA, the ER, the Planning Secretary and the EPA of the reasons for such work. The Proponent must use best endeavours to notify all noise and/or vibration affected sensitive receivers of the likely impact and duration of those works.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Out-of-hours work scheduling and respite		
E68	<p>Out-of-hours works that are regulated by an EPL as per Conditio©E66(c) or through the Out-of-Hours Work Protocol as per Condition E70 include:</p> <ul style="list-style-type: none"> (a) works which could result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 “<i>Risk Management – Principles and Guidelines</i>”; or (b) where the relevant road network operator has advised the Proponent in writing that carrying out the works and activities could result in a high risk to road network operational performance; or (c) where the relevant utility service operator has advised the Proponent in writing that carrying out the works and activities could result in a high risk to the operation and integrity of the utility network; or (d) where the TfNSW Transport Management Centre (or other road authority) has advised the Proponent in writing that a road occupancy licence is required and will not be issued for the works or activities during the hours specified in Condition E62 and Condition E63. <p><i>Note: Other out-of-hours works can be undertaken with the approval of an EPL, or through the project’s Out-of-Hours Work Protocol for works not subject to a EPL.</i></p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E69	<p>In order to undertake out-of-hours work under Condition E68, the Proponent must identify appropriate respite periods for the out-of-hours works in consultation with the community at each affected location on a regular basis. This consultation must include (but not be limited to) providing the community with:</p> <ul style="list-style-type: none"> (a) a progressive schedule for periods no less than three (3) months, of likely out-of-hours work; (b) the potential works, location and duration; (c) the noise characteristics and likely noise levels of the works; and (d) likely mitigation and management measures which aim to achieve the relevant noise management level (including the circumstances of when a respite or relocation offer will be available and details about how the affected community can access these offers). <p>The outcomes of the community consultation, the identified respite periods and the scheduling of the likely out-of-hour works must be provided to the AA, EPA and the Planning Secretary.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works

CoA	Condition Requirements	Document Reference
Out-of-hours Work Protocol – Works not subject to an EPL		
E70	<p>An Out-of-Hours Work Protocol must be prepared to identify a process for the consideration, management and approval of works which are outside the hours defined in Conditions E62 and E63 and that are <u>not</u> subject to an EPL. The Protocol must be approved by the Planning Secretary prior to commencement of the works. The Protocol must be prepared in consultation with the EPA and AA. The Protocol must identify activities in terms of their risk of adverse impacts on sensitive receivers (low, medium, high) and include:</p> <ul style="list-style-type: none"> (a) a process for the consideration of out-of-hours works against the relevant noise and vibration criteria, including the determination of low, medium and high-risk activities; (b) a process for selecting and implementing mitigation measures for residual impacts in consultation with the community at each affected location, including respite periods consistent with the requirement of Condition E69. The measures must take into account the predicted noise levels and the likely frequency and duration that sensitive receivers would be exposed to residual impacts, including the number of noise awakening events; (c) procedures to facilitate the coordination with other out-of-hours works, including those approved by an EPL or undertaken by a third party, to ensure appropriate respite is provided; (d) an approval process that considers the risk of works, proposed mitigation and management, and coordination, including where: <ul style="list-style-type: none"> i. the ER and AA review all proposed out-of-hours activities and confirm their risk levels, ii. low risk activities can be approved by the ER in consultation with the AA, and iii. medium and high risk activities are approved by the Planning Secretary. (e) notification arrangements for affected receivers and the EPA for all approved out-of-hours works and notification to the Planning Secretary of approved low risk out-of-hours works. 	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Out-of-hours works – coordination and respite		
E71	<p>All works undertaken for the delivery of the CSSI, including those undertaken by third parties (such as utility relocations), must be coordinated to ensure respite periods are provided. The Proponent must:</p> <ul style="list-style-type: none"> (a) reschedule any works to provide respite to impacted noise sensitive receivers so that the respite is achieved in accordance with Condition E69; or (b) consider the provision of alternative respite or mitigation to impacted noise sensitive receivers; and (c) provide documentary evidence to the AA in support of any decision made by the Proponent in relation to respite or mitigation. 	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Construction Noise and Vibration - General		

CoA	Condition Requirements	Document Reference
E72	<p>Mitigation measures must be implemented with the aim of achieving the following construction noise management levels and vibration criteria:</p> <ul style="list-style-type: none"> (a) construction 'Noise affected' noise management levels established using the <i>Interim Construction Noise Guideline</i> (DECC, 2009); (b) vibration criteria established using the <i>Assessing vibration: a technical guideline</i> (DEC, 2006) (for human exposure); (c) Australian Standard A– 2187.2 - 2006 "<i>Explosives - Storage and Use - Use of Explosives</i>"; (d) BS 7385 Part 2-1993 "<i>Evaluation and measurement for vibration in buildings Part 2</i>" as they are "applicable to Australian conditions"; and (e) the vibration limits set out in the <i>German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures</i> (for structural damage). (f) residential ground-borne noise L_{vels} of - <ul style="list-style-type: none"> i. evening (6:00 pm to 10:00 pm) — internal LAeq(15 minUTe): 40 dB(A), and ii. night (10:00 pm to 7:00 am) — internal LAeq(15 minUTe): 35 dB(A) <p><i>Note: The Interim Construction Noise Guideline identifies 'particularly annoying' activities that require the addition of 5 dB(A) to the predicted level prior to comparing to the construction Noise Management Level.</i></p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E73	<p>Construction Noise and Vibration Impact Statements (CNVIS) must be prepared for construction ancillary facility(ies) before any works that may exceed the noise management levels, vibration criteria and/or ground-borne noise levels specified in Condition E72 commence. CNVIS must include specific mitigation measures identified through consultation with affected sensitive receivers and the mitigation measures must be implemented for the duration of the works.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E74	<p>Noise generating works near community, religious, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories and operating theatres) resulting in noise levels above the NMLs must not be timetabled within sensitive periods, unless other reasonable arrangements with the affected institutions are made at no cost to the affected institution.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E75	<p>Owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage must be notified prior to works that generate vibration commences near those properties. If the potential exceedance is to occur more than once over a period of 24 hours, owners and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier. These properties must be identified and considered in the Noise and Vibration CEMP Sub-plan required by Condition C4 and the Communication Strategy required by Condition B1.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works

CoA	Condition Requirements	Document Reference
Construction Vibration Mitigation - Heritage		
E76	The Proponent must conduct vibration testing prior to and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances and/or any changes required to plant and equipment to prevent damage on built heritage items. These measures must be implemented where testing indicates the potential for vibration to damage built heritage items.	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Construction Noise Mitigation – Out-of-hours works		
E78	<p>At-receiver noise mitigation in the form of at-property treatment must be offered to the landowners of the residential properties (including long-term accommodation providers) identified in Appendix C for habitable living spaces, unless other mitigation or management measures are agreed to by the landowner. Mitigation must be offered prior to out-of-hours works commencing.</p> <p>The at-property construction noise mitigation treatments must be installed prior to the commencement of any out-of-hours works that may cause sleep disturbance (as described in NSW Road Noise Policy (DECCW, 2011)), unless otherwise approved by the Planning Secretary.</p> <p>The Proponent must prepare a report which details the range of at-property noise mitigation treatments to be offered and the procedures and terms of implementing such treatments. The report must be endorsed by the AA and submitted to the Planning Secretary for approval at least one month prior to making any offers to the landowners of the properties identified in Appendix C.</p> <p>This requirement does not apply if the sensitive receiver has been provided with noise mitigation under the TfNSW (RMS) Noise Abatement Program or the <i>State Environment Planning Policy (Infrastructure) 2007</i> (clause 102(3)). The adequacy of at-property treatments will be reviewed where previous treatments have been installed as part of other SSI or CSSI projects.</p>	At-property Noise Mitigation Report Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
E79	Landowners whose residential properties are eligible to receive at-property treatment under Condition E78 must be advised of the range of options that can be installed at or in their property and given a choice as to which of these they agree to have installed.	At-property Noise Mitigation Report
E80	The offer for at-property treatment in accordance with Condition E78 does not expire until the out-of-hours work affecting that property are completed, even if the landowner initially refuses the offer.	At-property Noise Mitigation Report
E81	The implementation of Conditions E78 and E85 does not preclude the application of other noise and vibration mitigation and management measures including temporary alternative accommodation specified under Condition E82 .	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary

CoA	Condition Requirements	Document Reference
		Construction Works
E82	<p>Temporary alternative accommodation is to be offered/ made available to residents affected by out-of-hours works (including where utility works are being undertaken for the project) where the construction noise levels, between:</p> <p>(a) 10:00 pm and 7:00 am, Monday to Friday; (b) 10:00 pm to 8:00 am, Saturday; and (c) 6:00 pm to 7:00 am, Sunday and public holidays,</p> <p>are predicted to exceed the nML +25 dB(A) or are greater THAN 75 dBA (LAeq(15 min)), whichever is the lesser and the impact is planned to occur for more than two (2) nights over a seven (7) day period. The noise level is to be reduced by 5 dB where the noise contains annoying characteristics and increased by 10 dB if the property has been treated or offered at-property noise treatment.</p> <p>The noise levels and duration requirements identified in this condition may be changed through an EPL applying to the CSSI.</p>	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Workplace health and safety for nearby workers		
E83	At no time can noise generated by construction exceed the National Standard for exposure to noise in the occupational environment of an eight-hour (8 hr) equivalent continuous A-weighted sound pressure level of LAeq,8H of 85 dB(A) for any employee working at a location near the CSSI.	Appendix B3 - Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
Property, land use and socio-economic impacts		
E92	The Proponent must identify the utilities and services (hereafter “services”) potentially affected by construction to determine requirements for diversion, protection and/or support. Alterations to services must be determined by negotiation between the Proponent and the service providers. The Proponent, in consultation with service providers, must ensure that disruptions to services resulting from the activity are avoided where possible, and where unavoidable customers are advised in accordance with a process to be documented in the Communication Strategy required under Condition B1 .	Communication Strategy
Condition survey		
E98	The Proponent must offer pre-construction surveys and must undertake and prepare Pre-construction Condition Survey Reports where the offer is accepted, on the current condition of surface and sub-surface structures identified as at risk from settlement or vibration by the geotechnical model described in Condition E93 or as directed by the E98 established under Condition E102 . The	Communication Strategy

CoA	Condition Requirements	Document Reference
	<p>Pre-construction Condition Survey Reports must be prepared by a suitably qualified and experienced person(s) and must be provided to the owners of the surface and sub-surface structures for review prior to the commencement of potentially impacting works.</p>	
E102	<p>The Proponent must establish an Independent Property Impact Assessment Panel (IPIAP) before works that have the potential to result in property impacts commence. The IPIAP must comprise geotechnical and engineering experts independent of the design and construction team. The IPIAP will be responsible for independently reviewing Pre- and Post-construction Condition Survey Report templates prepared under Conditions E98 and E100, any Pre- and Post-construction Condition Survey Reports where there is a dispute, and the resolution of property damage disputes, and the establishment of ongoing settlement and vibration monitoring requirements. The Planning Secretary must be notified of the members of the IPIAP prior to the commencement of any works which may potentially result in property impacts.</p> <p>Either the affected owner or the Proponent may refer unresolved disputes arising from potential and/or actual property impacts to the IPIAP for resolution. All costs incurred in establishing and implementing the IPIAP must be borne by the Proponent regardless of which party makes a referral to the IPIAP. The findings and recommendations of the IPIAP are final and binding on the Proponent.</p>	Communication Strategy
Public and Open Space Planning		
E103	<p>A Recreation Needs Analysis (RNA) to inform the future recreational requirements of the community in respect of the Bicentennial Park and Scarborough Park North Precinct must be prepared. The RNA must be prepared in consultation with the relevant council, park user group(s) and the community. The scope and outcomes of the RNA must consider the requirements of the relevant council.</p>	Recreation Needs Analysis
E104	<p>A Recreation Facilities Replacement Plan (RFRP), identifying impacts to recreational and community facilities in the Bicentennial Park and Scarborough Park North Precinct during construction and operation must be prepared. The RFRP must identify the facilities that would replace impacted facilities.</p> <p>Nothing in this condition prevents the Proponent from preparing individual RFRPs for separate recreational facilities.</p>	Addressed in UDLP. Refer to Design Management Plan.

CoA	Condition Requirements	Document Reference
E105	The facilities identified in the RFRP must consider the functionality of impacted facilities with consideration of, but not limited to, the RNA and capacity and accessibility from increased demand due to consolidation and intensification of uses (including footpaths and car parking).	Addressed in UDLP. Refer to Design Management Plan.
E106	Facilities outlined in the RFRP that offset impacts on existing facilities affected by works must be completed, functional and open to the community prior to impacting the existing facilities, or by such other time as may be approved by the Planning Secretary.	Addressed in UDLP. Refer to Design Management Plan.
E107	The RFRP must be prepared in consultation with the relevant council, user group(s) and the community. The RFRP must be approved by the Planning Secretary prior to construction of the relevant replacement recreational facilities. All impacted existing facilities that are proposed to be reinstated following completion of construction, as outlined in the RFRP , must be completed and open within 12 months of the project operating, or by such other time as may be approved by the Planning Secretary.	Addressed in UDLP. Refer to Design Management Plan.
E109	Construction must be staged to maximise progressive public access and use of the reinstated Rockdale Bicentennial Park and other public spaces.	N/A. This CEMP applies to preliminary construction and commencement activities.
Soils		
E111	All reasonably practicable erosion and sediment controls must be installed and appropriately maintained to minimise water pollution. When implementing such controls, any relevant guidance in the <i>Managing Urban Stormwater</i> series must be considered.	Appendix B4 - Soil and Surface Water Management Procedure
Contaminated Sites		
E112	Prior to the commencement of any works that would result in the disturbance of potential or contaminated land and/or soil, a Site Contamination Report must be prepared by a suitably qualified and experienced person, in accordance with guidelines made or approved under the <i>Contaminated Land Management Act 1997</i> (NSW). The Site Contamination Report must document the outcomes of Stage 1 and Stage 2 contamination assessments of land upon which the CSSI is to be carried out, or land associated with the CSSI, that is suspected, or known, to be contaminated. The report must identify the nature and extent of any existing remediation (such as impervious surface cappings). The Site Contamination Report must detail, where relevant, whether the land is suitable (for the intended	Appendix B8 - Contamination CEMP Sub-plan

CoA	Condition Requirements	Document Reference
	<p>final land use) or can be made suitable through remediation and/or outline the potential contamination risks from the CSSI to human health and receiving waterways.</p> <p>Nothing in this condition prevents the Proponent from preparing individual Site Contamination Reports for separate sites.</p> <p>Measures to identify, handle and manage potential contaminated soils, materials and groundwater must be identified in the Site Contamination Report and incorporated into the Contamination CEMP Sub-plan (prepared under Condition C4), unless otherwise approved by the Planning Secretary.</p> <p>Should remediation be required to make land suitable for the final intended land use, a Remediation Action Plan must be prepared and implemented and submitted to the Planning Secretary for information prior to undertaking remediation. The plan must detail how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater.</p> <p>If remediation is required, a Section A Site Audit Statement and Site Audit Report, must be prepared by a Site Auditor accredited by EPA under the <i>Contaminated Land Management Act 1997 (NSW)</i>.</p> <p>Nothing in this condition prevents the Proponent from engaging the Site Auditor to prepare Site Audit Statements for individual work sites.</p> <p>A Section A Site Audit Statement and its accompanying Section A Site Audit Report, which state that the contaminated land disturbed by the works has been made suitable for the intended land use, must be submitted to the Planning Secretary and relevant council after remediation. Contaminated land must not be used for the purpose approved under the terms of this approval until a Section A Site Audit Statement is obtained which states that the land is suitable for that purpose and any conditions on the Section A Site Audit Statement have been complied with.</p>	
E113	<p>An Unexpected Contaminated Land and Asbestos Finds Procedure must be prepared prior to the commencement of construction and must be followed should unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) be excavated or otherwise discovered during construction.</p>	Appendix B8 - Contamination CEMP Sub-plan
E114	<p>The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.</p>	Appendix B8 - Contamination CEMP Sub-plan
Traffic, Transport and Access Construction Access		

CoA	Condition Requirements	Document Reference
E117	Safe pedestrian and cyclist access must be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate route which complies with the relevant standards must be provided and signposted prior to the restriction or removal of the relevant pedestrian and cyclist access.	Appendix B1 - Traffic and Access Management Procedure
E118	During construction, where bus stops are required to be temporarily closed or relocated, such closure must not occur until relocated bus stops are functioning, have similar capacity and amenity and are relocated within a 400 metre walking distance of the existing bus stop. Closures and relocation of bus stops during construction must be undertaken in consultation with Transport for NSW and relevant council(s). Wayfinding signage must be provided directing commuters to adjacent or relocated bus stops. Footpaths and (where required) road crossing facilities must be provided to any relocated bus stops such that accessibility and safety standards are met.	Appendix A2 – Aspects and Impacts Register and Appendix B1 - Traffic and Access Management Procedure
E119	Prior to the commencement of operation, all bus stops temporarily closed or relocated must be reinstated in a manner that provides equal or improved capacity, amenity and accessibility (including footpaths and road crossings) in consultation with Transport for NSW and relevant council(s).	Appendix A2 – Aspects and Impacts Register and Appendix B1 - Traffic and Access Management Procedure
E120	Access to all utilities and properties must be maintained during construction, where practicable, unless otherwise agreed with the relevant utility owner, landowner or occupier.	Appendix B1 - Traffic and Access Management Procedure
E121	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier.	Communication Strategy
E122	Access to and from the Rockdale construction ancillary facility (C2) by heavy vehicles must only be via West Botany Street, unless otherwise approved by the Planning Secretary.	Appendix B1 - Traffic and Access Management Procedure
Road Dilapidation		
E127	Before any local road is used by a heavy vehicle for the purposes of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the relevant council within three (3) weeks of completion of the survey and no later than one (1) month prior to the road being used by heavy vehicles associated with the CSSI.	Appendix B1 - Traffic and Access Management Procedure Communication Strategy

CoA	Condition Requirements	Document Reference
E128	(a) If damage to roads occurs as a result of the CSSI, the Proponent must either (at the relevant road authority's discretion):compensate the relevant road authority for the damage so caused; or (b) rectify the damage to restore the road to at least the condition it was in pre-works as identified in the Road Dilapidation Report(s) .	Appendix B1 - Traffic and Access Management Procedure Communication Strategy
Parking		
E129	Construction vehicles (including staff vehicles) associated with the CSSI must be managed to minimise parking, idling and queuing on public roads.	Appendix A4 - Site Establishment Management Plan Appendix B1 - Traffic and Access Management Procedure
E130	A Construction Parking and Access Strategy must be prepared and implemented to identify and mitigate impacts resulting from on- and off-street parking changes during construction. The Strategy must include, but not necessarily be limited to: <ul style="list-style-type: none"> (a) confirmation and timing of the removal of on- and off-street parking associated with construction (including during site establishment when access to off-street parking at construction ancillary facilities has yet to be established); (b) parking accumulation surveys (consistent with Austroads requirements) of parking spaces to be removed to determine current demand during peak, off-peak, school drop off and pickup, and weekend periods; (c) consultation with affected stakeholders, including property occupants with driveway access along President Avenue between Civic Avenue and Princes Highway, utilising existing on- and off-street parking stock which will be impacted as a result of construction and impacted by the introduction of temporary clearways on President Avenue; (d) review of the impacts of changes to on- and off-street parking stock taking into consideration outcomes of consultation with affected stakeholders; (e) identification of mitigation measures to manage impacts to stakeholders as a result of on- and off-street parking changes including, but not necessarily limited to, staged removal and replacement of parking and provision of alternative parking arrangements; (f) strategies to address shortfalls in car parking spaces at individual construction ancillary facilities and disincentivising construction personnel from parking on the street near work sites instead of further afield at a different construction ancillary facility where car spaces are available, including 	Construction Parking and Access Strategy

CoA	Condition Requirements	Document Reference
	<p>managed staff parking arrangements and working with relevant council(s) to introduce parking restrictions adjacent to work sites and compounds;</p> <p>(g) review of the provision of a shuttle bus service(s) to transport workers to site(s) and details of the shuttle bus service(s), including service timing and frequency, where; reasonable and feasible</p> <p>(h) mechanisms for monitoring, over appropriate intervals, to determine the effectiveness of implemented mitigation measures;</p> <p>(i) provision of contingency measures should the results of mitigation monitoring indicate implemented measures are ineffective; and</p> <p>(j) provision of reporting of monitoring results to the Planning Secretary and relevant council(s) at three (3) monthly intervals.</p> <p>The Construction Parking and Access Strategy must be submitted to the Planning Secretary for information prior to the commencement of any works that impact parking.</p>	
E131	<p>During construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access, and parking arrangements must be developed in consultation with affected businesses and implemented prior to the disruption. Adequate signage and directions to businesses must be provided prior to, and for the duration of, any disruption.</p>	Appendix B1 - Traffic and Access Management Procedure
Safety Audits		
E132	<p>The CSSI (including new or modified local roads, parking, on-road pedestrian and cycle infrastructure) must be designed to meet relevant design, engineering and safety guidelines.</p>	Design Management Plan
Urban Design and Place Making Construction Ancillary Facilities		
E136	<p>The CSSI must be constructed in a manner that minimises visual impacts of construction sites, such as providing temporary landscaping and vegetative screening of the construction sites, minimising light spill, and incorporating treatments and finishes within key elements of temporary structures that reflect the context within which the construction sites are located.</p>	<p>Appendix A4 – Site Establishment Management Plan</p> <p>Construction Management Plan</p>
Lighting and Security		

CoA	Condition Requirements	Document Reference
E140	The Proponent must construct and operate the CSSI with the objective of minimising light spillage to surrounding properties. All lighting associated with construction and operation must be consistent with the requirements of <i>Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting</i> and relevant Australian Standards in the series <i>AS/NZ 1158 – Lighting for Roads and Public Spaces</i> , as relevant. Additionally, the Proponent must provide mitigation measures to manage any residual night lighting impacts from operational motorway complexes and the shared pedestrian and cycling pathway to protect properties adjoining or adjacent to the CSSI, in consultation with affected landowners.	Appendix A4 – Site Establishment Management Plan
E141	The Proponent must implement measures, in consultation with affected residents, to prevent headlights from vehicles exiting the Rockdale construction ancillary facility (C2) spilling onto residences along West Botany street that are adjacent to and opposite the site access way.	Appendix A4 – Site Establishment Management Plan Construction Management Plan
E142	The Proponent must construct and operate the CSSI with the objective of avoiding adverse or distracting lighting configuration, spillage or intensity to aircraft operations. All lighting associated with construction and operation must adhere to the <i>Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer</i> (CASA, 1999) and <i>National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports</i> (DITCARD, 2012). Notwithstanding, the Proponent must provide mitigation measures to manage any residual night lighting impacts to protect aircraft operations, in consultation with CASA and DITCARD.	Appendix A4 – Site Establishment Management Plan Design Management Plan
E143	Notwithstanding Condition E142 , the Proponent must consult with CASA, DITCARD and Sydney Airport Operators prior to the commencement of construction to determine the need and potential positioning of aviation hazard lighting on any equipment or built form component associated with the CSSI where such consultation deems it necessary.	Appendix A4 – Site Establishment Management Plan Design Management Plan
Tree Removals and Plantings		
E146	Prior to removing any street trees, the Proponent must commission an experienced and suitably qualified arborist independent of the design and construction of the CSSI, to prepare a comprehensive Tree Report(s) . The Tree Report may be prepared for all trees that will be removed or separate reports may be prepared for individual areas where trees are required to be removed. The report(s) must include: (a) a visual tree assessment of the type, stability and health of the tree;	Tree Reports will be submitted to DPIE prior to tree removal

CoA	Condition Requirements	Document Reference
	<p>(b) consideration of all options to amend the CSSI where a street tree has been identified for removal, including realignment, relocation of services, redesign of or relocation of ancillary components and reduction of standard offsets to underground services; and</p> <p>(c) measures to avoid the removal of trees or minimise damage to existing trees.</p> <p>A copy of the report(s) must be submitted to the Planning Secretary for approval prior to the removal of any trees. All recommendations of the report(s) must be implemented by the Proponent, unless otherwise approved by the Planning Secretary.</p>	
Urban Design and Landscape Plan		
E154	<p>A UDLP must be prepared to inform the final design of the CSSI, in accordance with the project objectives, the commitments made in the documents listed in Condition A1, and the requirements of this approval.</p> <p>The UDLP does not apply to works that do not allow an alternate design outcome and this has been approved by the Planning Secretary.</p>	Design Management Plan
E155	<p>The UDLP(s) must be prepared by a suitably qualified and experienced person(s). Unless otherwise approved by the Planning Secretary, the person(s) must show demonstrated skill and expertise in the following professional fields:</p> <p>(a) architecture;</p> <p>(b) urban design;</p> <p>(c) landscape design;</p> <p>(d) Aboriginal cultural heritage; and</p> <p>(e) non-Aboriginal heritage.</p>	Design Management Plan
E156	<p>The UDLP must be prepared in consultation with relevant council(s), the community and affected landowners and businesses. The UDLP must meet the reasonable requirements of these stakeholders and must meet or exceed the design standards of relevant council(s) guidelines. The UDLP must include, but not necessarily be limited to:</p> <p>(a) an analysis of the heritage, built, natural and community context and values, and articulation of the urban design objectives, principles and standards for the CSSI;</p> <p>(b) the urban design and landscape requirements of this approval, including but not limited to:</p> <ol style="list-style-type: none"> i. the Pedestrian and Cycle Implementation Plan identified in Condition E153, ii. heritage interpretation and plantings (including rehabilitation works to address heritage impacts on Patmore Swamps) identified in Condition E58, 	Design Management Plan

CoA	Condition Requirements	Document Reference
	<ul style="list-style-type: none"> iii. the RFRP identified in Condition E104, iv. sustainability initiatives; (c) the design of the CSSI elements including their form, materials, detail and staging; (d) the design of the project landform and earthworks; (e) the location of existing vegetation, areas of vegetation to be retained and proposed planting and seeding details, including the use of local indigenous species for revegetation activities; (f) visual screening requirements; (g) developed visuals, cross sections and plans showing the proposed design outcome; and (h) details of strategies to rehabilitate, regenerate or revegetate disturbed areas and successfully establish and maintain the resulting new landscape. 	
E157	The Proponent must submit the UDLP to the Planning Secretary for approval no later than one (1) month prior to the construction of permanent built surface works or landscaping works that are the subject of the UDLP(s) (in the area to which the UDLP applies) or earth works for the final surface contouring of the reinstated Rockdale Bicentennial Park, whichever is the sooner.	Design Management Plan
E158	Construction of permanent built works or landscaping that are the subject of the UDLP must not be commenced (in the area to which the UDLP applies) until the UDLP has been approved by the Planning Secretary.	Design Management Plan
Utilities Management		
E161	<p>A Low Impact Utility Works Management Strategy must be prepared and implemented for low impact utility works. The Strategy must identify how the works will be managed and must include:</p> <ul style="list-style-type: none"> (a) a description of all low impact utility works to be undertaken, including how they meet the definition of Low Impact Utility Works and (b) the management measures that will be implemented to manage dust, noise, traffic, access and lighting impacts associated with low impact utility works. <p>The Strategy must be submitted to the Planning Secretary for approval at least one (1) month prior to the commencement of low impact utility works.</p> <p><i>Note: Utility works that are not low impact are construction and appropriate management measures would be included in the CEMP</i></p>	Low impact utility works will be conducted in accordance with the CEMP
Utility Coordination Manager		

CoA	Condition Requirements	Document Reference
E162	<p>A Utility Coordination Manager must be appointed for the duration of the works. The role of the Utility Coordination Manager must include, but not be limited to:</p> <ul style="list-style-type: none"> (a) the management and coordination of all utility works associated with the delivery of the CSSI, to ensure respite is provided to the community, as required under Conditions E69 and E71; (b) investigating complaints received from the Community Complaints Mediator relating to utility works; and (c) providing a response to the Community Complaints Mediator. 	Communication Strategy
Waste		
E163	<p>Waste generated during construction and operation must be dealt with in accordance with the following priorities:</p> <ul style="list-style-type: none"> (a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced; (b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and (c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of at a waste management facility or premise lawfully permitted to accept the materials or in accordance with a Resource Recovery Exemption or Order issued under the <i>Protection of the Environment Operations (Waste) Regulation 2014 (NSW)</i>, or to any other place that can lawfully accept such waste. 	Appendix B9 - Waste CEMP Sub-plan
E164	<p>Waste generated outside the CSSI site must not be received at the CSSI site for storage, treatment, processing, reprocessing or disposal on the CSSI site, except as expressly permitted by a licence or waste exemption under the Protection of the Environment Operations Act 1997 (NSW), if such a licence is required in relation to that waste.</p>	Appendix B9 - Waste CEMP Sub-plan
E165	<p>The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the <i>Protection of the Environment Operations (Waste) Regulation 2014 (NSW)</i>, as the case may be.</p>	Appendix B9 - Waste CEMP Sub-plan
E166	<p>All waste generated during construction and operation must be classified in accordance with the EPA's <i>Waste Classification Guidelines</i>, with appropriate records and disposal dockets retained for audit purposes.</p>	Appendix B9 - Waste CEMP Sub-plan
E167	<p>The Proponent must develop and implement a waste tracking register that details:</p>	Appendix B9 - Waste CEMP Sub-plan

CoA	Condition Requirements	Document Reference
	(a) the quantity of each type of waste generated, its classification and source location (recorded using latitude and longitude coordinates); (b) the destination location(s) for all wastes generated during construction; (c) the quantities of any waste types imported onto the CSSI site, including their classification and emplacement location (recorded using latitude and longitude coordinates); (d) the quantities and types of wastes that are subject to a Resource Recovery Order and/or Exemption; and (e) disposal records demonstrating that receiving facilities have lawfully accepted the waste type.	
Water		
E168	The CSSI must be designed, constructed and operated so as to maintain the <i>NSW Water Quality Objectives</i> where they are being achieved as at the date of this approval, and contribute towards achievement of the <i>NSW Water Quality Objectives</i> over time where they are not being achieved as at the date of this approval, unless an EPL in force in respect of the CSSI contains different requirements in relation to the <i>NSW Water Quality Objectives</i> , in which case those requirements must be complied with. <i>Note: Discharge criteria for construction water treatment plant discharges will be included in the EPL for the project.</i>	Appendix B4 - Soil and Surface Water Management Procedure
E171	Works on waterfront land must be carried out in accordance with controlled activity guidelines.	Appendix B4 - Soil and Surface Water Management Procedure During preliminary construction, no works will occur within watercourses.

Table 2: EIS Performance Outcomes

EIS Ref	Performance Outcome	Document Reference
EIS, Chapter 24, Section 24.7	<p>Air Quality</p> <p>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.</p>	Air Quality and Odour CEMP Sub-plan
EIS, Chapter 24, Section 24.7	<p>Noise and Vibration – Amenity</p> <p>Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on acoustic amenity.</p> <p>Increases in noise emissions and vibration affecting nearby properties and other sensitive receptors during operation of the project are effectively managed to protect the amenity and well-being of the community</p>	Noise and Vibration CEMP Sub-plan
EIS, Chapter 24, Section 24.7	<p>Noise and Vibration – Structural</p> <p>Construction noise and vibration (including airborne noise, ground-borne noise and blasting) are effectively managed to minimise adverse impacts on the structural integrity of buildings and items including Aboriginal places and environmental heritage.</p> <p>Increases in noise emissions and vibration affecting environmental heritage as defined in the <i>Heritage Act 1977</i> during operation of the project are effectively managed.</p>	Noise and Vibration CEMP Sub-plan
EIS, Chapter 24, Section 24.7	<p>Biodiversity</p> <p>The project design considers all feasible measures to avoid and minimise impacts on terrestrial and aquatic biodiversity.</p> <p>Offsets and/or supplementary measures are assured which are equivalent to any remaining impacts of project construction and operation.</p>	Flora and Fauna Management Procedure
EIS, Chapter 24, Section 24.7	<p>Socio-economic, Land Use and Property</p> <p>The project minimises adverse social and economic impacts and capitalises on opportunities potentially available to affected communities.</p> <p>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 community facilities, and minimisation of dwellings and infrastructure.</p>	Communications Strategy

EIS Ref	Performance Outcome	Document Reference
EIS, Chapter 24, Section 24.7	<p>Water – Quality</p> <p>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).</p>	Soil and Surface Water Management Procedure
EIS, Chapter 24, Section 24.7	<p>Soils</p> <p>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 soils and site contamination.</p>	Soil and Surface Water Management Procedure Contamination CEMP Sub-plan
EIS, Chapter 24, Section 24.7	<p>Waste</p> <p>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.</p>	Waste CEMP Sub-plan

Table 3: Environmental Management Measures

EMM No.	EMM Requirements	Document Reference
Traffic and Transport		
TT1	A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan. The CTAMP will detail processes to minimise delays and disruptions and identify and respond to changes in road safety as a result of project construction works. The CTAMP will be prepared in accordance with applicable guidelines and relevant standards, guides and manuals.	B1 - Traffic and Access Management Procedure
TT3	During construction, work with the TMC to observe traffic flows and incidents from CCTV footage and where reasonable and feasible, modify sites and activities to address issues identified by TMC.	Communications Strategy, Appendix B1 - Traffic and Access Management Procedure
TT5	Minimise local road closures and maintain adequate property access to the road network. Property owners would be consulted and agree to any changes to access.	Appendix A2 – Aspects and Impacts Register, Appendix B1 - Traffic and Access Management Procedure and Communication Strategy
TT7	Prior to impacting roads, a road dilapidation report will be prepared, in consultation with relevant council(s) and road owners , identifying existing conditions of local roads and mechanisms to repair damage to the road network caused by heavy vehicle movements associated with the project.	Appendix A2 – Aspects and Impacts Register, Appendix B1 - Traffic and Access Management Procedure and Communication Strategy
Air Quality		

EMM No.	EMM Requirements	Document Reference
AQ1	<p>A Construction Air Quality Management Plan will be developed and implemented to monitor and manage potential air quality impacts associated with the construction of the project and activities at construction ancillary facilities. The management plan will identify project construction activities with the potential to have air quality impacts and the controls required to avoid, minimise and mitigate these impacts.</p> <p>The plan will include measures to:</p> <ul style="list-style-type: none"> • Minimise project and cumulative dust generation from stockpiles, haulage routes, work activities, exposed ground surfaces and acoustic spoil sheds • Manage the transport, storage and handling of sand, aggregate and fine materials • Minimise generator and vehicle emissions during construction of the tunnel • Inspect and address corrective actions • Modify or cease dust generating works during unfavourable weather conditions. <p>The Plan will be implemented for the duration of construction and will include appropriate dust monitoring procedures.</p>	Appendix B7 – Air Quality and Odour CEMP Sub-plan
AQ2	Demolition activities, including removal of hazardous building materials will be planned and carried out in a manner that minimises the potential for dust generation. Removal of hazardous building materials will be completed prior to the demolition works.	Appendix B7 – Air Quality and Odour CEMP Sub-plan
AQ3	<p>Odorous material would be treated immediately on-site, and removed from site where necessary. Areas of odorous materials would be excavated in a staged process to allow for treatment and handling. Exposed areas of odorous material would be kept to a minimum to reduce the total emissions from the site.</p> <p>On-site odour measurements would be carried out during excavation works to determine odour emission rates. Results from the monitoring would be used to inform future excavation and treatment activities on site.</p>	Appendix B7 – Air Quality and Odour CEMP Sub-plan
Health, safety and hazards		
HS1	A Pollution Incident Response Management Plan (PIRMP) will be prepared for the project. The PIRMP will be prepared in accordance with legislative requirements and include measures to manage hazardous substances and dangerous goods including storage, handling and spill response.	Refer to EPL, PIRMP, Work Health & Safety Management Plan and Emergency Management Response

EMM No.	EMM Requirements	Document Reference
HS2	A Work Health and Safety Plan will be implemented during construction of the project, supplemented by site and activity specific Safe Work Method Statements.	Work Health & Safety Management Plan
HS3	Transport of dangerous goods and hazardous substances will be conducted in accordance with relevant legislation and codes.	Appendix B4 - Soil and Surface Water Management Procedure
HS6	The project will be constructed and operated in accordance with the design requirements of CASA and the Sydney Airport Master Plan 2033, with respect to lighting.	Design Management Plan
Noise and Vibration		
NV1	<p>A Construction Noise and Vibration Management Plan (CNVMP) will be prepared. The CNVMP will include processes and responsibilities to assess, monitor, minimise and mitigate noise and vibration impacts during construction.</p> <p>The plan will:</p> <ul style="list-style-type: none"> • Identify relevant performance criteria in relation to noise and vibration • Identify noise and vibration sensitive receptors and features in the vicinity of the project • Include standard and additional mitigation measures from the Construction Noise and Vibration Guideline (CNVG) (Roads and Maritime 2016) and details about when each will be applied • Describe the process(es) that will be adopted for carrying out location and activity specific noise and vibration impact assessments to assist with the selection of appropriate mitigation measures • Consider cumulative construction noise impacts and construction noise fatigue • Include protocols that will be adopted to manage works required outside standard construction hours, in accordance with relevant guidelines including for management of respite periods • Include a Blast Management Strategy (where blasting is required) • Detail monitoring that will be carried out to confirm project performance in relation to noise and vibration performance criteria. <p>The CNVMP will be implemented for the duration of the construction of the project.</p>	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
NV2	Detailed noise assessments will be carried out for all ancillary facilities required for construction of the project. The requirement for temporary noise walls within ancillary facilities and adjacent to construction works, and the requirement for other appropriate noise management measures, is to	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for

EMM No.	EMM Requirements	Document Reference
	be assessed and implemented prior to the commencement of activities which have the potential to cause noise or vibration impacts.	Preliminary Construction Works
NV3	<p>All residents affected by noise from the construction of the project which are expected to experience an exceedance of the construction NML noise management levels will be consulted notified about potential noise impacts the project prior to the commencement of construction works.</p> <p>Roads and Maritime would will consult with vulnerable members of the community who are likely to be more susceptible to adverse health effects of noise (especially those who are elderly, who do not speak English, are housebound, or who may be unwell) to accommodate their preferences for noise mitigation, as far as practicable.</p> <p>Consultation would will also be undertaken with all schools likely to be affected, and in particular Cairnsfoot Special School, to determine suitable mitigation measures where necessary.</p> <p>The information provided to the residents will include:</p> <ul style="list-style-type: none"> • General sequencing and locations of construction work • The hours of the project works • Construction noise and vibration impact predictions for the works • Construction noise and vibration mitigation measures likely to be implemented on site. <p>Community consultation regarding construction noise and vibration will be detailed in the Community Involvement Communication Strategy Plan Communication Strategy Plan for the construction of the project and will include a complaints handling process. The community will be able to provide feedback via a 24 hour, toll-free project information and complaints line, a dedicated email address and postal address for the project.</p> <p>For out of hours works, consultation with affected residents will take place with consideration to Practice note vii of the ENMM and Strategy 2 of the ICNG.</p>	Communication Strategy, Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
NV4	<p>Noisy work (as defined in the EPL) and vibration intensive activities (those activities that exceed the vibration criteria) will be scheduled to be undertaken during standard construction hours as far as possible. Works or activities that cannot be undertaken during standard construction hours will be scheduled as early as possible during the evening and/or night-time periods.</p> <p>Respite measures are to be implemented for noisy work and vibration intensive activities in a manner consistent with EPL and Roads and Maritime guideline requirements.</p>	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works; Communications Strategy
NV5	Receptors identified as requiring at-property noise mitigation because of an exceedance of operational traffic noise goals noise management levels when the project is operating, will be	At-property Noise Treatment Report;

EMM No.	EMM Requirements	Document Reference
	<p>offered treatment prior to construction commencing. The receptors which are predicted to trigger consideration of noise mitigation will be confirmed during the detailed future design phases of the project and any additional eligible receptors will be contacted and noise mitigation options discussed with them. Receptors identified as requiring at-property operational noise mitigation will be identified and offered treatment prior to commencement of construction works that affects them.</p>	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
NV6	Construction vehicle movements (on and off site) will be managed to avoid or minimise noise impacts. Where reasonable and feasible, spoil will only be removed from site during the day. Mitigation measures for vehicle movements outside of standard construction hours are to be included in the CNVMP.	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
NV7	Vibration generating activities will be managed to minimise the potential for impacts on structures and sensitive receptor(s), including maximising safe working distances where practicable, or use of alternate methods to minimise vibration where safe working distances cannot be achieved. Where alternatives cannot be implemented, vibration monitoring is to be undertaken and receptors notified in advance of works. Vibration monitors are to provide real-time notification of exceedances of levels approaching cosmetic damage criteria.	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
Biodiversity		
B1	<p>Detailed design will avoid or minimise the need for native vegetation and habitat removal for the construction of the project, where feasible.</p> <p>A plan for the rehabilitation of all areas directly affected by construction, including water bodies, would be included as part of the CFFP (refer B4 below).</p>	Design Management Plan, Appendix A6 - Sensitive Area Plans, Appendix B2 – Flora and Fauna Management Procedure
B2	Detailed design of the project will avoid or minimise artificial light impacts on biodiversity within and immediately adjacent to the operational project (eg downward-facing lighting along the shared cycle and pedestrian pathways).	Appendix A4 – Site Establishment Management Plan Design Management Plan

EMM No.	EMM Requirements	Document Reference
B5	<p>All construction site inductions will contain a relevant section on identifying and managing potential risks to the Green and Golden Bell Frog. This will include identification of the frog and its habitat, a clear outline of the location of no-go zones for construction personnel, equipment and materials (including herbicides and pesticides), hygiene protocols and what to do in the event of an unexpected find.</p> <p>Frog exclusion fencing and sediment controls will be installed.</p> <p>Any Green and Golden Bell Frogs encountered within the construction boundary during construction are to be collected by a qualified and experienced herpetologist and relocated within the adjacent golf course by the herpetologist.</p> <p>Impacts to Green and Golden Bell Frog due to light spill will be mitigated with lighting directed to minimise construction night time light spill outside of all construction areas, particularly onto the RTA ponds and Kogarah Golf Course.</p> <p>The ground surface within the Arncliffe construction ancillary facility (excluding the operational footprint) will be reinstated to a condition the same or better than prior to the commencement of construction of the New M5 Motorway project in consultation with relevant stakeholders.</p>	Appendix B2 – Flora and Fauna Management Procedure and Green and Golden Bell Frog Plan of Management
Landscape and Visual		
LVIA1	<p>An Urban Design and Landscape Plan (UDLP) will be prepared and implemented. The plan UDLP will detail built and landscape features and architectural treatments to be implemented prior to operation of the project. The UDLP will be developed in consultation with local councils, other key stakeholders and the community and made available to the public.</p> <p>The plan is to be developed in consultation with local council.</p>	Design Management Plan
LVIA2	Where reasonable and feasible, existing trees will be retained and protected within construction areas.	Appendix A6 – Sensitive Area Plans and Appendix B2 - Flora and Fauna Management Procedure
LVIA3	Construction and operational lighting will be oriented to minimise glare and light spill impacts on adjacent receptors.	Design Management Plan, Appendix A6 – Sensitive Area

EMM No.	EMM Requirements	Document Reference
		Plans, Appendix B3 Noise and Vibration Sub-plan and CNVIS for Preliminary Construction Works
LVIA4	The design and maintenance of construction compound hoardings will aim to minimise visual impacts and landscape character impact, including the prompt removal of graffiti.	Appendix A4 – Site Establishment Management Plan
LVIA5	<p>Where trees are removed to facilitate construction of the project, replacement trees would be selected and planted in accordance with the tree management strategy developed for the project. The strategy would provide for the following:</p> <ul style="list-style-type: none"> • Consideration of all options to minimise the need for tree removal and to retain as many trees as possible • Preparation of comprehensive tree reports (by a qualified arborist) for trees requiring protection, pruning, or removal, to guide the approach to managing trees • Measures to minimise damage to, and ensure the health and stability of, trees to be retained, in accordance with AS4970-2009 Protection of trees on development sites • Replacement of trees where removal cannot be avoided, in accordance with the following general principles: <ul style="list-style-type: none"> - net increase in the number of replacement trees - provision of replacement trees to achieve similar outcomes as those removed where possible, such as screening, amenity, etc. - replacement trees are to have a minimum pot size of 75 litres, except where the plantings are consistent with the pot sizes specified in a relevant authority’s plans for vegetation management, or as agreed by the relevant authority(s) (such as Bayside Council) - trees to be planted within 500 metres of the project area wherever practicable, or in another location determined in consultation with the relevant council • Consideration of plant species that would benefit Grey-headed Flying-fox foraging <p>Targets to be achieved such as established vegetation cover and water quality parameters.</p>	Appendix B2 - Flora and Fauna Management Procedure and Tree Reports
Property and land use		
PL1	Prior to the commencement of works, a toll-free Acquisition Assistance Line will be established and maintained for a period of up to six months following completion of the final acquisition for the project.	Communication Strategy

EMM No.	EMM Requirements	Document Reference
	The Acquisition Assistance Line is to provide ongoing dispute resolution, a counselling program and contact information for relevant services for relocated persons.	
PL4	Prior to the commencement of construction, pre-construction Building Condition Surveys will be offered in writing, to the owners of properties where there is a potential for construction activities to cause cosmetic or structural damage. If accepted, a comprehensive written and photographic condition report would be produced by an appropriate professional prior to relevant works commencing.	Communication Strategy, Design Management Plan, Appendix B3 Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
PL5	Interface agreements will be entered into with relevant owners of infrastructure and utility services likely to be impacted by construction of the project. The agreements will likely identify: <ul style="list-style-type: none"> • Minimum separation distances and appropriate settlement criteria for utility infrastructure • Settlement monitoring requirements during construction Contingency actions in the event that settlement limits are exceeded.	Design Management Plan
PL7	Roads and Maritime will enter into access agreements with relevant councils and other agency stakeholders for temporary access to public land to enable the construction of the project.	Completed
Social and Economic		
SE1	A Site Establishment Management Plan will be prepared prior to construction and will have regard to the amenity of adjacent areas and minimising impacts to adjacent sensitive receivers, including potential noise, dust, traffic, visual, lighting and overshadowing and overlooking impacts during the establishment phase .	Appendix A4 – Site Establishment Management Plan
SE3	A Business Management Plan will be prepared prior to construction to detail the process for identification and communication with businesses adversely affected by construction works.	Communication Strategy
SE4	Prepare and implement a Construction Fatigue Protocol as part of the CNVMP to address potential construction fatigue impacts. The Protocol will include consideration of noise attenuation and periods of respite for affected stakeholders, where reasonable and feasible, and restricting out of hours work where practicable.	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works

EMM No.	EMM Requirements	Document Reference
SE5	A Community Communication Strategy would will be prepared prior to construction to detail the processes to facilitate communication between the project team and the community.	Communication Strategy
Soil and contamination		
SC2	A Hazardous Building Materials Management Plan will be prepared detailing measures to manage the removal of known and unexpected hazardous building materials, including asbestos within buildings and soil. The plan is to be prepared in accordance with relevant guidelines.	Appendix B8 – Contamination CEMP Sub-plan
SC3	<p>Detailed site (contamination) investigations will be undertaken in accordance with the NSW EPA (1995) <i>Sampling Design Guidelines</i> within the following ancillary facilities and construction sites prior to commencement of construction at these sites:</p> <ul style="list-style-type: none"> • Rockdale construction ancillary facility (C2) • President Avenue construction ancillary facility (C3), specifically Bicentennial Park and 427 to 441 West Botany Street • Parts of the shared cycle and pedestrian pathways where earth works are required within Scarborough Park North, Civic Avenue, Bicentennial Park, Rockdale Women’s Sports Field, Greg Atkins Mini Field, CA Redmond Field and White Oak Reserve • Princes Highway construction ancillary facility (C6), the 7-Eleven service station at 734 Princes Highway, Kogarah • The substation within St George TAFE. <p>Where required, based on the results of the additional investigations, a Remedial Action Plan (RAP) will be prepared prior to construction.</p>	Appendix B8 – Contamination CEMP Sub-plan
SC4	<p>Construction water treatment plants will be established and operated at the Arncliffe Construction Ancillary Facility (C1), Rockdale Construction Ancillary Facility (C2) and President Avenue Construction Ancillary Facility (C3) to treat water from the tunnel works. Discharge from these plants will be managed to achieve the applicable ANZECC criteria.</p> <p>Where feasible, water from the water treatment plants will be reused for construction activities.</p>	Appendix B4 – Soil and Surface Water Procedure
SC5	An Acid Sulfate Management Plan will be prepared detailing processes to manage actual and potential acid sulfate soils disturbed during construction.	Appendix B4 – Soil and Surface Water Procedure

EMM No.	EMM Requirements	Document Reference
		An Acid Sulfate Soil Management Plan is in preparation for construction. No bulk excavation during preliminary construction activities
SC6	Further detailed investigation and assessment will be undertaken in Bicentennial Park in order to develop a management plans for Leachate and Landfill Gas Management Plan . The purpose of the management plans will be implemented to minimise nuisance odours to the surrounding area during excavation and to contain and treat landfill gas emissions from excavations . prevent the accumulation of landfill gases in buildings, basins and subsurface service trenches and pits associated with the project The management plans may will include measures such as excavation staging, leachate and gas management, and gas and odour monitoring.	Design Management Plan
SC7	A soil conservation specialist will be engaged for the duration of construction to provide advice regarding erosion and sediment control.	Appendix B4 - Soil and Surface Water Procedure
SC8	Prior to ground disturbance in areas of very high potential soil salinity, testing will be carried out to confirm the presence of saline soils. If saline soils are encountered, they will be managed in accordance with Site Investigations for Urban Salinity (DLWC 2002).	Appendix B8 – Contamination CEMP Sub-plan
Groundwater and geology		
GW7	Prior to construction, a groundwater monitoring program will be prepared and implemented to monitor groundwater levels, construction and operational groundwater inflows in the tunnels, and groundwater quality in the three main aquifers impacted by construction works. The program will identify groundwater monitoring locations, performance criteria in relation to groundwater inflow and levels, and potential remedial actions that will be considered to address potential impacts. As a minimum, the program will include monthly manual groundwater level and quality monitoring and weekly monitoring of inflow volumes and quality.	Groundwater monitoring will continue as per the pre-construction phase, while the Groundwater Monitoring Program is developed during Stage 1.
Surface Water and Flooding		
SWF1	A program to monitor potential surface water quality impacts of the project will be developed and included in a Construction Soil and Water Management Plan (CSWMP).	Surface and ground water monitoring will continue as per the pre-construction

EMM No.	EMM Requirements	Document Reference
	<p>The program will include the water quality monitoring parameters (including pH, turbidity, dissolved oxygen, nitrogen and metals) and the monitoring locations (including Muddy Creek, Rockdale Bicentennial Park, North Scarborough Ponds and Cooks River) identified in Annexure G of Appendix L (Surface water technical report)</p> <p>Continuous surface water level and groundwater level monitoring will be undertaken within Bicentennial Park Pond and surrounding area for at least 12 months prior to the commencement of construction. Monthly groundwater quality would also be undertaken in the surrounding area. The data would be used as a baseline to monitor impacts on surface and groundwater levels and groundwater quality within the Pond during construction.</p> <p>In the instance that during detailed design it cannot be demonstrated that treated construction wastewater would meet the discharge criteria for Scarborough Ponds, in particular nutrient concentrations, treated construction wastewater from C2 and C3 will be discharged to the Muddy Creek stormwater catchment.</p>	<p>phase, while the Surface water Monitoring Program is developed during Stage 1.</p>
SWF6	<p>All works within watercourses or on waterfront land will be managed in accordance with the <i>Controlled Activities on Waterfront Land</i> guidelines (DPI 2012).</p> <p>The following specific measures are required to manage impacts within Bicentennial Park Pond:</p> <ul style="list-style-type: none"> • Installation of a temporary barrier to isolate the excavation works from the rest of the pond and prevent mobilisation of sediment and pollutants into adjacent areas. Water within the construction zone will be treated by the construction water treatment plant. Sediment mobilised during installation of the barrier will also be managed • Retention of hydrologic connectivity through Bicentennial Park Pond throughout construction 	<p>During preliminary construction, no works will occur within watercourses.</p> <p>Appendix B4 - Soil and Surface Water Procedure</p>
SWF8	<p>If the design identifies the risk of scour due to excessive velocities during construction and operation, the appropriate scour and erosion protection measures will be implemented at drainage outlets for both temporary and permanent works.</p>	<p>During preliminary construction, no works will occur within watercourses.</p> <p>Appendix B4 - Soil and Surface Water Procedure</p>

EMM No.	EMM Requirements	Document Reference
SWF10	A Flood Management Strategy (FMS) will be prepared prior to construction to demonstrate how flooding risks and behaviours will be mitigated during both the construction and operational phases. The FMS will include floor level survey for identified affected properties. The FMS would be prepared prior to commencement of construction by a suitably qualified and experienced person in consultation with directly affected landowners, Sydney Water, OEH, SES and relevant councils.	A Flood Management Strategy is in preparation, as part of detailed design, and will be completed (with consultation), prior to the construction stage.
Non-Aboriginal heritage		
NAH1	A Construction Heritage Management Plan will be prepared for the project. The plan will detail measures to minimise impacts on identified heritage features within the project boundary and will also detail procedures to manage unexpected heritage finds.	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
NAH2	Impacts to non-Aboriginal heritage items will to the greatest extent practicable, be avoided and minimised. Where impacts are unavoidable, works will be undertaken in accordance with the relevant management strategy as defined for the non-Aboriginal heritage item.	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
NAH3	Consultation will be undertaken with Bayside Council regarding the impacts that would occur to the Kings Wetland (heritage item listed on the Rockdale LEP 2011). Roads and Maritime will provide a copy of the proposed landscape rehabilitation plan to Council to facilitate comment on the proposed impacts and mitigation measures.	Communication Strategy; https://caportal.com.au/rms/m6/documents – Heritage Management Sub-plan
NAH5	<p>A protection area will be established either side of the proposed haul road to reduce impacts within the boundaries of the heritage listing. The delineation of the protection area will be maintained throughout the construction period.</p> <p>As part of the detailed design phase, the haul road through the boundaries of the heritage listing will be further optimised with a view to reducing the requirement for the removal of vegetation, as far as is practical.</p> <p>At the conclusion of construction, parts of the area within the boundaries of the heritage listing will be rehabilitated.</p>	https://caportal.com.au/rms/m6/documents – Heritage Management Plan and Appendix A4 – Site Establishment Management Plan

EMM No.	EMM Requirements	Document Reference
Aboriginal cultural heritage		
AH1	If an Aboriginal object(s) is discovered during construction it would be managed in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime Services 2015).	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
AH2	If human remains are discovered during construction, they would be managed in accordance with the Standard Management Procedure: Unexpected Heritage Items (Roads and Maritime Services, 2015).	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
AH3	The UDLP will include an Aboriginal interpretative signage strategy developed in consultation with the Metropolitan project would recognise the prior presence of Aboriginal people by highlighting resource zones they may have used. This could be undertaken through the implementation of interpretive signage and incorporated in to the Place making and Urban Design Strategy. Should this be pursued, it will be undertaken in consultation with the MLALC.	Design Management Plan
Waste Management		
W1	A Construction Waste Management Plan will be prepared for the project prior to construction and will detail appropriate waste management procedures. The CWMP will: <ul style="list-style-type: none"> • Document expected waste types and volumes for the project • Describe procedures for managing office and project waste materials including separation, treatment and disposal in accordance with relevant guidelines • Detail waste reporting requirements including the implementation of a waste register • Detail the process for identifying waste re-use sites including approval requirements. 	Appendix B9 - Waste CEMP Sub-plan
W4	Suitable areas within project sites will be identified to allow for contingency management of unexpected waste materials, including contaminated materials. Suitable areas will be required to be hardstand or lined areas that are appropriately stabilised and bunded, with sufficient area for stockpile storage.	Appendix B8 – Contamination CEMP Sub-plan and Appendix B9 - Waste CEMP Sub-plan
Climate change adaptation		
CC2	The increased potential for heat stress among construction personnel will be considered when refining construction Work Health and Safety Management Plans. Measures will be implemented to create	Work Health & Safety Management Plan

EMM No.	EMM Requirements	Document Reference
	greater awareness and education of personnel around health and wellbeing during periods of extreme heat.	
Greenhouse Gas		
GG1	Targets to reduce GHG emissions, including the use of green power and/or other renewable energy sources, will be included as part of the project's Sustainability Management Plan to assist in achieving 'Design' and 'As Built' ratings of Excellent under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	Sustainability Management Plan
GG2	An updated GHG assessment based on detailed design will be undertaken for ongoing monitoring and review of emissions during construction.	Sustainability Management Plan
GG4	Opportunities to use low emission construction materials, such as recycled aggregates in road pavement and surfacing, and cement replacement materials will be investigated and incorporated where feasible and cost-effective.	Sustainability Management Plan
GG5	Construction site layouts will be designed to reduce travel distances and double handling of materials so as to reduce fuel usage and emission generation.	Sustainability Management Plan and Appendix A4 – Site Establishment Management Plan
GG6	Construction plant and equipment will be well maintained to allow for optimal fuel efficiency.	Appendix B7 – Air Quality and Odour CEMP Sub-plan
GG7	Raw materials will be managed to reduce energy requirements for their processing. For example, stockpiled materials will be covered or provided undercover storage where possible to reduce moisture content of materials, and therefore the process and handling requirements.	Sustainability Management Plan
GG8	Locally produced goods and services will be procured where feasible and cost effective to reduce transport fuel emissions.	Sustainability Management Plan and Procurement Management Plan

RMS specification requirements

Table 4: RMS G36 requirements

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2	Implement a Contractors Environmental Management System (CEMS)	Section 1.5 of CEMP
Section 3	An environmental policy must be included in the CEMS	Appendix A3 – Environmental Policy
Section 3.1	Prepare and implement a CEMP in accordance with ISO 14001 Clause 4.	Section 1.5 of CEMP
Section 2	Nominate the Environmental Manager directly responsible for ensuring that the requirements of the CEMS are implemented and maintained.	Emergency and key contacts table - page iv
Section 3.3	Indicate how suitable resources will be assigned to ensure that the CEMP is fully implemented.	Section 3.4 of CEMP
Section 3.3	Detail the relationship between the designated Environmental Manager and other personnel responsible for implementing the CEMP.	Section 3.4 of CEMP
Section 3.1	Include a matrix or index in the CEMP showing where the environmental protection requirements of G36 have been addressed.	Appendix A1 – Legal and Compliance Tracking
Section 3.7	Advise RMS Representative of any changes to the CEMS or CEMP	Section 3.4 of CEMP
Section 3.9	Monitor and evaluate environmental performance.	Section 3.3.1 of CEMP
Section 3.10	Detail how control of non-conformity, corrective and preventive actions will be implemented and closed out.	Section 3.10 of CEMP
Section 3.9	Schedule and undertake CEMS audits and CEMP compliance audits.	Section 3.9.3 of CEMP
Section 3.1	A CEMP must be prepared and include environmental protection practices, resources and sequence of activities required to comply with relevant environmental legislation, conditions of any applicable licence, approval and permit, ISO 14001 Clause 4.	Section 3 of CEMP
Section 3.1	The CEMP must be either incorporated or part of the project quality plan.	Section 3.10.2

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 4	The CEMP must identify potential adverse environmental effect, applicable regulatory requirements and/or compliance limits, with a particular emphasis on a risk-based approach. Appropriate environmental protection measures must be documented to keep environmental effects within compliance limits.	Section 4 of CEMP CEMP Appendices B1 to B9
Section 4	The CEMP must include all supplementary plans for environmental protection.	CEMP Appendices B1 to B9
Section 3.3	The CEMP must indicate the names, responsibilities and authority of your site management personnel who have primary responsibility for implementing the CEMP, monitoring its effectiveness, rectifying and reporting any environmental deficiencies, controlling further construction activities until deficiencies are rectified and keeping your environmental records.	Emergency and key contacts table (front of CEMP) Section 3.4.1 of CEMP
Section 3.3	The CEMP must identify the Environmental Manager as the authorised contact person for communications with the Roads and Maritime Representative and EPA on environmental matters.	Section 3.4.1 of CEMP
Section 3.12	The CEMP must detail how changes to environmental management documentation and data are to be identified and communicated to relevant project personnel.	Section 3.13 of CEMP
Section 3.8	<p>The CEMP must include details of:</p> <ul style="list-style-type: none"> • Key emergency response personnel showing responsibilities and contact details including all-hours telephone numbers. • Emergency services (e.g. ambulance, fire brigade, spill clean-up services). • Communications strategy (internal and external). • Containment measures to be taken in the event of emergency situations that may arise during the Contractor's Work and 	Emergency and key contacts table Section 3.7 of CEMP Section 3.8 of CEMP

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
	procedures for restoration.	
Section 4.14	All Environmental Incidents must be managed and reported in accordance with the Roads and Maritime-Environmental Incident Classification and Reporting Procedure.	Section 3.8 of CEMP
Section 4.14	<p>EPA will be notified via the EPA Environment Line (telephone 131 555) of any environmental incidents or pollution incidents on or around the Site in accordance with Part 5.7 of the Protection of the Environment Operations Act 1997 (NSW) (POEO Act), in the following circumstances:</p> <ul style="list-style-type: none"> • If actual or potential harm to the health or safety of human beings or ecosystems is not trivial. • If actual or potential loss or property damage (including clean-up costs) associated with an environmental incident exceeds \$10,000. • Notify Roads and Maritime verbally immediately, and in writing within 24 hours, of all environmental incidents. 	Section 3.8 of CEMP
Section 3.5	Ensure that all staff and subcontractors working on the Site are provided with environmental training to achieve a level of competence and awareness appropriate to their assigned activities before they commence their assigned activities.	Section 3.6 of CEMP
Section 3.4	Include in the CEMP the procedures to be implemented to ensure subcontractor compliance.	Section 3.9 of CEMP
Section 3.7.1	The CEMP must identify at least two people (and 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 measures, as directed by an authorised officer of the EPA.	Section 3.7.3 of CEMP
Section 3.7.2	Notify local residents about new or changed construction activities which will affect access to their properties or otherwise significantly disrupt residents' use of their premises.	Communications Strategy

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 3.7.2	Inform residents of the proposed work outside normal working hours.	Appendix B3 – Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works
Section 3.7.2	The CEMP must include a procedure for notifying Roads and Maritime and all relevant authorities in advance of proposed extension to hours of work.	Appendix B3 – Noise and Vibration Sub-plan and CNVIA for Preliminary Construction Works
Section 3.7.3	Report on complaints about any environmental issues, including pollution, arising from the Works.	Communication Strategy
Section 3.11	Maintain environmental records to demonstrate compliance with the CEMP.	Section 3.11.1 of CEMP
Section 3.9	Document in the CEMP and implement a checking procedure to verify that work is compliant with this Specification.	Section 3.9.3 of CEMP
Section 3.9	Undertake inspections and surveillance, and report on performance of high risk events and activities, works in environmentally sensitive areas, the adequacy of operational controls, and measurements for aspects where compliance limits have been specified.	Section 3.9.1 of CEMP
Section 3.9	Develop and implement a risk-based auditing program.	Section 3.9.3 of CEMP
Section 4.11.2	Implement and document in the CEMP a waste and recycling material data collection program.	Appendix B9 – Waste CEMP Sub-plan
Section 4.13	Detail in the CEMP the location of environmental controls in environmentally sensitive areas.	Appendix B2 – Flora and Fauna Management Procedure Appendix A6 Sensitive Area Plans
Section 3.2.2	Identify obligations under environmental legislation relevant to the Work.	Appendix A1 – Legal and Compliance Tracking
Section 3.2.2	Obtain all necessary approvals, licences and permits required for the work and carry out work in accordance with the requirements.	Section 3.2.3 of CEMP Appendix A Legal and Compliance Tracking

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 4.15.1	Identify construction activities and access requirements to the construction site and the other areas affected by the Work.	Appendix B1 – Traffic and Access Management Procedure
Section 4.15.1	Prepare and implement a construction traffic and access management plan.	Appendix B1 – Traffic and Access Management Procedure
Section 4.1	Prepare and implement a construction soil and water quality management plan addressing: <ul style="list-style-type: none"> • Erosion and sedimentation control. • Water extraction. • Dewatering. • Impacts on groundwater from construction. 	Appendix B4 - Soil and Surface Water Management Procedure
Section 4.4	Prepare and implement a construction air quality management plan.	Appendix B7 – Air Quality and Odour CEMP Sub-plan
Section 4.6 and 4.7	Prepare and implement a construction noise and vibration management plan.	Appendix B3 – Noise and Vibration Sub-plan and CNVIS for Preliminary Construction Works
Section 4.8	Manage clearing, mulch, flora and fauna. Prepare and implement a construction flora and fauna management plan.	Appendix B2 – Flora and Fauna Management Procedure
Section 4.8	Include fauna habitat conservation measures in the CEMP. The CEMP must include provisions for compliance with the <i>Environment Protection and Biodiversity Conservation 1999 Act</i> and <i>Biodiversity Conservation Act 2016</i> where listed threatened species or migratory species are affected.	Appendix B2 – Flora and Fauna Management Procedure
Section 4.2	Plan and execute the Work so as to minimise the possibility of pollution of the Site and adjoining areas from chemicals, dangerous goods and other potential contaminants.	Appendix B8 – Contamination CEMP Sub-plan Appendix B4 – Soil and Surface Water Management Procedure

G36 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 4.1	The CEMP must include details of the management of the bunded areas including, but not be limited to, monitoring of the bunded areas, drainage requirements and procedures to meet environmental requirements and to ensure that bund capacities are maintained.	Appendix B4 – Soil and Surface Water Management Procedure
Section 4.9 and 4.10	Prepare and implement a construction heritage management plan to manage Aboriginal and non-Aboriginal heritage.	https://caportal.com.au/rms/m6/documents – Heritage Management Plan
Section 4.11	Prepare and implement a construction waste and energy management Plan.	Appendix B9 – Waste CEMP Sub-plan
Section 4.11	The CEMP must contain details of types and quantities of proposed material likely to be generated and proposed methods of disposal, recycling or re-use of such surplus materials.	Appendix B9 – Waste CEMP Sub-plan
Section 4.16	Reinstate all disturbed areas both on and off the Site.	Appendix B4 – Soil and Surface Water Management Procedure
Section 4.15.1	Prepare and implement an ancillary facilities management plan.	Appendix A4 – Site Establishment Management Plan
Section 4.2	Prepare and implement a construction contaminated land management plan	Appendix B8 – Contamination CEMP Sub-plan

Table 5: 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	Appendix B4 – Soil and Surface Water Management Procedure
Section 2.1.2	<p>The SWMP must include details of the following, where relevant:</p> <ul style="list-style-type: none"> (a) Purpose and objectives of SWMP. (b) Approvals, licence requirements and relevant legislation. (c) Site investigation and assessment of the following: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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; 	Appendix B4 – Soil and Surface Water Management Procedure

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	<ul style="list-style-type: none"> iv. procedures for the periodic removal and disposal of the sediment collected within the basins. (g) Training, including: <ul style="list-style-type: none"> i. site induction; ii. environmental training; iii. toolbox training. (h) Inspection and auditing. 	
	Prepare an Erosion and Sediment Control Plan (ESCP) for the Work Under the Contract	Appendix B4 – Soil and Surface Water Management Procedure
Section 2.2.2	<p>The ESCP must identify all erosion and sediment control risks and describe how these will be addressed during construction.</p> <p>The ESCP must include details of the following where relevant:</p> <ul style="list-style-type: none"> (a) erosion and sediment control measures required: <ul style="list-style-type: none"> 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; 	Appendix B4 – Soil and Surface Water Management Procedure

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	<ul style="list-style-type: none"> (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; (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. 	
Section 2.3	Prepare and implement a Water Quality Monitoring Program	Pre-construction monitoring of waterways within the Project location will continue (as per the EIS monitoring) throughout the preliminary construction stage.
Section 3.5	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.	Appendix B4 – Soil and Surface Water Management Procedure
Section 3.4.1	Conduct any dewatering activities in a manner that does not cause erosion and/or pollute the environment.	Appendix B4 – Soil and Surface Water Management Procedure
Section 3.4.2	Prepare a procedure for all identified dewatering activities as part of the SWMP or ESCP.	Appendix B4 – Soil and Surface Water Management Procedure
Section 3.4.5	Keep records of the following: <ul style="list-style-type: none"> 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; 	Appendix B4 – Soil and Surface Water Management Procedure

G38 Reference	Requirement	Relevant section of CEMP or supporting documentation
	vi. any other EPA licence requirements where issued.	
Section 3.7.1	Where work is required within waterways, prepare an Environmental Work Method Statement (EWMS) for the work(s).	No works under this CEMP will be conducted within waterways. CEMP Table 5

Table 6: RMS G40 requirements

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
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 Drawings. Also provide a report which: <ul style="list-style-type: none"> (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. 	Appendix B2 – Flora and Fauna Management Procedure
Section 2.4	Plan and carry out all operations to ensure that there is no damage to any trees outside the limits of clearing specified.	Appendix B2 – Flora and Fauna Management Procedure
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).	Appendix B2 – Flora and Fauna Management Procedure
Section 2.4	Weeds must be removed and disposed of in accordance with the requirements of the local Council.	Appendix B2 – Flora and Fauna Management Procedure

G40 Reference	Requirement	Relevant section of CEMP or supporting documentation
Section 2.4	<p>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 not be limited to:</p> <ul style="list-style-type: none"> 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. 	Appendix B2 – Flora and Fauna Management Procedure
Section 4.1	<p>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:</p> <ul style="list-style-type: none"> (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 exceeds the quantity required under the Contract, the excess mulch will become your property and must be removed from the Site. 	<p>Appendix B2 – Flora and Fauna Management Procedure</p> <p>Mulch is not expected to be reused on Project.</p>
Section 5	<p>Unless otherwise specified, all materials cleared, pruned and grubbed in accordance with this Specification shall become your property and must be removed from the site for recycling or disposal. Disposal must be in accordance with your Waste Management Plan.</p>	<p>Appendix B2 – Flora and Fauna Management Procedure</p> <p>Appendix B9 – Waste CEMP Sub-plan</p>

Table 7: G36, G38 and G40 specification hold and witness points

Specification	Clause	Type	Description	Relevant section of CEMP or supporting documentation
G36	3.1	Hold Point	Commencement of Work not previously addressed by CEMS and CEMP documents and authorised by earlier Hold Point release.	CEMP Section 3.13.1
G36	3.2.2	Hold Point	Commencement of any activity requiring an approval, licence and/or permit from an appropriate authority.	CEMP Section 3.13.1
G36	3.10	Hold Point	Any activity that causes or has the potential to cause harm to the Environment due to your failure to meet your environmental obligations under the Deed.	Section 3.8 of CEMP & Appendix A7 – TfNSW Environmental Incident Classification and Reporting Procedure
G36	4.2.4	Hold Point	Activities within the vicinity of actual or suspected contaminated land.	Appendix B8 – Contamination CEMP Sub-plan (Section 4.2.1 and Annexure A)
G36	4.2.5	Hold Point	Activities within the vicinity of actual or suspected Contaminated land. (Where the Work Method Statement is to be prepared by the Contractor) (Where there is an unexpected contamination find identified in accordance with the Work Method Statement)	Appendix B8 – Contamination CEMP Sub-plan (Section 4.2.1 and Annexure A)
G36	4.2.6	Hold Point	Activities associated with the remediation of actual or suspected Contaminated land.	Appendix B8 – Contamination CEMP Sub-plan (Section 4.2.1 and Annexure A)

Specification	Clause	Type	Description	Relevant section of CEMP or supporting documentation
G36	4.7	Hold Point	Commencement of blasting, pile driving, excavation by hammering or ripping, dynamic compaction or demolition operations or any other activities which may cause damage through vibration or air blast.	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIS for Preliminary Construction Works
G36	4.11.4	Hold Point	Transport of waste generated under the Contract to the “waste site”.	Appendix B9 – Waste CEMP Sub-plan (Section 4.4.4)
G36	4.13	Hold Point	Working in or near the environmentally sensitive areas.	CEMP Section 3.3.2; Appendix A6 – Sensitive Area Plans; & Appendix B2 – Flora and Fauna Management Procedure
G36	4.15.2	Hold Point	Taking possession of any land nominated or authorised by the Principal for use for the Contractor’s site facilities.	D&C Deed Exhibit H (Site Access Schedule)
G38	3.1.1	Hold Point	Commencement of work requiring the installation of erosion control and sediment capture measures not previously addressed by ESCP and authorised by earlier Hold Point release.	Appendix B4 – Soil and Surface Water Management Procedure
G38	3.1.1	Witness Point	Disturbance of the existing surface on a section of the Site, other than for the installation of erosion and sediment capture measures.	Appendix B4 – Soil and Surface Water Management Procedure
G40	2.4	Hold Point	Clearing any area of work.	Appendix B2 – Flora and Fauna Management Procedure

Requirements of Environmental Management Plan Guideline (DIPNR, 2004) (as per MCoA C1)

Does Your EMP Contain	Yes	Section
Background (EMP Guideline Section 4.3.1)		
Introduction	✓	Section 1
Project Description	✓	Section 1.3
EMP Context	✓	Section 1.1
EMP Objectives	✓	Section 1.4
Environmental Policy	✓	Appendix A3
Environmental Management (EMP Guideline Section 4.3.2)		
Environmental Management Structure & Responsibility	✓	Section 1.5 Section 3.4
Approval and Licensing Requirements	✓	Appendix A1
Reporting	✓	Section 3.9.5
Environmental Training	✓	Section 3.6
Emergency Contacts and Response	✓	Emergency and key contacts table
Implementation (EMP Guideline Section 4.3.3)		
Risk Assessment	✓	Appendix A2
Environmental Management Activities and Controls	✓	Appendix A1 CEMP Sub-plans
Environmental Control Plans or Maps	✓	CEMP Sub-plans
Environmental Schedules	✓	CEMP Sub-plans

Does Your EMP Contain	Yes	Section
Monitoring and Review (EMP Guideline Section 4.3.4)		
Environmental Monitoring	✓	Section 3.9
Environmental Auditing	✓	Section 3.9
Corrective Action	✓	Section 3.7.3 Section 3.9.1
EMP Review	✓	Section 3.12 Section 3.13.1 Section 3.13.2

Legal requirements

Table 8: Legal register

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
General					
<i>Environmental Planning and Assessment Act, 1979 (EP&A Act)</i>	All	The Project has been declared Critical State Significant Infrastructure (CSSI) by virtue of Schedule 5, clause 11 of <i>State Environmental Planning Policy (State and Regional Development) 2011</i> . 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 S5.25	Yes	Section 1.1 of CEMP
Water					
<i>Protection of the Environment Operations Act 1997</i>	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	Appendix B4 – Soil and Surface Water Management Procedure
Noise					
<i>Protection of the Environment Operations Act 1997</i>	Plant maintenance and operation	Do not operate plant if it emits noise caused by poor maintenance or operation.	S139	Yes	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works
<i>Protection of the Environment Operations Act 1997</i>	Materials management	Do not cause noise by failing to properly and efficiently deal with materials.	S140	Yes	Appendix B3 – Noise and Vibration CEMP Sub-plan and CNVIA for Preliminary Construction Works

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
Contaminated material					
<i>Protection of the Environment Operations Act 1997</i>	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	Appendix B4 – Soil and Surface Water Management Procedure
<i>Contaminated Land Management Act 1997</i>	Reporting contamination	Notify the EPA if; <ul style="list-style-type: none"> 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	Appendix B8 – Contamination CEMP Sub-plan
Biodiversity					
<i>Biodiversity Conservation Act 2016</i>	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	Appendix B2 – Flora and Fauna Management Procedure

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
<i>Biodiversity Conservation Act 2016</i>	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	Appendix B2 – Flora and Fauna Management Procedure
<i>Biodiversity Conservation Act 2016</i>	Biodiversity	Do not damage declared areas of outstanding biodiversity value unless authorised under other legislation (e.g. planning approval).	S2.3 S2.8	Yes	Appendix B2 – Flora and Fauna Management Procedure
<i>Biodiversity Conservation Act 2016</i>	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	Appendix B2 – Flora and Fauna Management Procedure
<i>Biosecurity Act 2015</i>	Weeds	Manage weeds on site in accordance with the relevant Regional Strategic Weed Management Plan.	S22	Yes	Appendix B2 – Flora and Fauna Management Procedure
<i>Biosecurity Regulation 2017</i>	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	Appendix B2 – Flora and Fauna Management Procedure
<i>Fisheries Management Act 1994</i>	Fish passage	Do not block fish passage without a permit	S219	No	Appendix B2 – Flora and Fauna Management Procedure
<i>Environment Protection Biodiversity Conservation Act, 1999 (Commonwealth)</i>	Flora and fauna conservation	Do not kill, injure or take a member of a listed threatened species without a permit.	Part 13	Yes	Appendix B2 – Flora and Fauna Management Procedure
Waste					

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
<i>Protection of the Environment Operations Act 1997</i>	Waste and transportation	<p>Do not undertake a scheduled waste activity unless in accordance with an environmental protection licence.</p> <p>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:</p> <ul style="list-style-type: none"> • 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 more than 30,000 tonnes of waste is received per year from off site. 	Part 3.2 Schedule 1	Yes	Appendix B9 - Waste CEMP Sub-plan
		Only transport waste to a facility that can lawfully accept the waste.	S143	Yes	Appendix B9 - Waste CEMP Sub-plan

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		Do not dispose of waste in a manner that harms or is likely to harm the environment.	S115	Yes	Appendix B9 - Waste CEMP Sub-plan
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	Appendix B9 - Waste CEMP Sub-plan
		Comply with record keeping requirements in relation to the transport of certain types of waste.	Regulation Part 3	Yes	Appendix B9 - Waste CEMP Sub-plan
Heritage					
<i>Heritage Act 1977</i>	Heritage	Notify the heritage Council on discovery of a relic	S146	Yes	TfNSW Standard Heritage Management Procedure Section 3.8 of CEMP & Appendix A7
<i>National Parks and Wildlife Act 1974</i>	Aboriginal places and objects	Do not harm or desecrate an Aboriginal object or Aboriginal place without consent.	S86 S90	No	Section 3.8 of CEMP & Appendix A7
		Notify the NPWS within reasonable time of becoming aware of the location or discovery of certain Aboriginal objects.	S89A	Yes	Section 3.8 of CEMP & Appendix A7
<i>Aboriginal and Torres Strait Islander Heritage</i>	Protection of areas and objects	Report any discovery of Aboriginal remains to the Federal Minister for the Environment and Heritage.	S20	Yes	Section 3.8 of CEMP & Appendix A7

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
<i>Protection Act 1984 (Commonwealth)</i>		Comply with the provisions of any declaration in relation to a significant Aboriginal area or object.	S22	Yes	Section 3.8 of CEMP & Appendix A7
General					
<i>Protection of the Environment Operations Act 1997</i>	Harming the environment	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	Yes	Appendix B9 - Waste CEMP Sub-plan, Appendix B4 – Soil and Surface Water Management Procedure
<i>Protection of the Environment Operations Act 1997</i>	Control equipment	Properly and efficiently maintain and operate any installed pollution control equipment (including monitoring devices).	S167	Yes	Appendix B7 - Air Quality and Odour CEMP Sub-plan
<i>Protection of the Environment Operations Act 1997</i>	Notification of pollution incidents	Notify the EPA immediately of pollution incidents where material harm to the environment is caused or threatened.	S148	Yes	Section 3.8 of CEMP & Appendix A7
<i>Protection of the Environment Operations Act 1997</i>	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	S47 S48	Yes	Environment Protection Licence (EPL)

Act	Activity / aspect	Requirement	Reference	Division 5.2 applicability	Relevant section of CEMP or supporting documentation
		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 classified, as a freeway or tollway under the <i>Roads Act 1993</i> .			
<i>Environmentally Hazardous Chemicals Act, 1985</i>	Hazards and risks	Obtain a licence to undertake prescribed activities involving environmentally hazardous chemicals or declared chemical wastes.	S28	Yes	Appendix B4 - Soil and Surface Water Management Procedure
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	Hazards and risks	Ensure that dangerous goods are transported in a safe manner.	S9	Yes	Appendix B4 - Soil and Surface Water Management Procedure
<i>Pesticides Act 1999</i>	Hazards and risks	Use pesticides in an environmentally sensitive manner. Do not use an unregistered pesticide without a permit. Read the label or permit for the pesticide. Use registered pesticides in accordance with instructions on the label. 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.	S12 S13 S14 S15 S17	Yes	Appendix B2 – Flora and Fauna Management Procedure
<i>National Greenhouse and Energy Reporting Act, 2007 and Regulations 2008</i>	Greenhouse gas emissions	Accounting and reporting of greenhouse gases produced and energy consumed during construction. Applicability dependent on thresholds.	-	Yes	Sustainability Management Plan



Appendix A2

Aspects and Impacts Register

*M6 Stage 1: Preliminary construction
including commencement activities*

November 2021

This Environmental Aspects and Impacts Register has been prepared by CPB Ghella UGL Engineering (CGU) Joint Venture, to supplement the Environmental Risk Analysis conducted as part of the Environmental Assessment (EA).

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; and
- 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 EA and subsequent Submissions Report.

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Risk Analysis Risk Classification = Consequence x Likelihood		LIKELIHOOD				
		5 Very high*	4 High*	3 Medium*	2 Low*	1 Very low*
		Almost certain to happen i.e. could occur daily or more frequently	Strong anecdotal evidence that it is likely to occur in the identified circumstances without any controls in place;	May occur in the identified circumstances without any controls in place	Could occur at some time in the identified circumstances without any controls in place but not expected.	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

Figure 1 Risk assessment matrix

C1 Arncliffe construction ancillary facility

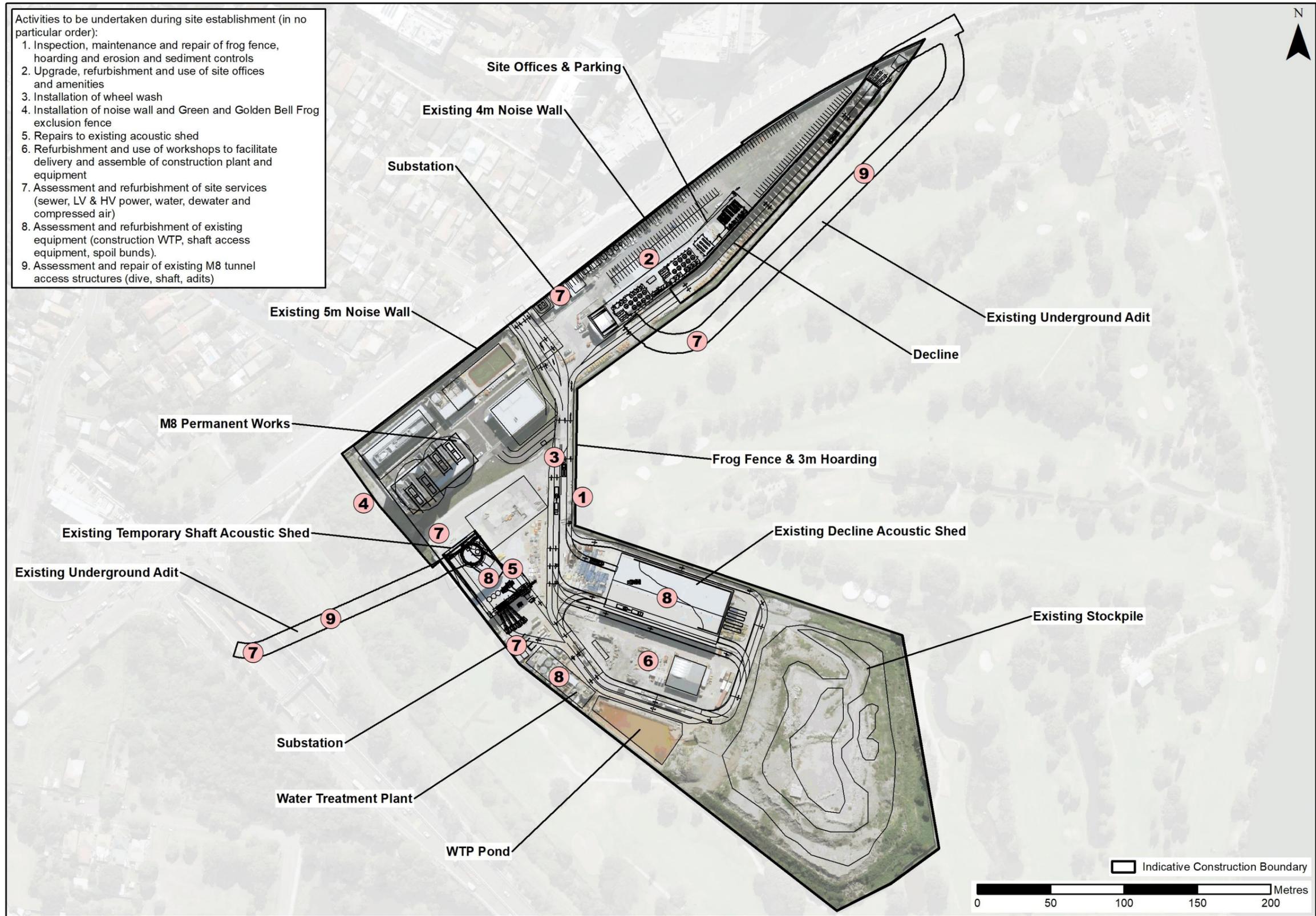


Figure 2 Stage 1 Preliminary construction activities at C1 Arncliffe construction ancillary facility

Table 1 Aspects and impacts register for C1 Arncliffe construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<p>Light vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 68 Workforce, staff and visitors vehicles Delivery of small-scale construction materials in vans 	Increased vehicle movements into construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> The preliminary construction and commencement activities undertaken at C1 will not include activities which impact the operation of the road network Spoil haulage will not be undertaken during preliminary construction including commencement activities All utility services are connected to the existing C1 construction ancillary facility and there are no foreseeable changes which would require works to be undertaken outside of the C1 ancillary facility Access to C1 will be via the existing access point (Marsh Street): <ul style="list-style-type: none"> When travelling in north bound lane, access to site will only occur from designated right turning lane at signalised intersection When travelling in south bound lane, access to site can occur in far-left hand lane Left hand turn to exit site only No access from Flora Street All site personnel would undergo a site induction and ongoing toolbox talks detailing traffic, parking, transport and access management measures Vehicle Management Plan will be distributed to all subcontractors who need to attend site <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Anticipated peak daily vehicle movements to C1 Development of Vehicle Management Plans Access arrangements for C1 Communication and training to be undertaken
	<p>Heavy vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 30 Delivery of plant and equipment on semi-trailers, some oversized Delivery of construction materials on flatbed trucks Delivery of concrete and shotcrete via concrete agitator Delivery and removal of portable buildings Fuel tankers distributing fuel and refuelling at designated refuelling area <p>Other:</p> <ul style="list-style-type: none"> Street sweeper routinely maintaining internal haul roads and Marsh Street Special purpose trucks servicing waste skips and front-loading bins Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within construction ancillary facility 			Out of hour works that could disrupt sensitive receivers including: <ul style="list-style-type: none"> Deliveries of plant and equipment 		
			Parking in local streets	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Parking is available on site for workforce, staff and visitors All on site personnel would undergo a site induction and ongoing toolbox talks that detail parking and transport management measures <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure. 	7 (minor)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Implementation of Construction Parking and Access Strategy. 		
		Vehicles using local roads	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> All construction traffic will use the most direct route to the closest arterial and motorway network to minimise impacts on local roads No access to C1 ancillary facility from Flora Street Minimise local road closures and maintain adequate property access <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Access arrangements for C1 <p>Communication and training which would be undertaken</p>
Flora and Fauna	<ul style="list-style-type: none"> Inspection and maintenance of erosion and sediment controls and frog fence on boundary of C1 construction ancillary facility Installation of hoarding and frog fence in Lot 2E (adjacent to M8 Motorway Operations Centre) Activities being undertaken within the existing C1 construction ancillary facility 	<ul style="list-style-type: none"> Unexpected encounter of Green and Golden Bell Frog (GGBF) while inspecting and maintaining erosion and sediment controls and frog fence Unexpected encounter of GGBF while installing hoarding and frog fence in Lot 2E Unexpected encounter of GGBF while undertaking activities within C1 construction ancillary facility Spread of Chytrid fungus 	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> All Stage 1 Preliminary Construction activities are to take place within C1 boundary A No-Go Zone will be established outside the C1 boundary. Entry to No-Go Zone will be managed through a permit system: <ul style="list-style-type: none"> Hygiene practices will be enforced before entering No-Go Zone to prevent the risk of spreading Chytrid Fungus Boundary controls including frog fence are to be inspected and maintained Frog fence must be installed in accordance with the design outlined in the Green and Golden Bell Frog Plan of Management If a GGBF is encountered, the GGBF Stop Works Procedure must be implemented immediately Workforce and staff members to be educated on GGBF, the risks posed to this species and control measures to be implemented on site through inductions and information posters Frog handling training (by Project Herpetologist) will be undertaken with workforce and staff who undertake frog fence inspection and maintenance activities <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B2 Flora and Fauna Management Procedure. Implementation of Green and Golden Bell Frog Plan of Management. 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure which contains:</p> <ul style="list-style-type: none"> GGBF Stop Works Procedure <p>CEMP Section 3.6 Competence, training and awareness:</p> <ul style="list-style-type: none"> Inductions Frog handling training Information posters (SEPs) <p>Green and Golden Bell Frog Plan of Management</p>
		Encountering fauna within C1 (including injured fauna)	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> If fauna is encountered, the Fauna Handling Procedure will be implemented. Boundary controls including frog exclusion fence, hoarding and noise walls are to be inspected, maintained and any gaps rectified immediately. <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B2 Flora and Fauna Management Procedure. 	3 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure which contains:</p> <ul style="list-style-type: none"> Fauna Handling Procedure
		Spread of weeds	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides beyond the C1 project boundary 	6 (Minor)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> An Environmental Work Method Statement will be developed on the application of pesticides and activity carried out in accordance with this EWMS <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Weed Management Procedure found in Appendix B2 Flora and Fauna Management Procedure Implementation of management measures outlined in the EWMS 		<ul style="list-style-type: none"> Appendix A Air Quality Monitoring Program <p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Weed Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Light spill from construction ancillary facility impacting fauna	9 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Lights are to be directed down and away from Kogarah Golf Course Where required, shields are to be placed on lights to direct light down into compound Lighting inspected regularly during environmental inspections or during noise monitoring to ensure light spill measures are effective <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in Appendix A4 Site Establishment Management Plan 	3 (minor)	<p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan (Table 5)
Noise and Vibration	<ul style="list-style-type: none"> Installation of hoarding along boundary of Lot 2E Utility and services reestablishment including: <ul style="list-style-type: none"> Pipes for sewer, compressed air, water and dewater LV and HV power Gantry crane and alimak within Temporary Shaft Acoustic Shed Wheel wash Amendments and repairs to existing structures including: <ul style="list-style-type: none"> Construction WTP Offices and amenities Temporary shaft acoustic shed Workshop 	<ul style="list-style-type: none"> Noise impacts on sensitive receivers from high impact activities within construction ancillary facility, including the use of: <ul style="list-style-type: none"> Rattle guns, welders and grinders at mechanical workshop. Rock hammer to facilitate the installation of wheel wash. Rattle guns and cutters to repair existing acoustic shed. Rattle guns to inspect, repair and/or replace service pipes. 	16 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> Impact of works to be assessed prior to works commencing through a Gateway Construction Noise Impact Assessment and/or the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan including: <ul style="list-style-type: none"> Respite periods Works to take place within C1 ancillary facility behind existing noise walls and hoarding Monitoring carried out in accordance with the CNVIA Programming of works to minimise the duration of noisy works All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of noise sensitive receivers and mitigation measures that must be implemented Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA Notification in accordance with the Community Communication Strategy List of assessed equipment and mitigation measures required to undertake high impact works to be specifically listed in Work Pack's 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 7 Construction noise and vibration assessment Section 8 Environmental Control Measures Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> Section 5.3.1 High noise impact activities Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.6 Competence, training and awareness Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) <p>Community Communication Strategy</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> ○ Spoil bunds within acoustic sheds • Geotechnical assessment of existing tunnel adits which may include repair and restoration including: <ul style="list-style-type: none"> ○ Repair and replace temporary tunnel support systems (e.g. ventilation fans) ○ Upgrade and replace existing service pipes to make safe for use during Stage 2 construction ○ Upgrade or replace emergency equipment ○ Decline and invert repairs ○ Ground support activities • Out of hours deliveries 	<ul style="list-style-type: none"> • Vibration impacts on sensitive receivers from use of vibratory equipment, including the use of: <ul style="list-style-type: none"> ○ Vibratory roller to facilitate the installation of the wheel wash. ○ Use of bolter underground to install ground support (if required following geotechnical assessment). ○ Use of rock hammers to repair invert of adit and decline. 	16 (significant)	<ul style="list-style-type: none"> • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan including: <ul style="list-style-type: none"> ○ Respite periods ○ Works to take place within specified areas only ○ Monitoring in accordance with the CNVIA • Programming of works to minimise the duration of works • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy • List of assessed equipment and mitigation measures required to undertake works which are at risk of generating vibration specifically listed in Work Pack's 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 6.3 Vibration mitigation measures • Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 3.6 Competence, training and awareness • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) <p>Community Communication Strategy</p>
		Noise impacts from out of hour deliveries	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • OOHW only where justified (oversize permit etc) • OOHW Approval must be obtained prior to works taking place and signed onto at pre-start • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. Works to be carried out in accordance with the CNVIA • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan and CNVIA • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy • The Work Pack/s must include assessed plant, equipment and work area along with any mitigation measures which need to be implemented. 	6 (minor)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 5.3 Noise mitigation and management • Appendix C Construction Timetable activities management <p>Out of Hours Work and Construction Fatigue Protocol (Appendix C to the Noise and Vibration Preliminary CEMP Sub-plan)</p> <p>Community Communication Strategy</p> <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 3.6 Competence, training and awareness

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
						<ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Inadequate notification of sensitive receivers impacted by activities taking place within C1 ancillary facilities.	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities Notification to be carried out in accordance with mitigation measures outlined in CNVIA All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA Notification in accordance with the Community Communication Strategy The Work Pack/s to be reviewed by Community Relations Advisor 	9 (moderate)	<p>Community Communication Strategy</p> <p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 4.1 Sensitive receivers Section 5 Noise and vibration criteria for NSW Section 7 Construction noise and vibration assessment Section 8 Environmental Control Measures Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> Section 3 nearest sensitive receivers Section 4 Construction noise and vibration objectives Section 5.3.2 Noise control and management measures <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.7 Communication
Soil and Surface Water	<ul style="list-style-type: none"> Operation of the existing construction water treatment plant (WTP) including water discharge Maintenance of WTP pond Cleaning and where required, upgrade of internal stormwater drains and sumps Installation of environmental control including erosion and sediment controls and hoarding in Lot 2E Stockpiling of material generated from activities listed above 	Impact to surface waters from inappropriate discharge	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Existing water collection and treatment systems to be maintained. Water for discharge from C1 ancillary facility will only be from the licenced discharge point (pre-existing construction WTP) Engineering controls at WTP maintained to prevent non-compliant water from being discharged Sampling and monitoring of treated water carried out in accordance with Project EPL All discharge activities to occur in accordance with the Water Reuse and Discharge Procedure. This includes implementation of a Permit to Dewater for all discharge events. The WTP will only be operated by personnel trained to operate the WTP including what to in the event of an emergency Ongoing pre-construction groundwater and surface water monitoring to continue <p>Indirect:</p>	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Water Reuse and Discharge Procedure <ul style="list-style-type: none"> Permit to Dewater <p>Project EPL</p> <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.2.3 Regulatory requirements and compliance Section 3.8 Emergency and Incident Planning Appendix A7 TfNSW Incident Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> Ongoing management of pre-existing stockpile Use of plant and equipment, including refuelling Concrete works (including washout of agitators) Vehicles and trucks exiting C1 ancillary facility 			<ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Operate and maintain construction WTP in accordance with construction WTP operating manual Implementing the TfNSW incident procedure in the event of a non-compliance 		<ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Sediment laden water leaving C1 boundary during rainfall event	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Plans (ESCP) would be prepared and implemented for all work areas and stages All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) Targeted training for key on site personnel who are involved in the installation and maintenance of erosion and sediment controls An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure ESCP to be included in Work Packs which detail activities working in close proximity to the site boundary (e.g. construction of hoarding in Lot 2E) 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Procedure Stockpile Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Mismanagement of sludge produced from cleaning stormwater drains, leading to escape of material beyond boundary	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Slurry to be collected in vacuum truck from internal stormwater drains Works to only occur within C1 construction ancillary facility (no live stormwater drainage connected to external systems) Erosion and Sediment Controls as per the ESCP will be implemented and maintained <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Procedure
		ASS/PASS encountered during hoarding installation works in Lot 2E	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> No bulk excavation occurring during Stage 1 preliminary construction Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Material from footings of noise wall to be stockpiled in a bunded area within an acoustic shed. <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1 <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan Control measures to be included in Work Pack for construction of hoarding in Lot 2E 		
		Contamination of soil or water due to spills of oils and chemicals related to: <ul style="list-style-type: none"> Mechanical failures Refuelling activities WTP operation 	8 (minor)	Direct: <ul style="list-style-type: none"> Spill kits available at locations within the C1 ancillary facility at all times The use of any hazardous substances that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds Any refuelling on site must follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. All spills or leakages will be immediately contained and cleaned up Spill containment kits will be placed at locations where chemicals are stored or used and where refuelling is permitted Inspection regime for chemical storage facilities Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Handling and storage of chemicals to follow Safe Work Method Statement and SDS Implement the TfNSW incident procedure 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Spill Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1 Appendix A7 TfNSW Incident Procedure
		Concrete Washout water escaping beyond C1 boundary	8 (minor)	Direct: <ul style="list-style-type: none"> Any washout areas will be adequately sized, regularly maintained (emptied), and located in a designated area Concrete Agitator truck drivers will be directed to the designated washout area Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Ongoing pre-construction groundwater and surface water monitoring to continue 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Tracking of material onto Marsh Street	12 (moderate)	Direct: <ul style="list-style-type: none"> Wheel wash to be installed at C1 ancillary facility Vehicles exiting site (excluding vehicles using car park) to travel through wheel wash Street sweeper to be used to maintain internal haul roads and Marsh Street Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Increase use of resources (potable water)	8 (minor)	Direct: <ul style="list-style-type: none"> Treated water from WTP will be readily available from a designated refilling area for water trucks, street sweepers etc. Treated water usage to be tracked 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Water Reuse Strategy

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implementation of Water Reuse Strategy 		
Groundwater	<ul style="list-style-type: none"> Geotechnical assessment of existing tunnel adits which may identify repair and restoration to ground support and/or groundwater control systems Operation of the existing construction WTP 	<ul style="list-style-type: none"> Impact/s to groundwater resources (including quality or drawdown) from disturbance 	8 (minor)	Direct: <ul style="list-style-type: none"> No bulk excavation during preliminary construction or commencement activities, Grouting activities within adits to reduce groundwater ingress Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure
		<ul style="list-style-type: none"> Impact to surface waters from inappropriate discharge of collected groundwater 	12 (moderate)	Direct: <ul style="list-style-type: none"> Existing groundwater collection and treatment systems to be maintained. Engineering controls at WTP maintained to prevent non-compliant water from being discharged Sampling and monitoring of treated water carried out in accordance with Project EPL All discharge activities to occur in accordance with the Water Reuse and Discharge Procedure. This includes implementation of a Permit to Dewater for all discharge events. Operators trained to operate WTP including what to in the event of an emergency Ongoing pre-construction groundwater and surface water monitoring to continue Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Operate and maintain construction WTP in accordance with construction WTP operating manual Implement the TfNSW incident procedure 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Permit to Dewater Project EPL CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.2.3 Regulatory requirements and compliance Section 3.8 Emergency and Incident Planning Appendix A7 TfNSW Incident Procedure Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
Heritage	No ground disturbance would occur at C1 Arncliffe construction ancillary facility outside of existing disturbed area.					
Air Quality	<ul style="list-style-type: none"> Handling of materials Cutting, grinding, sawing and rock hammering concrete on surface Movement of vehicles and equipment on surface Maintaining existing stockpile Refurbishment and upgrade of offices and amenities Use of street sweeper Application of pesticides to weeds 	Emissions from the use of plant and equipment	12 (moderate)	Direct: <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions The use of mains electricity will be favoured over diesel or petrol- powered generators where practicable to reduce site emissions. Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Mitigation measures to be included in SWMS for the operation of plant and equipment where applicable 	9 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.9 Monitoring, inspections and auditing

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Sensitive receivers impacted by dust generating surface works such as cutting, grinding, sawing and rock hammering	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Effective dust suppression would be applied during works including but not limited to the use of water carts, vacuum extractors, sprinklers, dust screens, fogging machines Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team Inspections will be undertaken on activities with potential to generate dust to monitor the effectiveness of the control measures All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 	9 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.9 Monitoring, inspections and auditing
		Tracking of material on Marsh Street from vehicle movements from C1 Arncliffe construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Hardstands and Haul roads within C1 construction ancillary facility will be maintained to minimise and reduce dust generation from exposed surface areas and vehicle movements All vehicles exiting the C1 construction ancillary facility (excluding light vehicles exiting from car park) will utilise the wheel wash prior to exiting site Water carts and street sweepers will service haul roads Inspections will be undertaken monitor the effectiveness of the control measures Vehicle Management Plan to be enforced by Supervisor and monitored by traffic control or delegated person <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Vehicle Management Plan to direct exiting vehicles through wheel wash 	9 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program
		Sensitive receivers impacted by dust generation from stockpiles	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Storage of materials that have the potential to result in dust generation would be minimised within Project sites at all times Where feasible, stockpiles of materials will be located within existing acoustic sheds Long term inactive stockpiles (e.g. stockpiles left exposed and undisturbed for longer than 10 days) will be stabilised using soil polymer binders, spray seed, geofabric etc. Controls outlined in Stockpile Management Procedure to be implemented Inspections will be undertaken monitor the effectiveness of the control measures 	9 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>Appendix B4 Soil and Surface Water Management Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Stockpile Management Procedure located in Appendix B4 Soil and Surface Water Management Procedure Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 		CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Dust generation from improper use of street sweeper	12 (moderate)	Direct: <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Supervisor to assess competency of operator of street sweeper Pre-start to be conducted on street sweeper daily and any faults rectified Where water sprays on street sweeper are not sufficient, water will be applied using water cart or hose until issue is rectified All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program 	9 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.9 Monitoring, inspections and auditing
		Sensitive receivers impacted by dust generated from the removal and movement of existing offices and amenities	12 (moderate)	Direct: <ul style="list-style-type: none"> Effective dust suppression to be applied during disassembly or relocation to minimise dust generation Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Inspections will be undertaken monitor the effectiveness of the control measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program 	9 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program
		Application of pesticides result in chemical travelling beyond C1 boundary	9 (moderate)	Direct: <ul style="list-style-type: none"> The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides beyond the C1 boundary An Environmental Work Method Statement will be developed on the application of pesticides and activity carried out in accordance with this EWMS 	6 (minor)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Weed Management Procedure found in Appendix B2 Flora and Fauna Management Procedure Implementation of management measures outlined in the EWMS 		Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Weed Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
Contamination	<ul style="list-style-type: none"> Excavation of footings for hoarding to be constructed along the boundary of Lot 2E (approx. 30metres) 	Disturbance of contaminated material	8 (minor)	Direct: <ul style="list-style-type: none"> No bulk excavation will be undertaken at C1 ancillary facility during preliminary construction activities Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Implementation of the TfNSW Unexpected Contaminated Lands and Asbestos Finds Procedure (Appendix A of the Appendix B8 Contamination CEMP Sub-plan) Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan Ensure that control measures are communicated and documented into Work Packs 	3 (minor)	Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 4 Existing environment Section 6 Environmental control measures Section 7 Compliance Management Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
Waste	<ul style="list-style-type: none"> Waste services collecting skips and front-loading bins Waste materials generated from refurbishment, upgrading and replacement activities: <ul style="list-style-type: none"> Services Existing mechanical plant and equipment Offices and amenities Material removed during: <ul style="list-style-type: none"> Repairs in decline and adits Restoration works within temporary shaft Installation of wheel wash Excavation of noise wall footings Litter from workforce, visitors and staff 	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) including disposal of waste at an unlicensed waste facility	15 (significant)	Direct: <ul style="list-style-type: none"> Waste classification in accordance with EPA guidelines Suitably licensed waste contractors would be used for the collection and transport of all wastes for either offsite processing and/or disposal to an appropriately licensed facility Receipts for waste transfer and disposal would be checked to ensure all details are correct and retained for audit purposes Implementation of a waste tracking register All on site personnel would undergo a site induction and ongoing toolbox talks that detail waste and resource management measures Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 	9 (moderate)	Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking Section 6 Environmental control measures Section 7 Compliance management
		Litter, inappropriate use of co-mingling and waste receptacles	8 (minor)	Direct: <ul style="list-style-type: none"> All recyclable solid wastes (paper/ cardboard/ plastic/ glass/ timber/ metals/ fluorescent lighting/ printer cartridges/ICT equipment) would be segregated for recycling purposes and volumes reported. Wherever possible, packaging should be avoided or minimised to prevent waste products being unnecessarily brought to site. All staff and subcontractors would undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the waste management hierarchy) and energy consumption Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Sustainability Management Plan and Appendix B9 Waste CEMP Sub-plan 	2 (negligible)	Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking Section 6 Environmental control measures Section 7 Compliance management

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
						Sustainability Management Plan
Leachate and Landfill Gas	The Leachate and Landfill Gas CEMP Sub-plan (CoA C7) does not apply to C1 Arncliffe construction ancillary facility.					
General aspects including Site Establishment	<ul style="list-style-type: none"> Refurbishment and upgrade of offices and amenities Construction of hoarding along the boundary of Lot 2E 	Inadequate notification to relevant stakeholders of incident and/or non-conformance	12 (moderate)	Direct: <ul style="list-style-type: none"> Potential and actual non-compliances will be classified and reported in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure A Pollution Incident Response Management Plan (PIRMP) will be prepared and implemented Indirect: <ul style="list-style-type: none"> All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use) 	9 (moderate)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.8 Emergency and Incident Planning Section 3.10 Environmental non-conformities
		Visual amenity impact on adjacent sensitive receivers including: <ul style="list-style-type: none"> Light spill (including impacts to airport operations) Boundary screening Overshadowing Overlooking Graffiti 	9 (moderate)	Direct: <ul style="list-style-type: none"> Existing noise walls and hoarding to remain in place The SSI number and Project name will be displayed at the entrance to the ancillary facility The ancillary facility will not cause overshadowing to sensitive receivers No facilities will look down into sensitive receivers Lights are to be directed down and away from sensitive receivers Where required, shields are to be placed on lights to direct light away from residential receivers Lighting to inspected regularly during environmental inspections or during noise monitoring to ensure light spill measures are effective Contact information will also be provided in the form of the Project Hotline and Information email address Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix A4 Site Establishment Management Plan 	6 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan
		Undertaking activities not described in the approved CEMP Preliminary construction including commencement activities and this risk assessment	12 (moderate)	<ul style="list-style-type: none"> All works will be carried out in accordance with the CPB Contractors Construction management System including ongoing environmental risk and opportunities identification during the development and review of: <ul style="list-style-type: none"> Project Risk Register (as per the Risk Management Plan: M6S1-CGU-NWW-PCRM-MPL-000800) Construction Area Plan Risk Assessments (CAPRAs) Work Packs, including Work Pack Risk Assessment Environmental Work Method Statements (EWMS) or Safe Work Method Statements (SWMSs), which address environmental risks (as applicable) Pre-start meetings Undertaking regular internal inspections and monitoring Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.2.1 Environmental Risk Assessment Workshop Section 3.9 Monitoring, inspections and auditing

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Environmental objectives and targets outlined in CEMP Preliminary construction including commencement activities (Section 3.3.1) are not met including: <ul style="list-style-type: none"> • Inspections • Monitoring 	12 (moderate)	<ul style="list-style-type: none"> • All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use) • Undertaking regular internal inspections and monitoring including: <ul style="list-style-type: none"> ○ Air quality monitoring as per Monitoring Program ○ Noise and vibration monitoring as per Monitoring Program ○ Ongoing pre-construction groundwater and surface water monitoring to continue • Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 1.5 Environmental Management System overview • Section 3.4 Resources, responsibilities and authority • Section 3.9 Monitoring, inspections and auditing
		Inadequate consultation with stakeholders outlined in Section 2 of the CEMP Preliminary construction including commencement activities	12 (moderate)	<ul style="list-style-type: none"> • Consultation will be undertaken in accordance with the Stage Report and CEMP Preliminary construction including commencement activities • Evidence of consultation and responses to queries will be provided within CEMP Sub-plans 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 2 Consultation, endorsement and approval

C2 Rockdale Depot construction ancillary facility

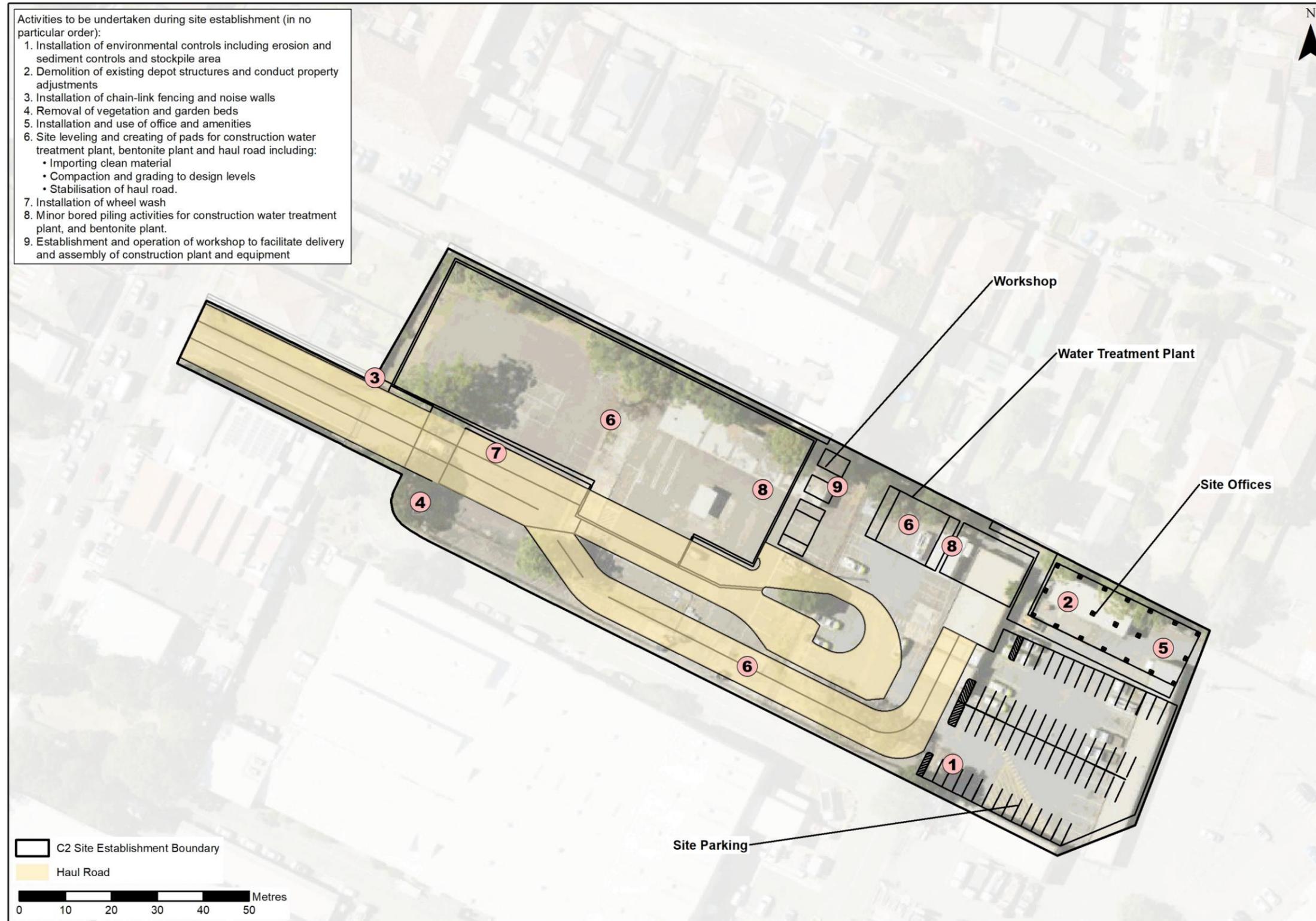


Figure 3 Stage 1 Preliminary construction activities at C2 Rockdale Depot construction ancillary facility

Table 2 Aspects and impacts register for C2 Rockdale Depot construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<p>Light vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 30 Workforce, staff and visitors vehicles Delivery of small-scale construction materials in vans <p>Heavy vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 40 Delivery of plant and equipment on semi-trailers, some oversized 	Increased vehicle movements into construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> The preliminary construction and commencement activities undertaken at C2 will not include activities that impact the operation of the road network Spoil haulage will not be undertaken during preliminary construction including commencement activities Access to C2 will be via the existing access point from West Botany Street (shared with existing depot): <ul style="list-style-type: none"> Access to site is from left hand lane when travelling in south bound lane Egress from site is left out of site into the south bound lane No access via Bay Street All on site personnel would undergo a site induction and ongoing toolbox talks that will detail traffic and access management measures Vehicle Management Plan will be distributed to all subcontractors who need to attend site <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Anticipated peak daily vehicle movements to C2 Development of Vehicle Management Plans Outline of access/egress to C2 Communication and training which will be undertaken <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.5 Selection and management of subcontractors Section 3.6 Competence, training and awareness <p>Construction Parking and Access Strategy</p>
	<ul style="list-style-type: none"> Delivery of construction materials on flatbed trucks Delivery of concrete and shotcrete via concrete agitator Delivery and removal of portable buildings Fuel tankers distributing fuel and refilling at designated refuelling area Importing clean material to build pads, haul roads and laydown areas 	Congestion at shared access point with TfNSW depot	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Consultation with adjacent stakeholders will be undertaken in accordance with Community Consultation Strategy Access to depot to remain available to stakeholders Where works temporarily restrict access, stakeholders will be engaged to determine access arrangements <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy Implementation of management measures outlined in the Community Communication Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Development of Vehicle Management Plans Outline of access rules to C2 <p>Community Communication Strategy</p> <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.4 Communication
	<p>Other:</p> <ul style="list-style-type: none"> Street sweeper routinely maintaining West Botany Street Special purpose trucks servicing waste skips and front-loading bins Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within 	<p>Out of hour works that could disrupt sensitive receivers including:</p> <ul style="list-style-type: none"> Deliveries of plant and equipment Relocation of overhead powerlines 	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Out of hour deliveries are to be unloaded during standard construction hours to avoid disruption to sensitive receivers Sensitive receivers to be notified of any OOH deliveries or works Where possible, removal of overhead powerlines will be removed during standard construction hours <ul style="list-style-type: none"> Where this is not permitted under a ROL, the OOHW and Construction Fatigue Protocol will be implemented (Appendix C of the Noise and Vibration Preliminary CEMP Sub-plan) Mitigation measures will follow those outlined in the CNVIA for Preliminary construction including commencement activities <p>Indirect:</p>	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure:</p> <ul style="list-style-type: none"> Section 2.2 Road occupancy licenses Section 2.6 Communication and training <p>Appendix B3 Noise and Vibration Preliminary Sub-plan:</p> <ul style="list-style-type: none"> Appendix C OOHW and Construction Fatigue Protocol Appendix F CNVIA preliminary construction including commencement activities <p>Community Communication Strategy</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> construction ancillary facility Traffic control facilitating the removal of overhead powerlines at entrance to C2 construction ancillary facility 			<ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan 		
		Parking in local streets	12 (moderate)	Direct: <ul style="list-style-type: none"> Parking on site would be available for workforce, staff and visitors Parking at C3 ancillary construction facility would be nearby and would be utilised by workforce, staff and visitors if additional spaces are required All on site personnel would undergo a site induction and ongoing toolbox talks that will detail parking and transport management measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure: <ul style="list-style-type: none"> Section 2.6 Communication and training Construction Parking and Access Strategy
		Vehicles using local roads	12 (moderate)	Direct: <ul style="list-style-type: none"> All construction traffic will use the most direct route to the closest arterial and motorway network to minimise impacts on local roads No access to C2 ancillary construction facility from Bay Street. Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Outline of access rules to C2 Communication and training which will be undertaken
Flora and Fauna	<ul style="list-style-type: none"> Removal of vegetation within construction ancillary facility (urban native and exotic cover) 	Clearing outside an approved area and/or the removal or pruning of tree/s not approved under Clearing and Grubbing Plan	9 (Moderate)	Direct: <ul style="list-style-type: none"> No PCT and TECs are located within the C2 construction ancillary facility Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of any habitat trees (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place Clearly delineate the C2 construction ancillary boundary (survey) prior to clearing activities taking place in accordance with the Clearing and Grubbing Plan Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation Pre and Post Clearing checklist to be completed 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Approved Tree Report under E146 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 		
		Damage to vegetation (including) tree roots	9 (moderate)	Direct: <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Implement tree protection measures as identified by arborist (E146) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and any tree protection measure implemented Pre-Clearing checklist to be completed to check controls are in place Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation If damage is identified in Post Clearing Checklist, arborist will be assigned to assess tree Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Approved Tree Report under E146 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist
		Injury / encounter with fauna	9 (moderate)	Direct: <ul style="list-style-type: none"> Pre-clearing surveys to be undertaken prior to the removal of any vegetation. Habitat trees must be identified in accordance with the Approved Clearing and Grubbing Report and Permit to Clear Land and Vegetation If fauna is encountered and/or injured, Fauna Handling Procedure will be implemented Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Appendix B Fauna Handling Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Pre-clearing Survey under E43 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist
		Spread of weed species	8 (minor)	Direct: <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees or threatened flora (Pre-Clearing Survey E42) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Appendix C Weed Management Procedure Clearing and Grubbing Plan:

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> ○ Noise Catchment Areas ○ Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) ○ Clearance boundary ○ Details on stages of work ○ Working hours ○ Location of weed (if applicable E42) • Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and weeds identified within Permit • Weeds to be identified on site prior to clearing activities taking place • Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation • Pre and Post Clearing checklist to be completed by CGU Environmental Advisor to identify that weed were managed in accordance with Permit • Disposal of weeds it to occur in accordance with Waste CEMP Sub-plan (MMW6) <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure • Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 		<ul style="list-style-type: none"> • Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> • Pre-clearing checklist • Post clearing checklist <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 6 Environmental Control Measures
Noise and Vibration	<ul style="list-style-type: none"> • Demolition of existing structures including: <ul style="list-style-type: none"> ○ Removal of garden beds, parking bays ○ Demolition of existing office buildings ○ Disconnection of services to buildings prior to demolition • Vegetation clearing • Installation of noise wall and boundary fencing • Property adjustment within C2 ancillary facility: <ul style="list-style-type: none"> ○ Connection of potable water, power and sewer facilities ○ Removal of redundant services for safety purposes • Relocation of overhead power lines at access point on West Botany Street 	<p>Noise impacts to sensitive receivers from works including high impact activities within site, including the use of:</p> <ul style="list-style-type: none"> ○ Rock hammer to facilitate the installation of wheel wash and removal of garden beds and parking bays ○ Grinders and rattle guns to assemble plant and equipment ○ Chainsaws and mulchers used during vegetation clearing 	16 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> • Impact of works to be assessed prior to works commencing through a Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan including: <ul style="list-style-type: none"> ○ Respite periods for high impact noise activities ○ Progressively erecting noise walls ○ Use of temporary screening ○ Monitoring will be carried out in accordance with the CNVIA • Programming of works to minimise the duration of noisy works • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of noise sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy • Including list of assessed equipment and mitigation measures required to undertake high impact works in Work Pack's 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 5.3 Noise mitigation and management measures • Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 3.6 Competence, training and awareness • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) <p>Community Communication Strategy</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> • Installation of office amenities • Site leveling including haul roads, piling pads and laydown areas which involves: <ul style="list-style-type: none"> ○ Importing clean material ○ Spreading and compacting material on top of existing ground ○ Stabilisation • Where design mandates, minor piling for footing of the construction WTP, noise wall and bentonite plant • Delivery and assembly of plant and equipment • Delivery of concrete in concrete agitators 	<p>Vibration impacts (human annoyance, property damage) on sensitive receivers from use of vibratory equipment, including the use of:</p> <ul style="list-style-type: none"> ○ Vibratory roller to compact clean material during site leveling. ○ Rock hammer to facilitate the installation of wheel wash and removal of garden beds and parking bays ○ Use of compactor or Wacker packer 	16 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan and CNVIA. This includes but are not limited to: <ul style="list-style-type: none"> ○ Undertaking Condition Surveys prior to activities ○ Abiding by of respite periods high impact activities ○ Substituting equipment where possible ○ Monitoring will be carried out in accordance with the CNVIA • Programming of works to minimise the duration of works • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy • Including list of assessed equipment and mitigation measures required to undertake works which are at risk of generating vibration in Work Pack's 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 6.1 Minimum working distances for vibration intensive plant • Section 6.2 Vibration assessment • Section 6.3 Vibration mitigation measures • Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 3.6 Competence, training and awareness • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) <p>Community Communication Strategy</p>
		Noise impacts from out of hour deliveries and works	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Where possible all works will be undertaken within standard construction hours • All OOH deliveries are to be unloaded during standard construction hours • OOHW Approval must be obtained prior to works taking place and permit signed onto at pre-start • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. Works to be carried out in accordance with the CNVIA • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan and CNVIA • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 5.3 Noise mitigation and management • Appendix C Construction Timetable activities management <p>Out of Hours Work and Construction Fatigue Protocol (Appendix C to the Noise and Vibration Preliminary CEMP Sub-plan)</p> <p>Community Communication Strategy</p> <p>CEMP preliminary construction including commencement activities:</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> The Work Pack/s must include assessed plant, equipment and work area along with any mitigation measures which need to be implemented. 		<ul style="list-style-type: none"> Section 3.6 Competence, training and awareness Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Inadequate notification to sensitive receivers impacted by activities associated with C2 construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities Notification to be carried out in accordance with mitigation measures outlined in CNVIA All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA Notification in accordance with the Community Communication Strategy The Work Pack/s to be reviewed by Community Relations Advisor 	9 (moderate)	<p>Community Communication Strategy</p> <p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 4.1 Sensitive receivers Section 5 Noise and vibration criteria for NSW Section 7 Construction noise and vibration assessment Section 8 Environmental Control Measures Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> Section 3 nearest sensitive receivers Section 4 Construction noise and vibration objectives Section 5.3.2 Noise control and management measures <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.7 Communication
Soil and Surface Water	<ul style="list-style-type: none"> Vegetation removal: soil caught in root systems of trees Construction of noise walls and chain link fencing Where design mandates, minor piling works for footings of construction WTP, noise wall and bentonite plant 	Impact to surface waters from inappropriate discharge	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> No water to be discharged from C2 ancillary facility Excavations to be protected to divert surface water around excavations (clean water diversion) Existing stormwater drains to be isolated from construction impacts or live network. <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implementing the TfNSW incident procedure in the event of a non-compliance 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Erosion and Sediment Control Management Procedure <p>Project EPL</p> <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> • Site leveling for haul roads, piling pads and hardstand areas which involves: <ul style="list-style-type: none"> ○ Importing clean material ○ Spreading and compaction to design levels (on top of existing pavement) ○ Stabilisation • Property adjustments including: <ul style="list-style-type: none"> ○ Disconnection of services to existing buildings ○ Connection of potable water, power and sewer to facilities ○ Removal of redundant services for safety purposes • Installation of erosion and sediment controls • Spoil management 					<ul style="list-style-type: none"> • Section 3.2.3 Regulatory requirements and compliance • Section 3.8 Emergency and Incident Planning • Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 • Appendix A7 TfNSW Incident Procedure
		Sediment laden water leaving C2 boundary during rainfall event (including from hardstands, stockpiles, site leveling activities)	12 (moderate)	Direct: <ul style="list-style-type: none"> • Erosion and Sediment Control Plans (ESCP) would be prepared and implemented • Stockpiles to be managed in accordance with Stockpile Management Procedure • Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) • Targeted training for key on site personnel who are involved in the installation and maintenance of erosion and sediment controls • An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control • Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers • Monitoring program • All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures Indirect: <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure • ESCP to be included in Work Packs 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> • Erosion and Sediment Control Procedure • Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) • Section 3.4 Resources, responsibility and authority • Section 3.6 Competence, training and awareness • Section 3.9 Monitoring, inspections and auditing • Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2
		Mishandling, treatment or disposal of material: <ul style="list-style-type: none"> • 	8 (minor)	Direct: <ul style="list-style-type: none"> • No bulk excavation would occur • Completion of Site Contamination Report/s (including investigation of groundwater) prior to ground disturbance activities (E112) • Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan • Material from minor works (fencing etc) to be stockpiled in a bunded area with guard layer • Material to be removed to a licenced facility Indirect: <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure • Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan • Control measures to be included in Work Pack/s 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> • Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> • Section 6 Environmental control measures
		Contamination of soil or water due to spills of hydrocarbons and chemicals related to:	8 (minor)	Direct:	4 (minor)	Appendix B4 Soil and Surface Water Procedure:

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		<ul style="list-style-type: none"> Mechanical failures Refuelling activities 		<ul style="list-style-type: none"> Spill kits are to be readily available within the C2 construction ancillary facility at all times The use of any hazardous substances that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds Any refuelling on site must follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. All spills or leakages will be immediately contained and cleaned up Spill containment kits will be placed at locations where chemicals are stored or used and where refuelling is permitted Inspection regime for chemical storage facilities and spill kits <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure When handling chemicals it will be done in accordance with Safe Work Method Statement and SDS Implementing the TfNSW incident procedure in the event of a non-compliance 		<ul style="list-style-type: none"> Spill Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 Appendix A7 TfNSW Incident Procedure
		Concrete works (including concrete washout water) escaping containment	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> Any washout areas will be adequately sized, regularly maintained, and located in a designated area Concrete agitator truck drivers will be directed to the designated washout area <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Water Reuse and Discharge Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2
		Tracking of material onto West Botany Street	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Wheel wash to be installed at C2 construction ancillary facility Vehicles exiting site to travel through wheel wash Street sweeper to be used to maintain internal haul roads and West Botany Street <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2
Groundwater	<ul style="list-style-type: none"> Where design requires piled footings for noise wall, construction WTP and bentonite plant 	Impact/s to groundwater resources (including quality or drawdown) from disturbance	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> No bulk excavation would be undertaken during preliminary construction or commencement activities. Possible shallow and minor piling works for the footings of hoardings, noise walls, WTP, grout and bentonite plant Completion of Site Contamination Report/s (including investigation of groundwater) prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Water Reuse and Discharge Procedure <p>Appendix B8 Contamination CEMP Sub-plan</p> <p>Geotechnical Interpretative Report</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan and Geotechnical Interpretative Report 		
Heritage	<ul style="list-style-type: none"> Where design requires piled footings for noise wall, construction WTP and bentonite plant Property adjustments including: <ul style="list-style-type: none"> Disconnection of services to existing buildings Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Vegetation removal including root systems of trees 	Unexpected heritage finds (indigenous and/or non-indigenous) including unexpected find of human remains	8 (minor)	Direct: <ul style="list-style-type: none"> Implement Unexpected Heritage Finds and Human Remains Procedure. If an unidentified heritage artefact is suspected: <ul style="list-style-type: none"> All works in the immediate vicinity of the find will cease immediately to avoid any further impacts. A qualified archaeologist will be contacted to determine the significance of the object(s). In the event that new Aboriginal site(s) or item(s) are discovered during the proposed investigations, an AHIMS site card will be completed and submitted to the Office of Environment and Heritage (OEH) in accordance with section 89A of the National Parks and Wildlife Act 1974 (NSW). The site card will be lodged within 21 days and a copy provided to Indigenous stakeholders who wish to have a copy. Management recommendations will be developed for newly identified site(s) or items(s) in consultation with registered Indigenous stakeholders, using the precautionary principles of avoidance, mitigation, salvage. Management measures will be determined based on the type of evidence identified, the significance of the site or item identified (scientific and cultural) as well as the nature of potential impacts. All on site personnel would 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 requirements of the Manage Heritage Procedure and the Unexpected Heritage Finds Procedure and Human Remains Procedure. Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the https://caportal.com.au/rms/m6/documents Heritage Management Plan 	2 (negligible)	https://caportal.com.au/rms/m6/documents Heritage Management Plan: <ul style="list-style-type: none"> Unexpected Heritage Finds and Human Remains Procedure
Air Quality	<ul style="list-style-type: none"> Importing clean material for site leveling activities and associated activities (spreading, compacting stockpiling etc.) Rock hammering of garden beds and parking bays Movement of vehicles and equipment on surface Stockpiling and handling of material Demolishing existing structures Use of street sweeper Application of pesticides to weeds 	Emissions from the use of plant and equipment	12 (moderate)	Direct: <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions The use of mains electricity will be favoured over diesel or petrol- powered generators where practicable to reduce site emissions Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Mitigation measures to be included in SWMS for the operation of plant and equipment where applicable 	6 (Minor)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Sensitive receivers impacted by dust generated from rock hammering	12 (moderate)	Direct: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Mitigation measures to be included in SWMS for the operation of plant and equipment where applicable 	9 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Effective dust suppression would be applied during works including but not limited to the use of water carts, sprinklers, dust screens, fogging machines etc. Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team Inspections will be undertaken on activities with potential to generate dust to monitor the effectiveness of the control measures All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 		<ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Tracking of material on West Botany Street from vehicle movements from C2 ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Hardstands and haul roads within C2 construction ancillary facility will be maintained to minimise and reduce dust generation from exposed surface areas and vehicle movements All vehicles exiting the C2 construction ancillary facility will utilise the wheel wash prior to exiting site Water carts and street sweepers will service haul roads Inspections will be undertaken monitor the effectiveness of the control measures Vehicle Management Plan implemented and monitored by traffic control or delegated person <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Vehicle Management Plan to direct exiting vehicles through wheel wash 	9 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program
		Sensitive receivers impacted by dust generation from site activities (spreading, compacting stockpiling etc.)	15 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> Storage of materials that have the potential to result in dust generation minimised within Project sites at all times Long term in active stockpiles (e.g. stockpiles undisturbed for longer than 10 days) will be stabilised using soil polymer binders, spray seed, geofabric etc. Controls outlined in Stockpile Management Procedure to be implemented Water suppression will be applied during activities to minimise the generation of dust Inspections will be undertaken monitor the effectiveness of the control measures 	10 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>Appendix B4 Soil and Surface Water Management Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure <p>CEMP preliminary construction including commencement activities:</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Stockpile Management Procedure located in Appendix B4 Soil and Surface Water Management Procedure Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 		<ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Dust generation from improper use of street sweeper	12 (moderate)	Direct: <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Supervisor to assess competency of operator of street sweeper Pre-start to be conducted on street sweeper daily and any faults rectified Where water sprays on street sweeper are not sufficient, water will be applied using water cart or hose until issue is rectified All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program 	6 (minor)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority
		Sensitive receivers impacted by dust from demolition activities	12 (moderate)	Direct: <ul style="list-style-type: none"> Effective dust suppression to be applied during demolition of existing structures to minimise dust generation HAZMAT surveys and removal of asbestos prior to demolition activities Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Inspections will be undertaken monitor the effectiveness of the control measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program 	9 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Application of pesticides result in chemical travelling beyond C2 construction ancillary facility boundary.	8 (minor)	<ul style="list-style-type: none"> • Direct: <ul style="list-style-type: none"> • The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides beyond the C2 project boundary • An Environmental Work Method Statement will be developed on the application of pesticides and activity carried out in accordance with this EWMS • Indirect: <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan • Implementation of management measures outlined in the Weed Management Procedure found in Appendix B2 Flora and Fauna Management Procedure • Implementation of management measures outlined in the EWMS 	4 (minor)	<ul style="list-style-type: none"> • Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> • Section 6 Environmental control measures (Table 9) • Section 7 Compliance management • Appendix A Air Quality Monitoring Program • Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> • Weed Management Procedure • CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
Contamination	<ul style="list-style-type: none"> • Where design mandates piled footings for noise wall, construction WTP and bentonite plant • Property adjustments including: <ul style="list-style-type: none"> ○ Disconnection to existing buildings ○ Connections of potable water, power and sewer to facilities ○ Removal of redundant services for safety purposes • Vegetation removal: soil caught in root systems of trees • Construction of footings for noise walls and chain link fencing 	Disturbance of contaminated material	12 (moderate)	<ul style="list-style-type: none"> • Direct: <ul style="list-style-type: none"> • No bulk excavation will be undertaken at C2 construction ancillary facility during preliminary construction activities • Completion of Site Contamination Report/s prior to ground disturbance activities (E112) • Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan • Implementation of the TfNSW Unexpected Contaminated Lands and Asbestos Finds Procedure (Appendix A of the Appendix B8 Contamination CEMP Sub-plan) • Stockpiles to be managed in accordance with Stockpile Management Procedure (Appendix B4 Soil and Surface Water Management Procedure) • Indirect: <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan • Ensure that control measures are communicated and documented into Work Packs 	9 (moderate)	<ul style="list-style-type: none"> • Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> • Section 4 Existing environment • Section 6 Environmental control measures • Section 7 Compliance Management • Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure • CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) • Appendix A4 Site Environmental Management Plan Appendix A Site Environment Plan for C2 • Appendix B4 Soil and Surface Water Management Procedure: <ul style="list-style-type: none"> • Stockpile Management Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Exposure of personnel to unidentified contaminated materials during works	12 (moderate)	Direct: <ul style="list-style-type: none"> No bulk excavation will be undertaken during preliminary construction or commencement activities Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Induct construction personnel in the identification and management of previously unidentified contaminated sites. The discovery of previously unidentified contaminated material will be managed in accordance with an Unexpected Contaminated Land Finds Procedure. The procedure will include: <ul style="list-style-type: none"> Cease work in the vicinity Initial assessment by an appropriately qualified environmental consultant Further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act 	6 (minor)	Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 4 Existing environment Section 6 Environmental control measures Section 7 Compliance Management Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure
Waste	<ul style="list-style-type: none"> Importing clean material (e.g. stabilised DGB, VEMN / tunnel spoil) for site leveling activities Waste services collecting skips and front-loading bins Waste materials generated from: <ul style="list-style-type: none"> Demolition Packaging from deliveries Maintenance of plant and equipment Offices and amenities Vegetation clearing Material removed during: <ul style="list-style-type: none"> Property adjustments Soil from tree roots Minor piling/footings activities where required Litter from workforce, visitors and staff 	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) including disposal of waste at an unlicensed waste facility	15 (significant)	Direct: <ul style="list-style-type: none"> Waste classification in accordance with EPA guidelines Suitably licensed waste contractors would be used for the collection and transport of all wastes for either offsite processing and/or disposal to an appropriately licensed facility Receipts for waste transfer and disposal would be checked to ensure all details are correct and retained for audit purposes Implementation of a waste tracking register All on site personnel would undergo a site induction and ongoing toolbox talks that detail waste and resource management measures Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 	9 (moderate)	Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking Section 6 Environmental control measures Section 7 Compliance management
		Inappropriate material bought to site for leveling purposes	15 (significant)	Direct: <ul style="list-style-type: none"> Imported clean material suitable for the purpose of site leveling as per design requirements Imported clean material may also be bought to site under a Resource Recovery Exemption Evidence of compliance to the Resource Recovery Order will be requested and inspections carried out on material Imported material its source will be tracked 	9 (moderate)	Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 7 Compliance Management
		Litter, inappropriate use of co-mingling and waste receptacles	8 (minor)	Direct: <ul style="list-style-type: none"> All recyclable solid wastes (paper/ cardboard/ plastic/ glass/ timber/ metals/ fluorescent lighting/ printer cartridges/ICT equipment) would be segregated for recycling purposes and volumes reported. Wherever possible, packaging should be avoided or minimised to prevent waste products being unnecessarily brought to site. All staff and subcontractors would undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the waste management hierarchy) and energy consumption 	2 (negligible)	Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Sustainability Management Plan and Appendix B9 Waste CEMP Sub-plan 		<ul style="list-style-type: none"> Section 6 Environmental control measures Section 7 Compliance management Sustainability Management Plan
Leachate and Landfill Gas	The Leachate and Landfill Gas CEMP Sub-plan (CoA C7) does not apply to C2 Rockdale Depot construction ancillary facility.					
General including Site Establishment	<ul style="list-style-type: none"> Refurbishment and upgrade of offices and amenities Construction of noise walls and chain link fences Vehicles exiting C2 onto West Botany Street Removal of vegetation within C2 construction ancillary facility 	Inadequate notification to relevant stakeholders of incident and/or non-conformance	12 (moderate)	Direct: <ul style="list-style-type: none"> Potential and actual non-compliances will be classified and reported in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure A Pollution Incident Response Management Plan (PIRMP) will be prepared and implemented Indirect: <ul style="list-style-type: none"> All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use) 	9 (moderate)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.8 Emergency and Incident Planning Section 3.10 Environmental non-conformities
		Visual amenity impact on adjacent sensitive receivers including: <ul style="list-style-type: none"> Light spill (including impacts to airport operations) Boundary screening Overshadowing Overlooking Graffiti 	9 (moderate)	Direct: <ul style="list-style-type: none"> The SSI number and Project name will be displayed at the entrance to the ancillary facility The ancillary facility will be designed to limit overshadowing of sensitive receivers No facilities will look down into sensitive receivers Lights are to be directed down and away from sensitive receivers Where required, shields are to be placed on lights to direct light away from residential receivers Lighting to inspected regularly during environmental inspections or during noise monitoring to ensure light spill measures are effective Sensitive receivers located opposite the West Botany Street access to be consulted on options for reducing impacts of light spill from headlights of exiting vehicles Contact information will also be provided in the form of the Project Hotline and Information email address Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix A4 Site Establishment Management Plan 	6 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan
		Undertaking activities, not described in the approved CEMP Preliminary construction including commencement activities and this risk assessment	12 (moderate)	<ul style="list-style-type: none"> All works will be carried out in accordance with the CPB Contractors Construction management System including ongoing environmental risk and opportunities identification during the development and review of: <ul style="list-style-type: none"> Project Risk Register (as per the Risk Management Plan: M6S1-CGU-NWW-PCRM-MPL-000800) Construction Area Plan Risk Assessments (CAPRAs) Work Packs, including Work Pack Risk Assessment Environmental Work Method Statements (EWMS) or Safe Work Method Statements (SWMSs), which address environmental risks (as applicable) 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.2.1 Environmental Risk Assessment Workshop Section 3.9 Monitoring, inspections and auditing

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> ○ Pre-start meetings • Undertaking regular internal inspections and monitoring Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist 		
		<p>Environmental objectives and targets outlined in CEMP Preliminary construction including commencement activities (Section 3.3.1) are not met including:</p> <ul style="list-style-type: none"> • Inspections • Monitoring 	12 (moderate)	<ul style="list-style-type: none"> • Regular internal inspections and monitoring including: <ul style="list-style-type: none"> ○ Air quality monitoring as per Monitoring Program ○ Noise and vibration monitoring as per Monitoring Program ○ Ongoing pre-construction groundwater and surface water monitoring to continue • Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist • All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use) 	8 (minor)	<p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 1.5 Environmental Management System overview • Section 3.4 Resources, responsibilities and authority • Section 3.9 Monitoring, inspections and auditing
		Inadequate consultation with stakeholders outlined in Section 2 of the CEMP Preliminary construction including commencement activities	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Consultation will be undertaken in accordance with the Staging Report and CEMP Preliminary construction including commencement activities • Evidence of consultation and responses to queries will be provided within CEMP Sub-plans 	8 (minor)	<p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 2 Consultation, endorsement and approval

C3 Bicentennial Park (including MOC3) construction ancillary facility

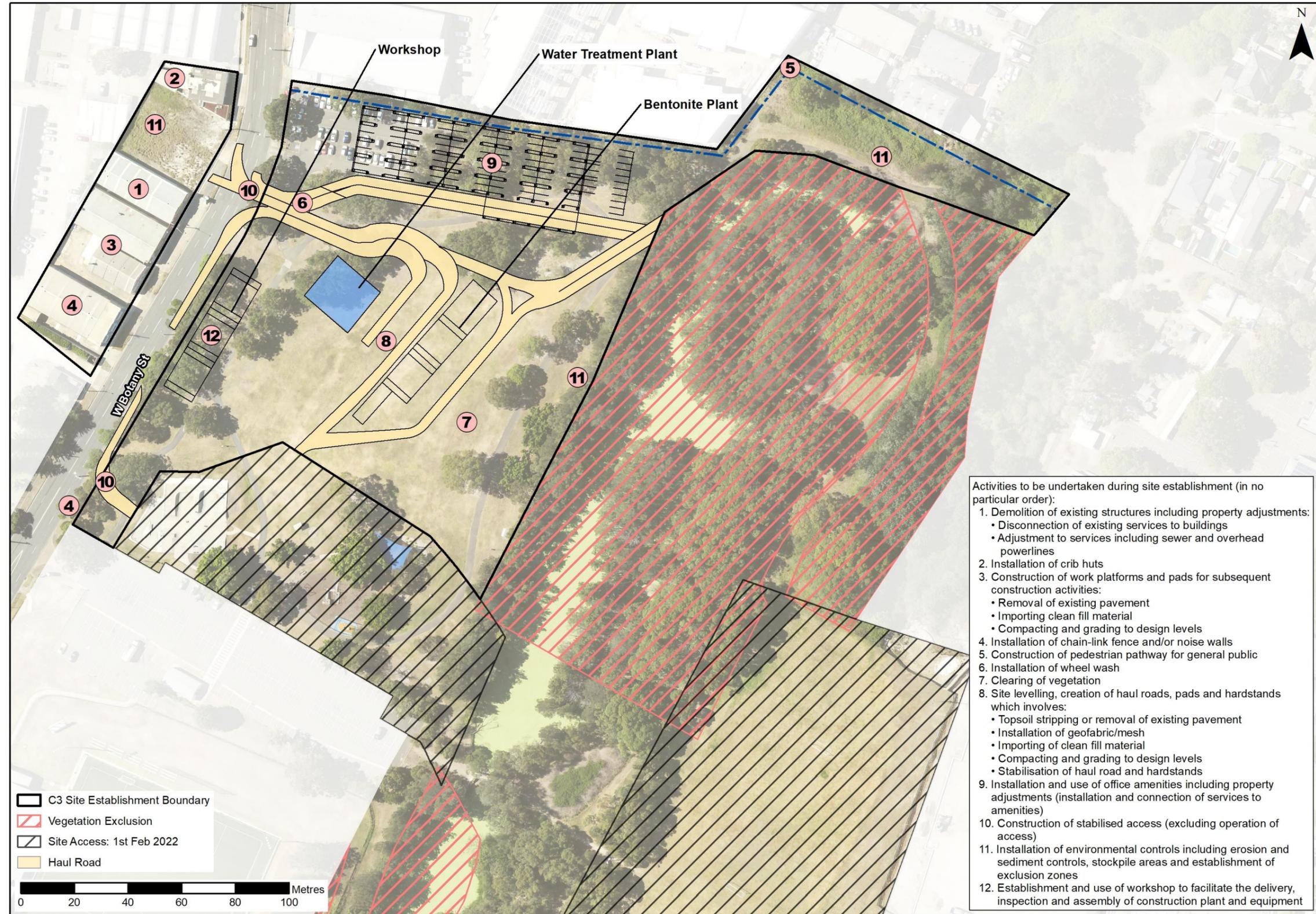


Figure 4 Stage 1 Preliminary construction activities at C3 Bicentennial Park (including MOC3) construction ancillary facility

Table 3 Aspect and impacts register for C3 Bicentennial Park construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<p>Light vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 52 Workforce, staff and visitors vehicles Delivery of small-scale construction materials in vans <p>Heavy vehicles entering site:</p> <ul style="list-style-type: none"> Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 80 Delivery of plant and equipment on semi-trailers, some oversized Delivery of construction materials on flatbed trucks Delivery of concrete and shotcrete via concrete agitator Delivery and removal of portable buildings Fuel tankers distributing fuel and refilling at designated refuelling area <p>Other:</p> <ul style="list-style-type: none"> Street sweeper routinely maintaining internal haul roads and Marsh Street Special purpose trucks servicing waste skips and front-loading bins Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within construction ancillary facility Traffic control facilitating the removal of overhead powerlines outside MOC3 construction ancillary facility, sewer relocation and street trees which limit access into site 	Increased vehicle movements into construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> The preliminary construction and commencement activities undertaken at C3 will not include activities that impact the operation of the road network Spoil haulage will not be undertaken during preliminary construction including commencement activities Access to C3 would be via the existing access points on West Botany Street (Access arrangements and direction within procedure). All on site personnel would undergo a site induction and ongoing toolbox talks that will detail traffic and access management measures Vehicle Management Plan will be distributed to all subcontractors who need to attend site <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Anticipated peak daily vehicle movements to C3 Development of Vehicle Management Plans Outline of site access requirements Communication and training which will be undertaken <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.5 Selection and management of subcontractors Section 3.6 Competence, training and awareness <p>Construction Parking and Access Strategy</p>
		Out of hour works that could disrupt sensitive receivers including:	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Out of hour deliveries would be unloaded during standard construction hours to avoid disruption to sensitive receivers Sensitive receivers to be notified of any OOH deliveries or works Where possible, overhead powerlines will be removed during standard construction hours <ul style="list-style-type: none"> Where this is not permitted under a ROL, the OOHW and Construction Fatigue Protocol will be implemented (Appendix C of the Noise and Vibration Preliminary CEMP Sub-plan) Mitigation measures will follow those outlined in the CNVIA for Preliminary construction including commencement activities <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure:</p> <ul style="list-style-type: none"> Section 2.2 Road occupancy licenses Section 2.6 Communication and training <p>Appendix B3 Noise and Vibration Preliminary Sub-plan:</p> <ul style="list-style-type: none"> Appendix C OOHW and Construction Fatigue Protocol Appendix F CNVIA preliminary construction including commencement activities <p>Community Communication Strategy</p>
		Parking in local streets	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Parking on site would be available for workforce, staff and visitors All on site personnel would undergo a site induction and ongoing toolbox talks that will detail parking and transport management measures <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure. Implementation of Construction Parking and Access Strategy. 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure:</p> <ul style="list-style-type: none"> Section 2.6 Communication and training <p>Construction Parking and Access Strategy</p>
		Vehicles using local roads	12 (moderate)	<p>Direct:</p>	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p>

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> All construction traffic would use the most direct route to the closest arterial and motorway network to minimise impacts on local roads Access to C3 construction ancillary facility from West Botany Road Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 		<ul style="list-style-type: none"> Outline of access requirements Communication and training which will be undertaken Construction Parking and Access Strategy
		Traffic disruption	12 (moderate)	Direct: <ul style="list-style-type: none"> Traffic control will be carried out in accordance with Traffic Guidance Schemes Programming of works to minimise the duration of works Community liaison and notification All complaints will be handled in accordance with the Complaints Management System Where required, pedestrians will be directed around work areas on alternative footpaths using signage, variable message boards or traffic controllers Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure 	7 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Mitigation Measures for Vehicle Movements Communication and training which will be undertaken
Flora and Fauna	<ul style="list-style-type: none"> Removal of vegetation within C3 (urban native and exotic cover) 	Clearing outside an approved area and/or the removal or pruning of tree/s not approved under Clearing and Grubbing Plan	9 (moderate)	Direct: <ul style="list-style-type: none"> Clearly delineate exclusion zone of the PCT and TECs: <ul style="list-style-type: none"> PCT and TECs will not to be cleared during Stage 1 preliminary construction Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees or threatened flora (Pre-Clearing Survey E43) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place Clearly delineate the C3 construction ancillary facility boundary (survey) prior to clearing activities taking place in accordance with the Clearing and Grubbing Plan Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Approved Tree Report under E146 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist CEMP: preliminary construction including commencement activities: <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan Appendix A Site Environmental Plan for C3

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Pre and Post Clearing checklist to be completed by CGU Environmental Advisor Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 		
		Damage to vegetation (including) tree roots	9 (moderate)	Direct: <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees or threatened flora (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Implement tree protection measures as identified by arborist (E146) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and any tree protection measure implemented Pre-Clearing checklist to be completed by CGU Environmental Advisor to check controls are in place Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation If damage is identified in Post Clearing Checklist, arborist will be assigned to assess tree Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Approved Tree Report under E146 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist
		Injury / encounter with fauna	9 (moderate)	Direct: <ul style="list-style-type: none"> Pre-clearing surveys (E43) to be undertaken prior to the removal of any vegetation. Any habitat trees would be identified in accordance with the Approved Clearing and Grubbing Report and Permit to Clear Land and Vegetation If fauna is encountered and/or injured, Fauna Handling Procedure will be implemented Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Appendix B Fauna Handling Procedure Clearing and Grubbing Plan: <ul style="list-style-type: none"> Pre-clearing Survey under E43 Permit to Clear Land and Vegetation: <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist
		Spread of weed species	8 (minor)	Direct: <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: 	6 (minor)	Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> ○ Location of habitat trees or threatened flora (Pre-Clearing Survey E42) ○ No-Go Zones (Safety, Heritage or Ecological) ○ Sensitive Areas ○ Noise Catchment Areas ○ Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) ○ Clearance boundary ○ Details on stages of work ○ Working hours ○ Location of weed (if applicable E42) ● Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and weeds identified within Permit ● Weeds to be identified on site prior to clearing activities taking place ● Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation ● Pre and Post Clearing checklist to be completed by CGU Environmental Advisor to identify that weed were managed in accordance with Permit ● Disposal of weeds it to occur in accordance with Waste CEMP Sub-plan (MMW6) <p>Indirect:</p> <ul style="list-style-type: none"> ● Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure ● Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 		<ul style="list-style-type: none"> ● Appendix C Weed Management Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> ● Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> ● Pre-clearing checklist ● Post clearing checklist <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> ● Section 6 Environmental Control Measures
Noise and Vibration	<ul style="list-style-type: none"> ● Demolition of existing structures including: <ul style="list-style-type: none"> ○ Removal of garden beds, parking bays ○ Disconnection of services to buildings at MOC3 ○ Demolition of existing buildings at MOC3 ● Vegetation clearing: <ul style="list-style-type: none"> ○ Majority within standard construction hours ○ Some street trees may require removal OOHW due to ROL ● Installation of noise wall and boundary fencing ● Property adjustments within C3: <ul style="list-style-type: none"> ○ Connection of potable water, power and sewer to facilities 	<p>Noise impacts to sensitive receivers, including from high impact activities within C3 from the use of:</p> <ul style="list-style-type: none"> ● Rock hammer to facilitate the removal of garden beds and parking bays ● Use of Rock hammer and similar to demolish buildings at MOC3 ● Grinders and rattle guns to assemble plant and equipment ● Chainsaws and mulchers used during vegetation clearing 	16 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> ● Impact of works to be assessed prior to works commencing the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. ● Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan including: <ul style="list-style-type: none"> ○ Respite periods for high impact noise activities ○ Progressively erecting noise walls along West Botany Street ○ Use of temporary screening ○ Monitoring will be carried out in accordance with the CNVIA ● Programming of works to minimise the duration of noisy works ● All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of noise sensitive receivers and mitigation measures that must be implemented ● Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> ● Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA ● Notification in accordance with the Community Communication Strategy 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> ● Section 7 Construction noise and vibration assessment ● Section 8 Environmental Control Measures ● Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> ● Section 5.3 Noise mitigation and management measures ● Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> ● Section 3.6 Competence, training and awareness ● Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> ○ Removal of redundant services for safety purposes • Relocation of overhead power lines on West Botany Street • Installation of office and amenities • Site leveling including haul roads, piling pads and laydown areas which involves: <ul style="list-style-type: none"> ○ Importing clean material ○ Spreading and compacting material on top of existing ground cover ○ Stabilisation • Delivery and assembly of plant and equipment (including OOH) 			<ul style="list-style-type: none"> • Including list of assessed equipment and mitigation measures required to undertake high impact works in Work Pack's 		Community Communication Strategy
		<p>Vibration impacts (human annoyance, property damage) to sensitive receivers from use of vibratory equipment, including the use of:</p> <ul style="list-style-type: none"> • Vibratory roller to compact clean material during site leveling • Rock hammer to facilitate the removal of garden beds and parking bays • Use of Rock hammer and similar to demolish buildings at MOC3 • Use of compactor or Wacker packer 	16 (significant)	<ul style="list-style-type: none"> • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan and CNVIA including: <ul style="list-style-type: none"> ○ Undertaking Condition Surveys prior to activities works (as per CNVIA) ○ Respite periods high impact activities ○ Substituting equipment where possible ○ Monitoring will be carried out in accordance with the CNVIA • Programming of works to minimise the duration of works • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented • Community liaison and notification <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA • Notification in accordance with the Community Communication Strategy <p>Including list of assessed equipment and mitigation measures required to undertake works which are at risk of generating vibration in Work Pack's</p>	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 6.1 Minimum working distances for vibration intensive plant • Section 6.2 Vibration assessment • Section 6.3 Vibration mitigation measures • Appendix C Construction Timetable activities management <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> • Section 3.6 Competence, training and awareness • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) <p>Community Communication Strategy</p>
		<p>Noise impacts from out of hour deliveries and works (e.g. relocation of overhead powerlines at MOC3)</p>	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Where possible, all works will be undertaken within standard construction hours • All OOH deliveries are to be unloaded during standard construction hours • OOHW Approval must be obtained prior to works taking place and signed onto at pre-start • Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities. Works to be carried out in accordance with the CNVIA • Mitigation measures implemented as per the Noise and Vibration Preliminary Sub-plan and CNVIA • All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of sensitive receivers and mitigation measures that must be implemented 	9 (moderate)	<p>Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 7 Construction noise and vibration assessment • Section 8 Environmental Control Measures • Section 9 Compliance management (including training) <p>CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan):</p> <ul style="list-style-type: none"> • Section 5.3 Noise mitigation and management • Appendix C Construction Timetable activities management

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Community liaison and notification Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA Notification in accordance with the Community Communication Strategy The Work Pack/s must include assessed plant, equipment and work area along with any mitigation measures which need to be implemented. 		Out of Hours Work and Construction Fatigue Protocol (Appendix C to the Noise and Vibration Preliminary CEMP Sub-plan) Community Communication Strategy CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.6 Competence, training and awareness Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Inadequate notification to sensitive receivers impacted by activities associated with C3 construction ancillary facility	12 (moderate)	Direct: <ul style="list-style-type: none"> Impact of works to be assessed prior to works commencing through the Construction Noise and Vibration Impact Statement (CNVIA) for preliminary construction including commencement activities Notification to be carried out in accordance with mitigation measures outlined in CNVIA All on site personnel would undergo a site induction and ongoing toolbox talks that will identify the location/s of vibration sensitive receivers and mitigation measures that must be implemented Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan and CNVIA Notification in accordance with the Community Communication Strategy The Work Pack/s to be reviewed by Community Relations Advisor 	9 (moderate)	Community Communication Strategy Appendix B3 Noise and Vibration Preliminary CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.1 Sensitive receivers Section 5 Noise and vibration criteria for NSW Section 7 Construction noise and vibration assessment Section 8 Environmental Control Measures Section 9 Compliance management (including training) CNVIA for preliminary construction including commencement activities (Appendix F to the Noise and Vibration Preliminary CEMP Sub-plan): <ul style="list-style-type: none"> Section 3 nearest sensitive receivers Section 4 Construction noise and vibration objectives Section 5.3.2 Noise control and management measures CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.7 Communication
Soil and Surface Water	<ul style="list-style-type: none"> Vegetation removal: soil caught in root systems of trees Construction of footings for noise walls and chain link fencing Site leveling for haul roads, piling pads and hardstand areas which involves: <ul style="list-style-type: none"> Importing clean material 	Impact to surface waters from inappropriate discharge	12 (moderate)	Direct: <ul style="list-style-type: none"> No water to be discharged from C3 during preliminary construction Divert surface water around disturbed areas (clean water diversion) Existing stormwater drains to be isolated No activities to occur within wetland during Stage 1 preliminary construction Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Erosion and Sediment Control Management Procedure Project EPL CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> ○ Spreading and compaction to design levels (on top of existing pavement) ○ Stabilisation ● Property adjustments: <ul style="list-style-type: none"> ○ Disconnection of existing services to buildings ○ Connection of potable water, power and sewer to facilities ○ Removal of redundant services for safety purposes ● Installation of erosion and sediment controls ● Construction of pedestrian footpath from West Botany Street through to Brighton-Le-Sands Public School 			<ul style="list-style-type: none"> ● Implementing the TfNSW incident procedure in the event of a non-compliance 		<ul style="list-style-type: none"> ● Section 3.2.3 Regulatory requirements and compliance ● Section 3.8 Emergency and Incident Planning ● Appendix A7 TfNSW Incident Procedure ● Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Sediment laden water leaving C3 boundary during rainfall event (including from hardstands, stockpiles, site leveling activities)	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> ● Erosion and Sediment Control Plans (ESCP) would be prepared and implemented ● Stockpiles to be managed in accordance with Stockpile Management Procedure ● Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) ● Targeted training for key on site personnel ● All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures ● An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control ● Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers <p>Indirect:</p> <ul style="list-style-type: none"> ● Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure ● ESCP to be included in Work Packs 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> ● Erosion and Sediment Control Procedure ● Stockpile Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> ● Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) ● Section 3.4 Resources, responsibility and authority ● Section 3.6 Competence, training and awareness ● Section 3.9 Monitoring, inspections and auditing ● Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Contamination of soil or water due to spills of hydrocarbon, oils and chemicals related to: <ul style="list-style-type: none"> ● Mechanical failures ● Refuelling activities 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> ● Spill kits would be readily available within the C3 (including MOC3) construction ancillary facility ● The use of any hazardous substances that could result in a spill would be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds ● Any refuelling on site would follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. ● All spills or leakages would be immediately contained and cleaned up ● Spill containment kits would be placed at locations where chemicals are stored or used and where refuelling is permitted ● Inspection regime for chemical storage facilities <p>Indirect:</p> <ul style="list-style-type: none"> ● Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure ● Storage and handling chemicals would be done in accordance with Safe Work Method Statement and SDS ● Implementing the TfNSW incident procedure in the event of a non-compliance 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> ● Spill Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> ● Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) ● Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3 ● Appendix A7 TfNSW Incident Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Washout water from concrete agitator travelling beyond C3 boundary	8 (minor)	Direct: <ul style="list-style-type: none"> Washout areas will be adequately sized, regularly maintained, and located in a designated area Concrete agitator truck drivers will be directed to the designated washout area Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Tracking of material onto West Botany Street	12 (moderate)	Direct: <ul style="list-style-type: none"> Wheel wash to be installed at C3 construction ancillary facility Vehicles exiting site will be directed through wheel wash, once installed Street sweeper to be used to maintain internal haul roads and West Botany Street Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Sediment escaping from pedestrian footpath works into Kings Wetland	12 (moderate)	Direct: <ul style="list-style-type: none"> Erosion and Sediment Control Plans (ESCP) would be prepared and implemented Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Control measures to be included in Work Pack/s 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
Groundwater	<ul style="list-style-type: none"> Soil disturbance activities including: <ul style="list-style-type: none"> Vegetation removal soil caught in root systems of trees Property adjustments including service connections/disconnection and removal of redundant services for safety purposes Footings for noise walls and chain link fencing 	Impact/s to groundwater resources (including quality or drawdown) from disturbance	8 (minor)	Direct: <ul style="list-style-type: none"> No bulk excavation would be undertaken during preliminary construction or commencement activities Completion of Site Contamination Report/s (including investigation of groundwater) prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan and Geotechnical Interpretative Report 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Appendix B8 Contamination CEMP Sub-plan Geotechnical Interpretative Report

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Heritage	<ul style="list-style-type: none"> Property adjustments including: <ul style="list-style-type: none"> Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Vegetation removal Construction of footings for noise walls and chain link fencing Construction of the pedestrian footpath 	Unexpected heritage finds (indigenous and/or non-indigenous) including unexpected find of human remains	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> Implement Unexpected Heritage Finds and Human Remains Procedure. If an unidentified heritage artefact is suspected: <ul style="list-style-type: none"> All works in the immediate vicinity of the find will cease immediately to avoid any further impacts. A qualified archaeologist will be contacted to determine the significance of the object(s). In the event that new Aboriginal site(s) or item(s) are discovered during the proposed investigations, an AHIMS site card will be completed and submitted to the Office of Environment and Heritage (OEH) in accordance with section 89A of the National Parks and Wildlife Act 1974 (NSW). The site card will be lodged within 21 days and a copy provided to Indigenous stakeholders who wish to have a copy. Management recommendations will be developed for newly identified site(s) or items(s) in consultation with registered Indigenous stakeholders, using the precautionary principles of avoidance, mitigation, salvage. Management measures will be determined based on the type of evidence identified, the significance of the site or item identified (scientific and cultural) as well as the nature of potential impacts. <p>Indirect:</p> <ul style="list-style-type: none"> All on site personnel would 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 requirements of the Manage Heritage Procedure and the Unexpected Heritage Finds Procedure and Human Remains Procedure. Implement management measures outlined in the https://caportal.com.au/rms/m6/documents Heritage Management Plan 	2 (negligible)	https://caportal.com.au/rms/m6/documents Heritage Management Plan: <ul style="list-style-type: none"> Unexpected Heritage Finds and Human Remains Procedure
		Pedestrian footpath works encroaching on Kings Wetland	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> No-go zone to be established for Kings Wetland, entry to this wetland will require approval through a permit system and coordinated by the Environment Team Boundary fencing will be established during preliminary construction works, delineating work area from Kings Wetland 	3 (minor)	https://caportal.com.au/rms/m6/documents Heritage Management Plan
Air Quality	<ul style="list-style-type: none"> Importing clean material for site leveling activities and associated activities (spreading, compacting stockpiling etc.) Rock hammering of garden beds and parking bays Movement of vehicles and equipment on surface Stockpiling of material Demolishing existing structures (MOC3) Use of street sweeper 	Emissions from the use of plant and equipment	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Engine idling will be minimised when plant is stationary, and plant will be switched off when not in use to reduce emissions The use of mains electricity will be favoured over diesel or petrol- powered generators where practicable to reduce site emissions <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Mitigation measures to be included in SWMS for the operation of plant and equipment where applicable 	6 (minor)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Application of pesticides to weeds		Sensitive receivers impacted by dust generated from rock hammering on surface	15 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> Effective dust suppression would be applied during works including but not limited to the use of water carts, sprinklers, dust screens, fogging machines etc. Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team Inspections will be undertaken on activities with potential to generate dust to monitor the effectiveness of the control measures All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 	12 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Tracking of material on West Botany Street from vehicle movements exiting C3 construction ancillary facility	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Hardstands and haul roads within C3 construction ancillary facility will be maintained to minimise and reduce dust generation from exposed surface areas and vehicle movements All vehicles exiting the C3 construction ancillary facility will utilise the wheel wash prior to exiting site (once available) Water carts and street sweepers will service haul roads Inspections will be undertaken monitor the effectiveness of the control measures Vehicle Management Plan to be enforced by Supervisor and monitored by traffic control or delegated person <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program Vehicle Management Plan to direct exiting vehicles through wheel wash 	9 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program
		Sensitive receivers impacted by dust generation from site leveling activities and associated activities (spreading, compacting stockpiling etc.)	15 (significant)	<p>Direct:</p> <ul style="list-style-type: none"> Storage of materials that have the potential to result in dust generation would be minimised within Project sites at all times Long term inactive stockpiles (e.g. longer than 10 days) will be stabilised using soil polymer binders, spray seed, geofabric etc. Controls outlined in Stockpile Management Procedure to be implemented Water suppression will be applied during activities to minimise the generation of dust Inspections will be undertaken monitor the effectiveness of the control measures 	12 (moderate)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>Appendix B4 Soil and Surface Water Management Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Stockpile Management Procedure located in Appendix B4 Soil and Surface Water Management Procedure Monitoring and surveillance as per the Air Quality Monitoring program Ensure that control measures are communicated and documented into Work Packs 		CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Dust generation from improper use of street sweeper	12 (moderate)	Direct: <ul style="list-style-type: none"> Construction plant and equipment will be operated, inspected and maintained to maximise efficiency and comply with relevant emission standards Supervisor to assess competency of operator of street sweeper Pre-start to be conducted on street sweeper daily and any faults rectified Where water sprays on street sweeper are not sufficient, water will be applied using water cart or hose until issue is rectified All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Monitoring and surveillance as per the Air Quality Monitoring program 	8 (minor)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority
		Sensitive receivers impacted by dust generation form demolition activities	15 (significant)	Direct: <ul style="list-style-type: none"> Effective dust suppression to be applied during demolition of existing structures to minimise dust generation HAZMAT surveys and removal of asbestos prior to demolition activities Preliminary construction including commencement activities with the potential to generate dust would be managed (modified, reduced or ceased) during unfavourable weather conditions to reduce the potential for dust generation Forecast of unfavourable weather conditions will be communicated to construction team All on site personnel would undergo a site induction and ongoing toolbox talks that will identify correct behaviours and mitigation measures that must be implemented Inspections will be undertaken monitor the effectiveness of the control measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan 	12 (moderate)	Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Application of pesticides result in chemical travelling beyond C3 construction ancillary facility boundary.	9 (moderate)	<ul style="list-style-type: none"> Monitoring and surveillance as per the Air Quality Monitoring program Direct: <ul style="list-style-type: none"> The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides beyond the C3 project boundary An Environmental Work Method Statement will be developed on the application of pesticides and activity carried out in accordance with this EWMS Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Weed Management Procedure found in Appendix B2 Flora and Fauna Management Procedure Implementation of management measures outlined in the EWMS 	6 (minor)	<ul style="list-style-type: none"> Appendix B7 Air Quality and Odour CEMP Sub-plan: <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program Appendix B2 Flora and Fauna Management Procedure: <ul style="list-style-type: none"> Weed Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
Contamination	<ul style="list-style-type: none"> Property adjustments including: <ul style="list-style-type: none"> Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Vegetation removal including root systems Construction of footings for noise walls and chain link fencing 	Disturbance of contaminated material	12 (moderate)	<ul style="list-style-type: none"> Direct: <ul style="list-style-type: none"> No bulk excavation will be undertaken at C3 construction ancillary facility during preliminary construction activities Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Implementation of the TfNSW Unexpected Contaminated Lands and Asbestos Finds Procedure (Appendix A of the Appendix B8 Contamination CEMP Sub-plan) Property adjustment will avoid soil disturbance by: <ul style="list-style-type: none"> Running services above existing ground Placing services within clean fill material (placed during site leveling) No landfill material to be intercepted with the installation of services Disturbance of soil below topsoil will be avoided wherever possible, with site leveling activities building up from existing ground level 	9 (moderate)	<ul style="list-style-type: none"> Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 4 Existing environment Section 6 Environmental control measures Section 7 Compliance Management Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Appendix A4 Site Environmental Management Plan Appendix A Site Environment Plan for C3 Appendix B4 Soil and Surface Water Management Procedure:

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Stockpiles to be managed in accordance with Stockpile Management Procedure (Appendix B4 Soil and Surface Water Management Procedure) Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan Ensure that control measures are communicated and documented into Work Packs 		<ul style="list-style-type: none"> Stockpile Management Procedure
		Exposure of personnel to unidentified contaminated materials during works	12 (moderate)	Direct: <ul style="list-style-type: none"> No bulk excavation will be undertaken during preliminary construction or commencement activities Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Induct construction personnel in the identification and management of previously unidentified contaminated sites. The discovery of previously unidentified contaminated material will be managed in accordance with an Unexpected Contaminated Land Finds Procedure. The procedure will include: <ul style="list-style-type: none"> Cease work in the vicinity Initial assessment by an appropriately qualified environmental consultant Further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act 	6 (minor)	Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 4 Existing environment Section 6 Environmental control measures Section 7 Compliance Management Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure
Waste	<ul style="list-style-type: none"> Importing clean material (e.g. stabilised DGB, VEMN / tunnel spoil) for site leveling Waste services collecting skips and front-loading bins Waste materials generated from: <ul style="list-style-type: none"> Demolition Packaging from deliveries Maintenance of plant and equipment Offices and amenities Vegetation clearing Material removed during: <ul style="list-style-type: none"> Noise wall, chain link fencing footings Property adjustments Soil from tree roots Litter from workforce, visitors and staff 	Inappropriate disposal of waste (including demolition, vegetation and hazardous / special waste) including disposal of waste at an unlicensed waste facility	15 (significant)	Direct: <ul style="list-style-type: none"> Waste classification in accordance with EPA guidelines Suitably licensed waste contractors would be used for the collection and transport of all wastes for either offsite processing and/or disposal to an appropriately licensed facility Receipts for waste transfer and disposal would be checked to ensure all details are correct and retained for audit purposes Implementation of a waste tracking register All on site personnel would undergo a site induction and ongoing toolbox talks that detail waste and resource management measures Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 	9 (moderate)	Appendix B9 Waste CEMP Sub-plan: <ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking Section 6 Environmental control measures Section 7 Compliance management
		Inappropriate material bought to site for leveling purposes	15 (significant)	Direct: <ul style="list-style-type: none"> Imported clean material suitable for the purpose of site leveling as per design requirements Imported clean material may also be bought to site under a Resource Recovery Exemption Evidence of compliance to the Resource Recovery Order will be requested and inspections carried out on material Imported material its source will be tracked 	9 (moderate)	Appendix B8 Contamination CEMP Sub-plan: <ul style="list-style-type: none"> Section 7 Compliance Management
		Litter, inappropriate use of co-mingling and waste receptacles	8 (minor)	Direct:	2 (negligible)	Appendix B9 Waste CEMP Sub-plan:

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> All recyclable solid wastes (paper/ cardboard/ plastic/ glass/ timber/ metals/ fluorescent lighting/ printer cartridges/ICT equipment) would be segregated for recycling purposes and volumes reported. Wherever possible, packaging should be avoided or minimised to prevent waste products being unnecessarily brought to site. All staff and subcontractors would undergo a site induction and ongoing toolbox talks that will detail waste and resource management measures (including the waste management hierarchy) and energy consumption <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Sustainability Management Plan and Appendix B9 Waste CEMP Sub-plan 		<ul style="list-style-type: none"> Section 4.4 Waste management Hierarchy Section 4.5 Classification of waste streams Section 4.6 Management of waste streams Section 4.7 Waste tracking Section 6 Environmental control measures Section 7 Compliance management <p>Sustainability Management Plan</p>
Landfill and leachate	<p>Ground disturbance activities:</p> <ul style="list-style-type: none"> Property adjustments including: <ul style="list-style-type: none"> Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Vegetation removal: soil caught in root systems of trees Construction of footings for noise wall and chain link fencing 	Interception of landfill and leachate	12 (moderate)	<ul style="list-style-type: none"> No bulk excavation will be undertaken during preliminary construction or commencement activities Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Property adjustment will minimise ground disturbance by: <ul style="list-style-type: none"> Trenches will not run through landfill material during preliminary construction activities Running services along/above existing ground Placing services within clean fill material (placed during site leveling) Induct construction personnel in the identification and management of previously unidentified contaminated sites If landfill and leachate is intercepted, it will be managed in accordance with an Unexpected Contaminated Land Finds Procedure. The procedure will include: <ul style="list-style-type: none"> Cease work in the vicinity Initial assessment by an appropriately qualified environmental consultant Further assessment and management of contamination, if confirmed, in accordance with Section 105 of the CLM Act <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B8 Contamination CEMP Sub-plan Implementing the TfNSW incident procedure in the event of a non-compliance 	8 (Minor)	<p>Appendix B8 Contamination CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 4 Existing environment Section 6 Environmental control measures Section 7 Compliance Management Appendix A TfNSW Unexpected Contaminated Land and Asbestos Finds Procedure
General including Site Establishment	<ul style="list-style-type: none"> Installation of offices and amenities Construction of the noise walls and chain link fences Removal of vegetation with C3 construction ancillary facility and nominated street trees 	Inadequate notification to relevant stakeholders of incident and/or non-conformance	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Potential and actual non-compliances will be classified and reported in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure A Pollution Incident Response Management Plan (PIRMP) will be prepared and implemented All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 	9 (moderate)	<p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.8 Emergency and Incident Planning Section 3.10 Environmental non-conformities

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				14001:2016 Environmental management systems – Requirements with guidance for use)		
		Visual amenity impact on adjacent sensitive receivers including: <ul style="list-style-type: none"> Light spill (including impacts to airport operations) Boundary screening Overshadowing Overlooking Graffiti 	9 (moderate)	Direct: <ul style="list-style-type: none"> The SSI number and Project name will be displayed at the entrance to the ancillary facility The ancillary facility will be designed to limit overshadowing of sensitive receivers No facilities will look down into sensitive receivers Lights would be directed down and away from sensitive receivers Where required, shields are to be placed on lights to direct light away from residential receivers Lighting to inspected regularly during environmental inspections or during noise monitoring to ensure light spill measures are effective Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix A4 Site Establishment Management Plan 	6 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan
		Undertaking activities, not described in the approved CEMP Preliminary construction including commencement activities and this risk assessment	12 (moderate)	<ul style="list-style-type: none"> Undertaking regular internal inspections and monitoring Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist All works will be carried out in accordance with the CPB Contractors Construction management System including ongoing environmental risk and opportunities identification during the development and review of: <ul style="list-style-type: none"> Project Risk Register (as per the Risk Management Plan: M6S1-CGU-NWW-PCRM-MPL-000800) Construction Area Plan Risk Assessments (CAPRAs) Work Packs, including Work Pack Risk Assessment Environmental Work Method Statements (EWMS) or Safe Work Method Statements (SWMSs), which address environmental risks (as applicable) Pre-start meetings 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.2.1 Environmental Risk Assessment Workshop Section 3.9 Monitoring, inspections and auditing
		Environmental objectives and targets outlined in CEMP Preliminary construction including commencement activities (Section 3.3.1) are not met including: <ul style="list-style-type: none"> Inspections Monitoring 	12 (moderate)	<ul style="list-style-type: none"> Undertaking regular internal inspections and monitoring including: <ul style="list-style-type: none"> Air quality monitoring as per Monitoring Program Noise and vibration monitoring as per Monitoring Program Ongoing pre-construction groundwater and surface water monitoring to continue Undertaking inspection with external stakeholders including the ER, AA and Project Soil Conservationist All works will be carried out in accordance with the CPB Contractors Construction management System (certified to conform to AS/NZS ISO 14001:2016 Environmental management systems – Requirements with guidance for use) 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 1.5 Environmental Management System overview Section 3.4 Resources, responsibilities and authority Section 3.9 Monitoring, inspections and auditing
		Inadequate consultation with stakeholders outlined in Section 2 of the CEMP Preliminary construction including commencement activities	12 (moderate)	Direct: <ul style="list-style-type: none"> Consultation will be undertaken in accordance with the Stage Report and CEMP Preliminary construction including commencement activities Evidence of consultation and responses to queries will be provided within CEMP Sub-plans 	8 (minor)	CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 2 Consultation, endorsement and approval

Table 4 Aspects and impacts register for C4, C5, C6 and permanent power supply construction ancillary facilities

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	No activities will take place at C4, C5 and C6 construction ancillary facilities during Stage 1 – Preliminary Construction.					
Flora and Fauna						
Noise and Vibration						
Soil and Surface Water						
Groundwater						
Heritage						
Air Quality						
Contamination						
Waste						
Leachate and Landfill Gas						

Appendix A3

Environment and Sustainability Policies

M6 Stage 1

July 2021

Environment Policy

Purpose

This Policy sets out the minimum mandatory requirements for the management of environmental risks and impacts from our construction activities.

Application

This Policy applies to all business entities controlled by the business, including alliances, joint ventures and consortia where the business exerts management control. It applies at all levels of the organisation including Corporate, Business Unit and Project.

Minimum Requirements

- Senior leaders must demonstrate a personal visible commitment to our SH&E Cultural Framework and ensure all workers understand the requirements of the Management System as it applies to the work they are undertaking, so that work is undertaken to minimise our environmental impact.
- Environment Management Plans (EMP) must be developed and implemented for each Project to outline how the project environmental risk will be managed and controlled.
- Environmental objectives, targets and key performance indicators must be established at all levels of the organisation, with performance against these monitored and analysed to provide a baseline for continual improvement.
- The Environment Procedures must be used to eliminate or minimise environmental risk from construction activities.
- Construction Area Plans and Work Packs must be developed and include an assessment of environmental risk and associated controls.
- Site Environment Plans must be developed for Work Packs where environmental risk dictates; these must be used to inform as content of Daily Pre Starts.
- As part of the risk management process, personnel and teams at the Project, Business Unit and Corporate level should seek to identify opportunities for improving efficiency in the use of natural resources, enhancing positive environmental impacts and driving innovation.
- All environmental incidents must be reported in accordance with the incident notification requirements. They must be thoroughly investigated and appropriate corrective action undertaken with the aim of preventing recurrence of the incident.
- Reporting of energy consumption, water use and waste generation, as well as reporting on initiatives and environmental achievements must be completed by projects and business units as requested.

- All levels of the organisation must be prepared to respond to an emergency and in the event of an emergency, plans and capabilities are in place to eliminate or minimise damage to the environment, preserve ongoing operations and our reputation.
- Effective communication, cooperation and consultation channels must be in place to consult with workers who may impact upon the environment.
- All project personnel responsible for environmental risk shall be appropriately trained and competent and understand their legal obligations with regard to environment management.

Sustainability Policy

This Policy sets out requirements for sustainability for CPB Contractors, Ghella & UGL Engineering (CGU) on the M6 Stage 1 Upgrade Project. Sustainability is the integration of environmental, social and governance factors into decision making to maximise short- and long- term shareholder value, seek competitive advantage, and contribute to safe and healthy employees, communities and ecosystems.

This Policy is consistent with the CIMIC Sustainability Policy and applies to all employees, and third parties engaged by CGU. The objectives of this Sustainability Policy are to:

- Focus CGU's efforts on managing sustainability risks and opportunities, enhancing business performance and supporting the long-term interests of CGU;
- Promote a culture of accountability for sustainability outcomes and improve the sustainability knowledge and skills of employees;
- Integrate consideration of environmentally and socially responsible sourcing and governance factors into CGU's operating and procurement processes, and seek opportunities to collaborate with the supply chain to drive innovation and create mutual value;
- Drive the efficient use of resources and continual innovation in the delivery of the Project;
- Support the adoption and delivery of the Infrastructure Sustainability (IS) rating schemes and other standards that drive sustainability outcomes;
- Encourage and pursue sustainability initiatives and programs that are consistent with the scope of work and technical criteria and meet client expectations, provide value for money, and leave net positive legacies for CGU, our client, project stakeholders, the environment and communities; and
- Enhance resilience to climate change.

CGU will regularly review strategies, reporting and performance to ensure compliance with all legislative requirements and support continuous improvement in sustainability and business performance.

Glen Ashton

M6 Stage 1 Project Director

Date: 14 July 2021

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Appendix A4

Site Environmental Management Plan

M6 Stage 1: Preliminary construction including commencement activities

October 2021

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Site Establishment Management Plan

This Site Establishment Management Plan (SEMP) relates to the M6 Stage 1 Project (the Project) and has been prepared in accordance with the:

- Minister’s Conditions of Approval (CoA);
- M6 Stage 1 Environmental Impact Statement (EIS);
- Preferred Infrastructure Report (PIR);
- Requirements of EMP guidance as specified by the Department of Planning, Industry and Environment (DPIE); and
- The Staging Report (M6S1-CGU-NWW-ENPE-PLN-000401).

This SEMP forms part of the Preliminary CEMP (M6S1-CGU-NWW-ENPE-MPL-000400) and should be read in conjunction with the main body of the CEMP and associated CEMP Sub-plans and Management Procedures in Appendix B.

Table 1 outlines the desired performance outcomes identified in Chapter 24 of the M6 Stage 1 EIS and references where these performance outcomes are addressed in the SEMP.

Table 1 Desired performance outcomes from M6 Stage 1 Environmental Impact Statement Chapter 24

Desired performance outcome	Project outcome	Reference in document
Place making and urban design	Moderate adverse visual and landscape character impacts at around Rockdale Bicentennial Park during construction	Refer to Table 6, reference C3
	Receptors are not expected to experience significant changes to their night time visual and light environment during construction and operation.	Refer to Table 6
Socio-economic, Land Use and Property	Majority of amenity and community wellbeing, and access and connectivity impacts during construction would be temporary and short term	Refer to Table 6, reference C2 and C3
	All construction sites have the potential to be impacted by flooding to some degree however the Flood Management Strategy would be prepared to manage the risk of adverse flood impacts being experienced by construction workers and infrastructure.	Refer to Table 6

Table 2 outlines how this SEMP will comply with CoA A17.

Table 2 Compliance to CoA A17

CoA	Condition Detail	Where CoA has been addressed
A17	<p>Site Establishment Management Plan</p> <p>The Proponent must prepare and submit for approval to the Planning Secretary one (1) month before the establishment of any construction ancillary facility (excluding minor construction ancillary facilities established under Condition A19) a Site Establishment Management Plan. The Plan must be prepared in consultation with the relevant council and government agencies and must include:</p>	
	<p>a) an outline of the environmental management practices and procedures to be implemented at the facility(ies);</p>	<p>Management practices and procedures are outlined in Section 3 and Section 4 of the CEMP Preliminary construction including commencement activities.</p> <p>Refer to Appendix B CEMP Sub-plans and Management Procedures, of the CEMP Preliminary construction including commencement activities</p> <p>Site Environmental Plans (SEPs), featured in Appendix A of the SEMP</p>
	<p>b) a description of activities to be undertaken during establishment of the construction ancillary facility (including scheduling and duration of works to be undertaken at the site);</p>	<p>Description of activities are featured in:</p> <ul style="list-style-type: none"> • Table 5 and Table 6 of the SEMP; and • Section 1.1, Section 1.4 and Table 1 of the CEMP Preliminary construction including commencement activities
	<p>c) figures illustrating the proposed operational site layout;</p>	<p>Figures illustrating the proposed layout are found in the SEPs, featured in Appendix A of the SEMP</p>

CoA	Condition Detail	Where CoA has been addressed
	<p>d) a program for ongoing analysis of the key environmental risks arising from the site establishment activities described in subsection (b) of this condition, including an initial risk assessment undertaken prior to the commencement of site establishment works;</p>	<p>Initial risk assessment is found in Appendix A2 of the CEMP Preliminary construction including commencement activities</p> <p>Ongoing analysis of key environmental risks will be carried out in accordance with Section 1.5 and Section 3 CEMP Preliminary construction including commencement activities</p> <p>SEPs, featured in Appendix A of the SEMP</p>
	<p>e) details of how the site establishment activities described in subsection (b) of this condition will be carried out to:</p>	
	<p>i. meet the performance outcomes stated in the documents listed in Condition A1, and</p>	<p>Refer to Table 1</p> <p>Also refer to Appendix A1 Legal and Compliance Tracking, of the CEMP Preliminary construction including commencement activities.</p>
	<p>ii. manage the risks identified in the risk analysis undertaken in subsection (d) of this condition; and</p>	<p>Risk will be managed in accordance with:</p> <ul style="list-style-type: none"> • Section 3 and Section 4 of the CEMP Preliminary construction including commencement activities; • Appendix B CEMP Sub-plans and Management Procedures, of the CEMP Preliminary construction including commencement activities; and

CoA	Condition Detail	Where CoA has been addressed
	<p>f) a program for monitoring the performance outcomes, including a program for noise monitoring of site establishment activities.</p>	<ul style="list-style-type: none"> SEPs, featured in Appendix A of the SEMP. <p>Performance outcomes applicable to Stage 1 preliminary construction are outlined in Tables 7-9, Section 3.3.1 of the CEMP Preliminary construction including commencement activities.</p> <p>Monitoring programs applicable to Stage 1 preliminary construction are outlined in Table 5, Section 3.2.1 of the CEMP Preliminary construction including commencement activities.</p>
	<p>The establishment of the construction ancillary facilities cannot commence until the Planning Secretary has approved the Site Establishment Management Plan for the relevant ancillary facility or facilities. Nothing in this condition prevents the Proponent from preparing individual Site Establishment Management Plans for each construction ancillary facility or one Site Establishment Management Plan for all facilities. The approved Site Establishment Management Plan(s) must be implemented.</p>	<p>This SEMP will be updated prior to the establishment or update of any Project ancillary facilities, in accordance with Figure 1.</p>

Approval and amendment of ancillary facilities

Overview of approval for establishment of ancillary facilities

The approval process for ancillary facilities is depicted in Figure 1 below.

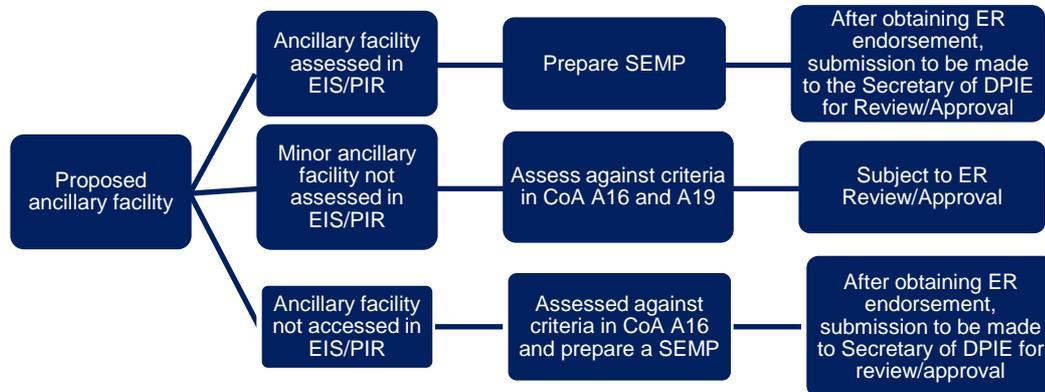


Figure 1 Approval process for ancillary facilities

Ancillary facilities identified in the EIS and PIR

The CoA A17 approve the use of the ancillary facilities described in the EIS and PIR to facilitate construction of the Project. All ancillary facilities will be constructed as described in Table 1 and Appendix A. The operation of all ancillary facilities will be in accordance with the Preliminary CEMP and the associated CEMP Sub-plans and Management Procedures found in Appendix B.

Minor changes to the use or layout of the ancillary facilities may be required to facilitate constructability, amenity or traffic staging. This may include:

- 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; and
- Demobilisation of the facilities as construction works progress and near completion.

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

Any changes to these ancillary facilities will be assessed against the CoA to determine compliance, and appropriate approval will be sought where required. Where the proposed change is considered to be minor, the Environmental Representative has authority to grant approval.

Ancillary Facilities not identified in EIS and PIR

Where ancillary facilities are proposed as they are required to facilitate the construction of the Project but they have not been identified by description and location in the EIS and PIR, the ancillary facilities must be assessed against CoA A16:

- (a) they are located within or immediately adjacent to the construction boundary; and
- (b) they are not located next to a sensitive receiver (including where an access road is between the facility and the receiver), unless the sensitive receiver landowner and occupier have given written acceptance to the carrying out of the relevant facility in the proposed location; and
- (c) they have no impacts on heritage items (including areas of archaeological sensitivity), threatened species, populations or ecological communities beyond the impacts approved under the terms of this approval; and
- (d) the establishment and use of the facility can be carried out and managed within the performance outcomes set out in the terms of this approval, including in relation to environmental impacts.

Where the proposed ancillary facility complies with CoA A16, this SEMP will be updated to include the ancillary facility. The updated SEMP will then be endorsed before being submitted to DPIE for review and approval. The establishment of the proposed ancillary facility cannot occur until the SEMP has approved by DPIE. Refer to Figure 1 for detail on this process.

Minor construction ancillary facilities

There may be circumstances during the construction of the Project where Minor Construction Ancillary Facilities are required. Under CoA A19, additional minor construction ancillary facilities (e.g. lunch sheds, office sheds and portable toilet facilities) can be established during construction so long as they:

- a) Are located within the construction boundary; and
- b) Have been assessed by the Environmental Representative to have:
 - i. low amenity impacts to surrounding residences and businesses, after consideration of matters such as compliance with the Interim Construction Noise Guideline (DECC, 2009), traffic and access impacts, dust and odour impacts, and visual (including light spill) impacts;
 - ii. low environmental impact with respect to waste management and flooding; and
 - iii. no impacts on biodiversity, soil and water, and heritage items beyond those already approved under other terms of this approval.

The Environmental Representative will review the proposed minor construction ancillary facilities against the above criteria and make an approval determination.

Compliance to other relevant conditions

Table 3 and Table 4 address other relevant Ministers Conditions of Approval and Environmental Mitigation Measures respectively.

Table 3 Relevant Ministers Conditions of Approval

CoA	Condition text	Where this addressed
A20	Boundary screening must be erected around all ancillary facilities that are adjacent to sensitive receivers for the duration of construction unless otherwise agreed with the relevant council and affected residents, business operators or landowners.	<p>This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot and C3 Rockdale Bicentennial Park.</p> <p>The C1 Arncliffe construction ancillary facility has existing boundary screening from M8 Motorway which will remain in place.</p> <p>Refer to Table 6 and the SEPs in Appendix A.</p>
A21	Boundary screening required under Condition A20 of this approval must minimise visual, noise and air quality impacts on adjacent sensitive receivers.	<p>This will be addressed in design of construction ancillary facilities for the C2 Rockdale Depot and C3 Rockdale Bicentennial Park.</p> <p>C1 Arncliffe construction ancillary facility has existing boundary screening from M8 Motorway which will remain in place.</p> <p>Refer to Table 6 and the SEPs in Appendix A for indicative locations of noise walls and hoarding at C2 and C3 which will be installed during Stage 1 Preliminary Construction, and the current location of noise walls and hoarding at C1.</p>
A42	Signage on hoardings surrounding construction ancillary facilities must include the CSSI name and application number.	<p>All compounds to have signage at the entry, which identifies the Project and application number. This sign will be mounted to either a noise wall or hoarding at the entrance to site. The Project name will also be displayed on the TfNSW banner (which will be mounted to specific noise walls and hoarding).</p> <p>Refer to Table 6 and the SEPs in Appendix A.</p>

CoA	Condition text	Where this addressed
E122	Access to and from the Rockdale construction ancillary facility (C2) by heavy vehicles must only be via West Botany Street, unless otherwise approved by the Planning Secretary.	This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot. Boundary fencing will prevent access from any other avenue. Refer to Table 6 and the SEPs in Appendix A. For further information on Traffic and Access, refer to the Traffic and Access Management Procedure (Appendix B1 of the CEMP).
E129	Construction vehicles (including staff vehicles) associated with the CSSI must be managed to minimise parking, idling and queuing on public roads.	This will be addressed in the design of the construction ancillary facilities (i.e. haul roads, staging areas and onsite car parking). Timing of heavy vehicles will also be staged to avoid queuing on public roads. Refer to Table 6. For further information on Traffic and Access, refer to the Traffic and Access Management Procedure (Appendix B1 of the CEMP).
E136	The CSSI must be constructed in a manner that minimises visual impacts of construction sites, such as providing temporary landscaping and vegetative screening of the construction sites, minimising light spill, and incorporating treatments and finishes within key elements of temporary structures that reflect the context within which the construction sites are located.	This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot and C3 Rockdale Bicentennial Park. Refer to the boundary screening section in Table 6.
E141	The Proponent must implement measures, in consultation with affected residents, to prevent headlights from vehicles exiting the Rockdale construction ancillary facility (C2) spilling onto residences along West Botany street that are adjacent to and opposite the site access way.	This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot. Consultation with property owners will be undertaken in accordance with the Communication Strategy. Refer to Table 6.

CoA	Condition text	Where this addressed
E142	The Proponent must construct and operate the CSSI with the objective of avoiding adverse or distracting lighting configuration, spillage or intensity to aircraft operations. All lighting associated with construction and operation must adhere to the <i>Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer</i> (CASA, 1999) and <i>National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports</i> (DITCARD, 2012). Notwithstanding, the Proponent must provide mitigation measures to manage any residual night lighting impacts to protect aircraft operations, in consultation with CASA and DITCARD.	This will be addressed in design of construction ancillary facilities. Consultation with Sydney Airport (on behalf of CASA and DITCARD) will continue to be undertaken progressively and reflective of scope. Refer to Table 6.
E143	Notwithstanding Condition E142 , the Proponent must consult with CASA, DITCARD and Sydney Airport Operators prior to the commencement of construction to determine the need and potential positioning of aviation hazard lighting on any equipment or built form component associated with the CSSI where such consultation deems it necessary.	This will be addressed in design of construction ancillary facilities. Consultation with Sydney Airport (on behalf of CASA and DITCARD) will continue to be undertaken progressively and reflective of scope. Refer to Table 6.

Table 4 Relevant Environmental Management Measures

EMM	Environmental Mitigation Measure text	Where this addressed
LVIA3	Construction and operational lighting will be oriented to minimise glare and light spill impacts on adjacent receptors.	This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot and C3 Rockdale Bicentennial Park. Lighting will continue to be positioned away from residential receivers and the frog habitat at C1 Arncliffe construction ancillary facility. This will be monitored throughout CEMP activities.

EMM	Environmental Mitigation Measure text	Where this addressed
		Refer to Table 6.
LVIA4	The design and maintenance of construction compound hoardings will aim to minimise visual impacts and landscape character impact, including the prompt removal of graffiti.	<p>This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot and C3 Rockdale Bicentennial Park.</p> <p>The C1 Arncliffe construction ancillary facility has existing boundary screening from M8 Motorway which will remain in place.</p> <p>Refer to the boundary screening section in Table 6 and the SEPs in Appendix A.</p>
SE1	A Site Establishment Management Plan will be prepared prior to construction and will have regard to the amenity of adjacent areas and minimising impacts to adjacent sensitive receivers, including potential noise, dust, traffic, visual, lighting and overshadowing and overlooking impacts during the establishment phase.	<p>This will be addressed in design of construction ancillary facilities at C2 Rockdale Depot and C3 Rockdale Bicentennial Park.</p> <p>The C1 Arncliffe construction ancillary facility has existing compound from M8 Motorway. Changes to the visual amenity of this compound are not expected.</p> <p>Refer to Table 6 and the SEPs in Appendix A.</p>
SWF12	As a minimum, site facilities are to be located outside high flood hazard areas based on a one per cent AEP flood. For site facilities located within the floodplain, the FMS is to identify how risks to personal safety and damage to construction facilities and equipment will be managed.	Design of the construction compounds has considered results of flood modelling and the Flood Mitigation Strategy. The Flood Mitigation Strategy has been developed and will be assessed and updated throughout the lifetime of the Project. It identifies risks to personal safety and damage to construction facilities and equipment and how they will be managed. Refer to Table 6.
GG5	Construction site layouts will be designed to reduce travel distances and double handling of materials so as to reduce fuel usage and emission generation.	The design of construction ancillary facilities and site establishment activities will be optimised to reduce travel distances. Location of acoustic sheds at C2 and C3 will be

EMM	Environmental Mitigation Measure text	Where this addressed
		<p>positioned to reduce travel time of truck and dogs within the construction ancillary facility.</p> <p>Stage 1 Preliminary Construction activities will be carried out in a manner which will avoid double handling of materials. This will include allocating designated stockpile and laydown areas. Refer to Table 6.</p>
HS6	<p>The project will be constructed and operated in accordance with the design requirements of CASA and the Sydney Airport Master Plan 2033, with respect to lighting.</p>	<p>This will be addressed in design of construction ancillary facilities. Lighting will be positioned so as not to impact airport operations. Consultation with Sydney Airport (on behalf of CASA and DITCARD) will be undertaken progressively and reflective of scope.</p> <p>This will be monitored throughout CEMP activities. Refer to Table 6.</p>

Site Establishment Overview

Six (6) ancillary facilities were identified and described in the Environmental Impact Statement (EIS) and Preferred Infrastructure Report (PIR) as being required to facilitate the construction of the Project. They included:

- C1 Arncliffe construction ancillary facility;
- C2 Rockdale construction ancillary facility;
- C3 President Avenue construction ancillary facility;
- C4 and C5 Shared cycle and pedestrian pathways construction ancillary facilities; and
- C6 Princes Highway construction ancillary facility.

Due to site access schedule and construction program, not all ancillary facilities will be established during Stage 1 Preliminary Construction. The scope of this SEMP includes the three ancillary facilities which will be established and operated during Stage 1 Preliminary Construction:

- C1 Arncliffe construction ancillary facility;
- C2 Rockdale construction ancillary facility; and
- C3 President Avenue construction ancillary facility;

Table 5 describes each ancillary facilities and their proposed uses during Stage 1 Preliminary Construction and Stage 2 Construction.

Table 6 outlines measures which will be undertaken to address aspects related to the establishment of construction ancillary facilities.

Table 5 Ancillary Facilities and associated activities

Ref	Ancillary facility	Primary activities during preliminary construction (Stage 1)	Primary activities during construction (Stage 2)
C1	Arncliffe construction ancillary facility (C1)	<ul style="list-style-type: none"> Installation and/or repair of environmental mitigation measures (wheel baths, site hoarding and noise walls, frog fencing and for the ongoing management of the pre-existing stockpile) Upgrade, refurbishment and use of site offices and amenities Refurbishment and use of workshops to facilitate delivery and assembly of construction equipment and plant Assessment and refurbishment of site services (sewer, low and high voltage power, water, dewatering facilities and compressed air) Assessment and refurbishment of existing equipment such as the water treatment plant, shaft access equipment (alimak and gantry crane), spoil bunds and acoustic sheds (some repairs required) Assessment and repair of existing M8 tunnel access structures (dive, shaft and adits) and services including: <ul style="list-style-type: none"> Geotechnical safety assessments Repair and replacement of temporary tunnel support systems as required Invert repairs (to facilitate subsequent construction access) Repair and refurbish tunnel services such as lighting, ventilation, power supply and communication equipment Upgrade or replace exiting construction service pipes (dewater, air) and emergency equipment (call points, caches etc). 	<ul style="list-style-type: none"> Operation of construction ancillary facilities Bulk excavation of tunnels including installation of tunnel support and groundwater control systems, Construction of back-end works (e.g. drainage, pavements, barriers) Construction of MOC and facilities Mechanical and electrical fit-out of tunnels and structures Reinstatement and rehabilitation of construction areas Other works as required to fulfil Project objectives
C2	Rockdale construction ancillary facility (C2)	<ul style="list-style-type: none"> Demolition of existing depot structures and property adjustments where required for access and site establishment Installation of mitigation measures including noise walls, fencing, hoarding, wheel bath, sediment and erosion control devices, and drainage Removal of vegetation in depot, which does not include any Plant Community Types (PCTs) or Threatened Ecological Communities (TECs) Installation of site offices, amenities, workshop and parking Connection of services such as water, sewer and power to offices and amenities Minor site levelling and installation of haul roads and hardstands Delivery and assembly of plant and equipment including water treatment plant Creation of working platforms and pads for subsequent construction activities Construction of footings for noise walls, bentonite plant and construction water treatment plant (which may include some bored piling due to poor ground conditions) 	<ul style="list-style-type: none"> Operation of construction ancillary facilities including construction of an acoustic shed Bulk excavation of a temporary shaft, tunnel and caverns including installation of shaft and tunnel support and groundwater control systems Supporting construction of backend works (e.g. drainage, pavement, barriers) Mechanical and electrical fit-out as required Reinstatement of construction areas Other works as required to fulfil Project objectives
C3	President Avenue construction ancillary facility (C3)	<p>MOC area (west of West Botany Street)</p> <p>Demolition of existing structures and property adjustments including:</p> <ul style="list-style-type: none"> Disconnection of existing services to buildings requiring removal Adjustments to services, including sewer and overhead wiring Installation of fencing and crib sheds Creation of working platforms and pads for subsequent construction activities <p>Within areas of Bicentennial Park (east of West Botany Street):</p>	<ul style="list-style-type: none"> Operation of construction ancillary facilities including construction of an acoustic shed, water treatment plant and a waterway diversion Bulk excavation of a temporary shaft, permanent ventilation shaft, tunnels (soft ground and ramps), cut and cover and entry ramps, including ground improvement, diaphragm wall construction, tunnel support and groundwater control systems Ground improvement works Construction of back-end works (e.g. drainage, pavements, barriers) Mechanical and electrical fit-out of tunnels and structures as required

Ref	Ancillary facility	Primary activities during preliminary construction (Stage 1)	Primary activities during construction (Stage 2)
		<ul style="list-style-type: none"> • Install pedestrian pathway between West Botany Street and Brighton-Le-Sands Public School • Installation of mitigation measures including fencing, noise walls, hoarding, wheel bath, sediment and erosion control • Demolition of existing structures (picnic and barbeque shelter) and property adjustments including minor vegetation clearing in compound area (no clearing of any PCTs or TECs for Stage 1) • Site levelling, which will include: <ul style="list-style-type: none"> • Removal of existing kerbs and garden beds; • Installation of geofabric; and • Spreading and compaction of imported material to design levels. • Installation of site offices, amenities including establishment and use of workshop to facilitate delivery, inspection and assembly of construction plant and equipment • Installation of site equipment such as a water treatment plant and bentonite plant • Other commencement activities related to site establishment including construction of stabilised site access (but not operation of a construction compound) 	<ul style="list-style-type: none"> • Construction of MOC and facilities • Upgrade of road network including a new intersection for tunnel access and associated infrastructure • Reinstatement and rehabilitation of construction areas, installation and finalisation of recreational facilities including an active transport corridor • Other works as required to fulfil Project objectives
C4 & C5¹	Shared cycle and pedestrian pathways construction ancillary facilities (C4 and C5)	No activities or works are proposed during Stage 1: Preliminary construction	<ul style="list-style-type: none"> • Establishment and operation of construction ancillary facilities • Installation of the Active Transport Corridor including interface and upgrade of road and existing transport corridors • Reinstatement and rehabilitation of construction areas • Other works as required to fulfil Project objectives
C6¹	Princes Highway construction ancillary facility (C6)	No activities or works are proposed during Stage 1: Preliminary construction	<ul style="list-style-type: none"> • Establishment and operation of construction ancillary facilities • Upgrade of road networks and transport corridors including utility modifications, relocations and amendments. • Traffic staging as required • Remediation of the former petrol stations and reinstatement and rehabilitation of construction areas • Other works as required to fulfil Project objectives
-	Permanent Power Supply	No activities or works are proposed during Stage 1: Preliminary construction	<ul style="list-style-type: none"> • Installation of Permanent Power Supply from Earlwood to Rockdale, including trenching, underbore works, cable pulling, cable joining, commissioning, restoration and rehabilitation works

Table 6 Aspects and details of construction ancillary facilities

Ref	Ancillary facility	Aspect	Detail
C1	Arncliffe construction ancillary facility (C1)	Boundary screening	<p>The existing boundary screening around the ancillary facility was established during the construction of the M8 Motorway to minimise visual, noise and air quality impacts of the ancillary facilities sites and construction activities on adjacent sensitive receivers (i.e. residential receivers along Marsh Street and local roads and recreational users of the Kogarah Golf Course). This will remain in place throughout the duration of the Project and includes:</p> <ul style="list-style-type: none"> • The noise wall which runs adjacent to Marsh Street; <ul style="list-style-type: none"> ○ Noise wall will feature TfNSW signage and branding including in the NSW Government Logo, Project Name, Key Project contact points for the community, image relevant to the site and key benefits of the project. • Hoarding which runs along the boundary of the ancillary facility: <ul style="list-style-type: none"> ○ Hoarding was painted green to reflect the golf course context and will be maintained throughout the lifetime of the Project. <p>Repairs and maintenance on the existing boundary screening will occur where necessary. Graffiti will be removed.</p>
		Visual screening and light spill	<p>This ancillary facility was established during the construction of the M8 Motorway in a manner that minimises the visual impacts of the ancillary facilities sites.</p> <p>Upgrades and refurbishments will be generally consistent with the existing ancillary facility.</p> <p>Lighting will be required at night at this ancillary facility for the purposes of illuminated office buildings, providing security around compounds and adequate lighting for oversized deliveries.</p> <p>Lights will be positioned as far away as possible and pointed away from neighbours and the Frog Habitat.</p> <p>Lighting will be positioned so as not to impact airport operations in accordance with <i>Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer (CASA, 1999)</i> and <i>National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (DITCARD, 2012)</i></p> <p>All practicable and reasonable steps will be taken to mitigate night lighting.</p>
		Project identification	<p>The SSI number and Project name will be displayed on a sign mounted to the noise wall at the entrance to the ancillary facility. The Project name will also be displayed on the TfNSW Banner.</p> <p>Contact information will also be provided in the form of the Project Hotline and Information email address.</p>
		Overshadowing and overlooking	<p>The ancillary facility will not cause overshadowing to sensitive receivers.</p> <p>No facilities will look down into sensitive receivers.</p>
		Flood mitigation	<p>A Flood Mitigation Strategy was developed prior to the construction of the M8 Motorway. This has been incorporated into the Flood Modelling and Project Flood Mitigation Strategy.</p> <p>The ancillary facility will continue to operate, and activities carried out in such a manner that is consistent with the Flood Mitigation Strategy.</p>
		Vehicle management	<p>The ancillary facility was established during the construction of the M8 Motorway and was designed to avoid queuing on Marsh Street. During Stage 1 Preliminary Construction:</p> <ul style="list-style-type: none"> • Deliveries will be coordinated to avoid congestion and queuing; and • If required, vehicles will que within the site compound along haul road or within acoustic sheds. <p>Some parking is available for workers on site.</p> <p>Access to the compound is outlined in the Traffic and Access Management Procedure.</p> <ul style="list-style-type: none"> • Access will be via Marsh Street only (left in when travelling in south bound lanes, right in when travelling in north bound lanes); • Vehicles will utilise the dedicated right-hand turning lane and obey traffic signals; • Strictly no access from Flora Street; and • Exit from site is strictly a left-hand turn onto Marsh Street. <p><i>This section will be updated with further measures for spoil haulage trucks, which will commence in Stage 2 Construction (Dec-21).</i></p>

Ref	Ancillary facility	Aspect	Detail
C2	Rockdale construction ancillary facility (C2)	Boundary screening	<p>Ancillary facilities will be constructed in a manner that minimises the visual, noise and air quality impacts of the ancillary facilities sites on adjacent sensitive receivers.</p> <p>Noise walls within the compound will be installed in accordance with the mitigation measures outlined construction ancillary facility CNVIS.</p> <p>The boundary screening will also be used to minimise visual, noise and air quality impacts from construction activities on adjacent sensitive receivers. This includes:</p> <ul style="list-style-type: none"> Noise walls will be installed on the northern boundary of the ancillary facility and it will be painted Dulux Pale Eucalypt as it is sympathetic with the surrounding environment and context of the site and provides the residents with a soft colour along the boundary of the site; Hoarding will be installed along the southern boundary of the ancillary facility; Fencing will also be installed along sections of the southern boundary. Shade cloth will be installed on fencing and will feature the TfNSW banner; and Refer to SEP in Appendix A for indicative locations of noise walls and fencing. <p>Graffiti will be removed.</p>
		Existing structures	Where possible, existing structures will be maintained and utilised for temporarily during construction. Examples may include the use of existing boundary fencing along the eastern and western boundary of the compound and retaining and utilising the building located on the far eastern side of the compound.
		Visual screening and light spill	<p>Where possible, trees will be retained to provide screening to neighbours.</p> <p>Lighting will be required at night at this ancillary facility for the purposes of illuminated office buildings, providing security around compounds and adequate lighting for oversized deliveries.</p> <p>Lights will be positioned as far away as possible and pointed away from neighbours.</p> <p>Lighting will be positioned so as not to impact airport operations in accordance with <i>Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer (CASA, 1999)</i> and <i>National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (DITCARD, 2012)</i>.</p> <p>All practicable and reasonable steps will be taken to mitigate night lighting.</p> <p>Property owners opposite the access gate, will be consulted on reasonable and feasible measures to reduce the impacts of headlights from exiting vehicles. Existing measures installed at property will be inspected to determine if they provide sufficient shielding. Where deemed insufficient, CGU will carry out further consultation with the property owners to determine adequate mitigation measures.</p>
		Project identification	<p>The SSI number and Project name will be displayed on a sign mounted to a noise wall at the entrance to the ancillary facility. The Project name will also be displayed on the TfNSW Banner.</p> <p>Contact information will also be provided in the form of the Project Hotline and Information email address.</p>
		Overshadowing and overlooking	<p>Temporary office compound:</p> <ul style="list-style-type: none"> A temporary office will be erected in the north eastern corner of the compound. This office will be double stacked at a height of approximately 5.6m. No overshadowing will occur from this office compound as sensitive receivers are located north of the site boundary. Windows facing sensitive receivers will be shielded. <p>Temporary acoustic shed:</p> <ul style="list-style-type: none"> A temporary acoustic shed will be constructed to mitigate noise impacts related to tunnel support activities. Construction of this shed will occur in Stage 2 Construction (Dec-21). Temporary overshadowing from the temporary acoustic shed will occur at two sensitive receivers (392 and 396 West Botany Street) in the morning. The acoustic shed will be removed on the completion of the support activities at this ancillary facility and the site restored to its previous condition and use (TfNSW depot).
		Flood mitigation	A Flood Mitigation Strategy has been developed and flood modelling has been considered in the design of the C2 compound.

Ref	Ancillary facility	Aspect	Detail
		Vehicle management	<p>The ancillary facility will be designed to minimise queuing on West Botany Street. During Stage 1 Preliminary Construction, this may be achieved through:</p> <ul style="list-style-type: none"> • Coordination of deliveries into C2; • Implementing traffic control where required; and • Finalising design of the signalised intersection and organising resources to carry out this activity during Stage 2 Construction. <p>Stage 1 Preliminary Construction activities will be carried out in a manner which will avoid double handling of materials. This will include allocating designated stockpile and laydown areas.</p> <p>Some parking will be available for workers on site. Parking will also be available at C3.</p> <p>Access to the compound is outlined in the Traffic and Access Management Procedure.</p> <ul style="list-style-type: none"> • Access to the compound will only be via West Botany Street; and • Left into and left out of compound will be enforced. <p>Stage 2 Construction:</p> <ul style="list-style-type: none"> • Temporary acoustic shed will be designed to optimise reduce travel distances of vehicles. This includes positioning the temporary acoustic shed to reduce travel time of truck and dogs within the construction ancillary facility.
C3	President Avenue construction ancillary facility (C3)	Boundary screening	<p>Ancillary facilities will be constructed in a manner that minimises the visual, noise and air quality impacts of the ancillary facilities sites on adjacent sensitive receivers. This will include maintaining vegetation screening where possible, including along the access to Brighton-Le-Sands Public School. Vegetation screening between the construction compound and Brighton-Le-Sands Public School will be maintained as far as possible.</p> <p>Noise walls within the compound will be installed in accordance with the mitigation measures outlined construction ancillary facility CNVIS. Noise walls around the compound will be progressively installed as CGU obtains land, as per the Site Access Schedule.</p> <p>During Stage 1 Preliminary Construction, boundary screening will be installed to minimise visual, noise and air quality impacts from construction activities on adjacent sensitive receivers. This includes:</p> <ul style="list-style-type: none"> • A noise wall along the western boundary of the compound (adjacent to West Botany Street) which will feature TfNSW signage and branding including in the NSW Government Logo, Project name, key Project contact points for the community, image relevant to the site and key benefits of the project. • Chain-link fencing with shade cloth will be installed along northern boundary where the pedestrian footpath connects West Botany Street to the Brighton-Le-Sands Public School. There is potential that an Indigenous Aboriginal Motif may be incorporated into the mesh design. • Refer to SEP in Appendix A for indicative location of noise walls and fencing. <p>This SEMP will be updated for Stage 2 Construction to include the location of boundary screening which will be installed progressively as per Site Access Schedule.</p> <p>Where reasonable and feasible, treatments and finishes of key visible temporary elements will be selected that reflect the local context. This is expected to include colours compatible with Dulux Pale Eucalypt as it is sympathetic to the park environment and surrounding sporting fields.</p> <p>Graffiti will be removed.</p>
		Existing structures	<p>Where possible, existing structures will be maintained and utilised temporarily during construction. Examples may include use of existing pedestrian footpaths or pathways, utilising the existing warehouse adjacent to MOC3 for site offices, toilet and shower facilities and maintaining the existing car park (adjacent to Pet-O).</p>
		Visual screening and light spill	<p>Where possible, trees will be retained to provide screening to neighbours.</p> <p>Lighting will be required at night at this ancillary facility for the purposes of illuminated office buildings, providing security around compounds and adequate lighting for oversized deliveries.</p> <p>Lights will be positioned as far away as possible and pointed away from neighbours.</p> <p>Lighting will be positioned so as not to impact airport operations in accordance with <i>Lighting in the Vicinity of Aerodromes: Advice to Lighting Designer (CASA, 1999)</i> and <i>National Airports Safeguarding Framework Guideline E: Managing the Risk of Distractions to Pilots from Lighting in the Vicinity of Airports (DITCARD, 2012)</i>.</p> <p>All practicable and reasonable steps will be taken to mitigate night lighting.</p>

Ref	Ancillary facility	Aspect	Detail
		Project identification	The SSI number and Project name will be displayed on a sign mounted on the noise wall at the entrance to the ancillary facility. The Project name will also be displayed on the TfNSW Banner. Contact information will also be provided in the form of the Project Hotline and Information email address.
		Overshadowing and overlooking	No overshadowing or overlooking will occur from the establishment of this temporary ancillary facility. Overshadowing of commercial receivers will occur with the completion of MOC3. This will be addressed in the Urban Landscape Design Plan.
		Flood mitigation	A Flood Mitigation Strategy has been developed and flood modelling has been considered in the design of C3 compound. During Stage 1 Preliminary Construction, no works will occur within watercourses.
		Vehicle Management	The ancillary facility will be designed to minimise queuing on West Botany Street. During Stage 1 Preliminary Construction, this will be achieved through: <ul style="list-style-type: none"> • Coordination of deliveries into C3; • Implementing traffic control where required; and • Undertaking construction activities to build the permanent access points. Stage 1 Preliminary Construction activities will be carried out in a manner which will avoid double handling of materials. This will include allocating designated stockpile and laydown areas. Some parking will be available for workers on site. Access to the compound is outlined in the Traffic and Access Management Procedure. <ul style="list-style-type: none"> • Access to the compounds will only be via West Botany Street; and • Left into compounds and left out of compounds will be enforced. Stage 2 Construction: <ul style="list-style-type: none"> • Temporary acoustic shed will be designed to optimise reduce travel distances of vehicles. This includes positioning the temporary acoustic shed to reduce travel time of truck and dogs within the construction ancillary facility.
C4 and C5	Shared cycle and pedestrian pathways construction ancillary facilities (C4 and C5)	No activities or works are proposed during Stage 1: Preliminary construction, to be updated prior to works commencing in 2023.	
C6	Princes Highway construction ancillary facility (C6)	No activities or works are proposed during Stage 1: Preliminary construction, to be updated for Stage 2 Construction.	
-	Permanent Power Supply	No activities or works are proposed during Stage 1: Preliminary construction, to be updated prior to commencing works in late 2022.	

Appendix A Site Environment Plans

Activities to be undertaken during site establishment (in no particular order):

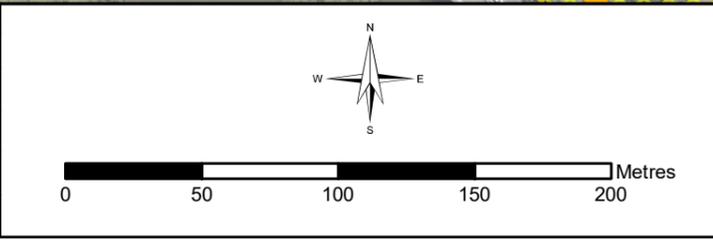
1. Inspection, maintenance and repair of frog fence, hoarding and erosion and sediment controls
2. Upgrade, refurbishment and use of site offices and amenities
3. Installation of wheel wash
4. Installation of noise wall and Green and Golden Bell Frog exclusion fence
5. Repairs to existing acoustic shed
6. Refurbishment and use of workshops to facilitate delivery and assemble of construction plant and equipment
7. Assessment and refurbishment of site services (sewer, LV & HV power, water, dewater and compressed air)
8. Assessment and refurbishment of existing equipment (construction WTP, shaft access equipment, spoil bunds).
9. Assessment and repair of existing M8 tunnel access structures (dive, shaft, adits)

Procedures	
Traffic and Access Management Procedure M6S1-CGU-NWW-ENPE-PRO-000418	Clearing and Grubbing Procedure
Flora and Fauna Management Procedure M6S1-CGU-NWW-ENPE-PRO-000419	Fauna Handling Procedure
	Weed Management Procedure
	Green and Golden Bell Frog Stop Work Procedure
Heritage Management Plan M6S1-CGU-NWW-ENPE-PRO-000420	Unexpected Heritage Finds Procedure
	Unexpected Find of Human Remains Procedure
Soil and Surface Water Management Procedure M6S1-CGU-NWW-ENPE-PRO-000421	Erosion and Sediment Control Procedure
	Water Reuse and Discharge Procedure
	Stockpile Management Procedure
	Spill Management Procedure

CEMP Sub-plans	
Noise and Vibration Preliminary CEMP Sub-plan and CNVIS M6S1-CGU-NWW-ENNV-PLN-000403	
Air Quality and Odour CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000407	
Contamination CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000413	
Waste CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000414	



Key Contacts		
Role	Name	Contact Number
Project Manager	TBC	TBC
Superintendent	TBC	TBC
Community Relations Advisor	TBC	TBC
Environment Area Coordinator	TBC	TBC



Designed By	PB	Drawn	GIS
Coordinate System	MGA ZONE 56	Date Printed	13/08/2021
Height Datum	AHD	Date Issued	13/08/2021
Filename:	Site Environment Plan - Arncliffe (SEMP).mxd		

Site Environment Plan

Arncliffe (C1)

Document Number

SEP Scope and Timeframe	
This SEP work scope is:	
<ul style="list-style-type: none"> Install & repair environmental controls. Upgrade & refurbishment of offices. Assessment & refurbishment to services & existing plant/equipment/infrastructure. Assessment & repair of existing M8 access structures (dives, shaft and adits). 	

Key Potential Environmental Impacts	
<ul style="list-style-type: none"> Air quality risks Minor noise and vibration Soil and water pollution 	<ul style="list-style-type: none"> Presence of vehicles and trucks on site

Applicable Environmental Work Permits	Responsibility
Permit to Enter No Go Zone (GGBF Exclusion Zone)	All
Permit to Dewater	All
Out of Hours Work Permit	All

Soil and Water	
Key Management Measures	Responsibility
Erosion and sediment controls are to be inspected and improvements or rectifications carried out.	Supervisor
No works are to be undertaken outside of the site boundary.	All
Stockpile to be remain stabilised when not active.	Supervisor
Treated water from construction WTP to be used as primary water source (for dust suppression).	All
Provide and use concrete washout facilities. Isolate washout to prevent surface water from entering washout. Washout must be bunded, lined and maintained.	Supervisor
Any material produced from rectification and upgrading activities is to be stored in existing acoustic shed.	Supervisor
Vehicles are to use wheel wash before exiting site.	All

Waste	
Key Management Measures	Responsibility
All wastes shall be segregated, stored, classified, tracked, transported and treated in accordance with Waste Management CEMP Sub-plan	Supervisor

All personnel are to separate waste for recycling and use facilities provided.	All
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Air Quality & Dust	
Key Management Measures	Responsibility
Notify supervisor if dust/air quality issues are observed. Dust is to be managed via the use of water and stabilisation products.	All
Wheel wash to be installed and maintained. Sweepers shall be used to clean public roads where mud has been deposited.	Supervisor
Effective dust suppression will be in place for known dust generating activities like rock hammering and concrete sawing.	All

Noise and Vibration	
Key Management Measures	Responsibility
Keep noisy equipment away from sensitive receivers	All
Ensure all equipment is well maintained and is not making excessive noise	
Turn off machinery when not in use	
Noise mitigation measures will be installed as per CNVIS prior to activity commencing.	

Hours of Work
Standard Construction Hours
Monday – Friday: 7am to 6pm
Saturday: 7am to 6pm
No work shall be carried out on Sundays, or public holidays.

High impact activities hours
Monday - Friday: 8am to 6pm
Saturday: 8am to 1pm
Sunday and public holidays: no works permitted
All activities to occur in 3-hour blocks, with 1-hour respite during which no other high impact activities are to occur.
All works which need to occur outside these hours must be approved from the CGU Environment and Community team under an Out of Hours Work Permit . Please contact the Superintendent and Environmental Coordinator.

Flora, Fauna and Weeds	
Key Management Measures	Responsibility
No vegetation clearing or pruning will occur during work activities.	Supervisor
Notify supervisor or Environmental Coordinator if injured wildlife is sighted.	All
No works are to occur within Green and Golden Bell Frog No Go Zone (Kogarah Golf Course and Eve Street Habitat). Entry only by authorised personnel. Contact Environmental Coordinator.	All
If a Green and Golden Bell Frog is identified on site, works are to stop in the immediate vicinity. Contact Environmental Coordinator immediately.	All
Ensure lighting onsite is directed away from frog habitat.	All

Hazardous Materials	
Key Management Measures	Responsibility
Store and handle hazardous substances in accordance with the SDS.	All
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	All
Spill kits are located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations. Refer to SEP Map.	Supervisor
Refuelling to occur at designated refuelling area (when commissioned) unless equipment and plant are located underground.	Supervisor

Heritage	
Key Management Measures	Responsibility
If a Heritage object is discovered that may be a suspected heritage item, work must cease in the vicinity immediately. Notify and the Supervisor and Environmental Coordinator. Work can only resume following approval from the project Environmental Coordinator.	Supervisor

If a bone is discovered that may be a suspected human remains item, work must cease in the vicinity immediately. Notify and the Supervisor and Environmental Coordinator. Work can only resume following approval from the project Environmental Coordinator.	All
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Contaminated Land	
Key Management Measures	Responsibility
Stop work if contaminated materials are discovered or suspected and notify Supervisor and Environmental Coordinator immediately.	All
The movement of materials shall be tracked via the Materials Tracking Form.	Project Engineer

Acid Sulphate Soils (ASS)	
Key Management Measures	Responsibility
If PASS is excavated during rectification and upgrading activities, it is to be stockpiled in a bunded area fitted with a guard layer.	Supervisor
PASS/ASS Material must be classified and SPOCAS testing performed. Lime must be applied to the material in accordance with this test and tested to confirm it has been sufficiently neutralized.	Project Engineer
Communicate known areas of ASS/PASS via the induction, toolbox talks, pre starts, mud maps and Site Environmental Plans.	Inductor Supervisor
Minimize disturbance to ASS/PASS areas.	Supervisor Project Manager
Track ASS/PASS materials handling and movement.	Project Engineer

Community and Visual Amenity	
Key Management Measures	Responsibility
Graffiti on hoarding of compound visible to community members must be removed promptly	Supervisor
The Project name and DPIE number must remain visible at entry point to compound.	Supervisor
Light spill to be monitored regularly to ensure adjacent receivers are not being impacted by compound lighting.	Environmental Coordinator

No access to site from Flora Street.	Supervisor
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Evaluating Performance	Responsibility
Daily	Supervisor
1. Inspect erosion and sediment controls	
2. Inspect dust emissions & controls	
3. Inspect waste management practices	
Weekly	Environmental Coordinator
1. Inspect erosion and sediment controls	
2. Inspect dust emissions & controls	
3. Inspect waste management practices	
4. Inspect No Go Zones	
Immediately Notify Supervisor of:	All
• Environmental incidents,	
• Spills,	
• Unexpected finds of ASS/PASS, heritage or contaminated soils,	
• Encroachment into No Go Zones,	
• Risk or damage to native flora/fauna,	
• Dust/air pollution, and	
• Water pollution.	

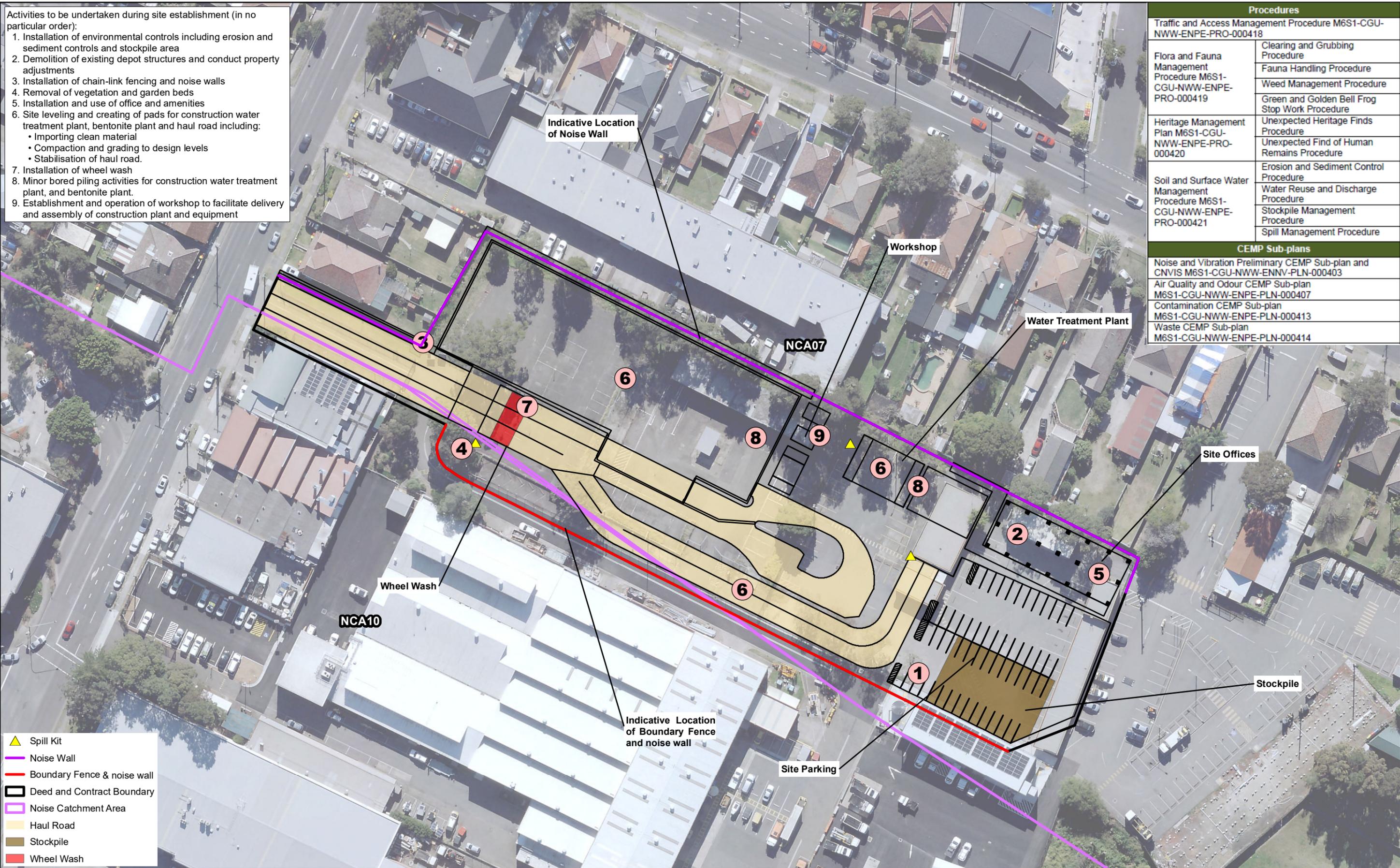
Points of Contact	
Superintendent	
Environment Coordinator	
Project Community Hotline	1800 789 297
Safety	To be advised and written in each prestart

Activities to be undertaken during site establishment (in no particular order):

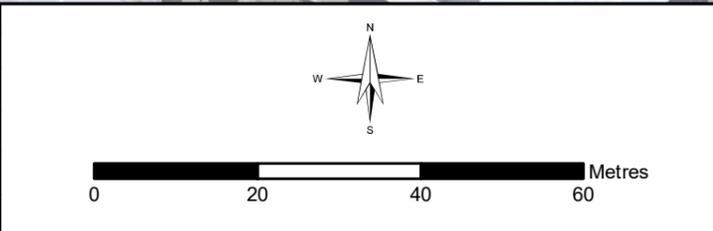
1. Installation of environmental controls including erosion and sediment controls and stockpile area
2. Demolition of existing depot structures and conduct property adjustments
3. Installation of chain-link fencing and noise walls
4. Removal of vegetation and garden beds
5. Installation and use of office and amenities
6. Site leveling and creating of pads for construction water treatment plant, bentonite plant and haul road including:
 - Importing clean material
 - Compaction and grading to design levels
 - Stabilisation of haul road.
7. Installation of wheel wash
8. Minor bored piling activities for construction water treatment plant, and bentonite plant.
9. Establishment and operation of workshop to facilitate delivery and assembly of construction plant and equipment

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Designed By	PB	Drawn	GIS
Coordinate System	MGA ZONE 56	Date Printed	13/09/2021
Height Datum	AHD	Date Issued	13/09/2021
Filename:	Site Environment Plan - Depot (SEMP).mxd		

Site Environment Plan	
Rockdale Depot	
Document Number	

SEP Scope and Timeframe
<p>This SEP work scope is:</p> <ul style="list-style-type: none"> Install environmental controls. Demolition of existing Depot structures. Removal of vegetation (minor clearing) Installation of offices and cribs Service connections Minor levelling of site Installation of plant and equipment including WTP Creation of working platforms and pads for subsequent construction activities

Key Potential Environmental Impacts
<ul style="list-style-type: none"> Noise and vibration Poor air quality Soil and water pollution Unexpected finds of: PASS, Contaminated soils and heritage items Weeds Incorrect waste disposal Spills resulting in water or soil contamination

Applicable Environmental Work Permits	Responsibility
Permit to Clear Land or Vegetation	Supervisor
Permit to Enter No Go Zone	All
Permit to Dewater	All
Out of Standard Hours Work Permit	All

Soil and Water	
Key Management Measures	Responsibility
Erosion and sediment controls are to be installed prior to or immediately upon any disturbance to vegetation or soil as per ESCP.	Supervisor
Minimise ground disturbance.	Supervisor
Locate stockpile materials away from concentrated flow paths.	Supervisor
Maximise water reuse.	All
Provide and use concrete washout facilities. Isolate washout to prevent surface water from entering washout. Washout must be bunded, lined and maintained.	Supervisor
No dewatering off site	All
Waste	
Key Management Measures	Responsibility
All wastes shall be segregated, stored, classified, tracked, transported and treated in accordance with Waste CEMP Sub-plan	Supervisor

All personnel are to separate waste for recycling and use facilities provided.	All
--	-----

Air Quality & Dust	
Key Management Measures	Responsibility
Notify supervisor if dust/air quality issues are observed. Dust is to be managed via the use of water and stabilisation products.	All
Stabilised access including rumble grids or wheel washes will be established for the site exits to minimise mud on public roads. Sweepers shall be used to clean public roads where mud has been deposited.	Supervisor
Effective dust suppression will be in place for known dust generating activities like rock hammering and concrete sawing.	All

Noise and Vibration	
Key Management Measures	Responsibility
Keep noisy equipment away from sensitive receivers.	All
The use of noise barriers for mobile equipment for generators / compressors are to be used to reduce noise impacts.	All
All stationary plant to be situated as far as possible from residents.	All
Ensure all equipment is well maintained and is not making excessive noise.	All
Turn off machinery when not in use	All
Noise mitigation measures will be installed as per CNVIS prior to activity commencing.	Supervisor

Hours of Work	
Standard Construction hours	
Monday – Friday: 7am to 6pm	
Saturday: 7am to 6pm	
No work shall be carried out on Sundays, or public holidays.	
High impact activities hours	
Monday - Friday: 8am to 6pm	
Saturday: 8am to 1pm	
Sunday and public holidays: no works permitted	
All activities to occur in 3-hour blocks, with 1-hour respite during which no other high impact activities are to occur.	

All works which need to occur outside these hours must be approved from the CGU Environment and Community team under an Out of Hours Work Permit. Please contact the Superintendent and Environmental Coordinator.

Flora, Fauna and Weeds	
Key Management Measures	Responsibility
Prior to any disturbance, clearing or grubbing activities the following must be in place; <ul style="list-style-type: none"> Trees flagged for removal are approved by DPIE under Tree Report G40 Hold Point Release of Cleaning and Grubbing Plan Permit to Clear Land or Vegetation is in place. If applicable, No-go Zones for significant flora and fauna must be established, fenced/flagged and sign posted prior to commencement of clearing. Pre-clearing Survey has been conducted. 	Supervisor
Notify Supervisor or Environmental Coordinator if injured wildlife is sighted.	All
Weeds are segregated from vegetation that will be mulched where practicable.	All

Hazardous Materials	
Key Management Measures	Responsibility
Store and handle hazardous substances in accordance with the SDS.	All
Hazardous substances must be stored in a bunded area with a minimum holding capacity of 110% of the largest container within the bund or 25% of the total capacity of all containers within it, whichever is the greatest.	All
Spill kits are located adjacent to all hazardous substance storage units, in refuelling and maintenance areas and at designated locations Refer to SEP map.	Supervisor
Refuelling activities must occur with drip tray and have a spill kit readily available.	Supervisor

Heritage	
Key Management Measures	Responsibility
If a Heritage object is discovered that may be a suspected heritage item, work must cease in the vicinity immediately. Notify and the Supervisor and Environmental Coordinator.	All

Work can only resume following approval from the project Environmental Coordinator.	
If a bone is discovered that may be a suspected human remains item, work must cease in the vicinity immediately. Notify and the Supervisor and Environmental Coordinator. Work can only resume following approval from the project Environmental Coordinator.	All

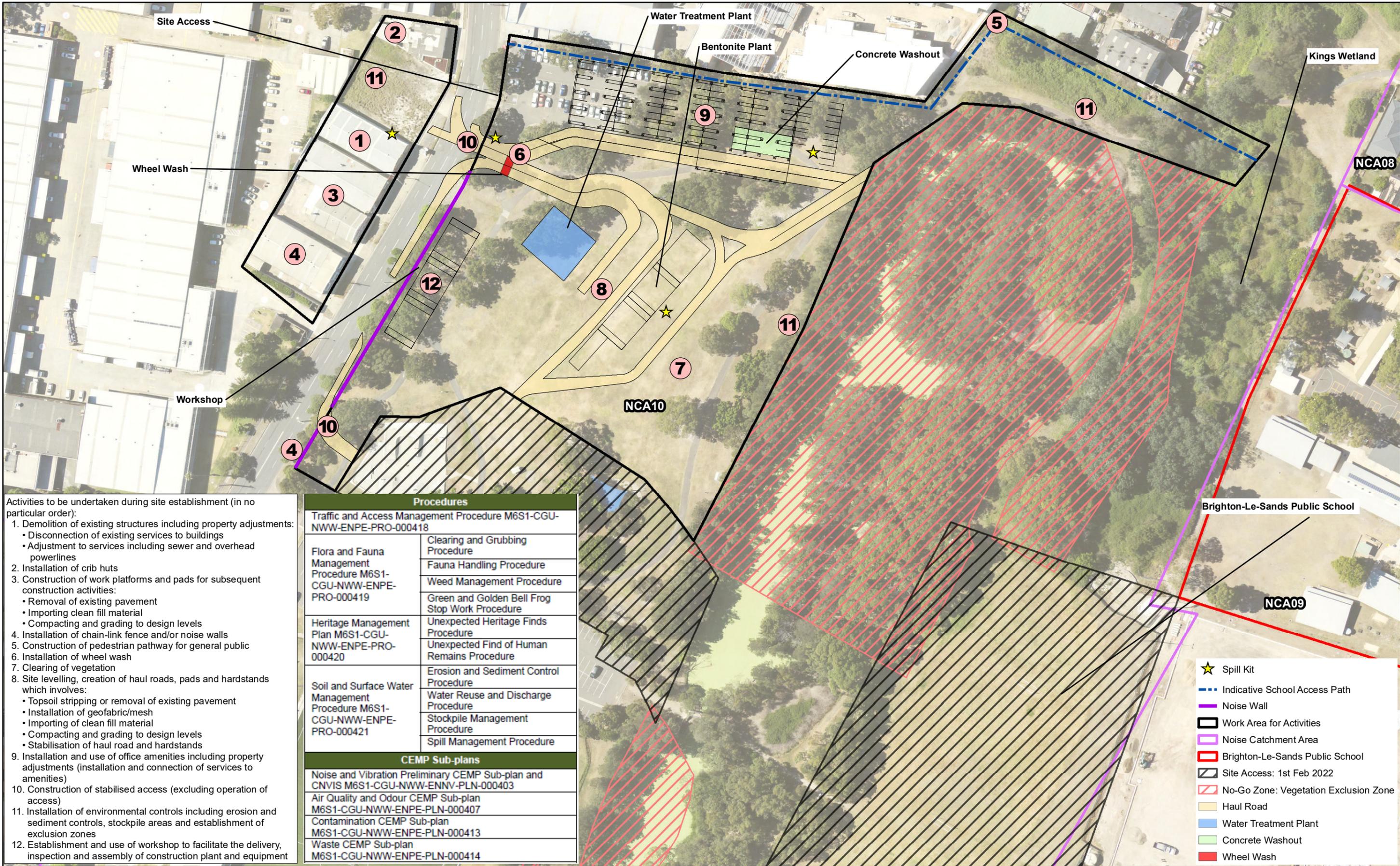
Contaminated Land	
Key Management Measures	Responsibility
Stop work if contaminated materials are discovered or suspected and notify Supervisor and Environmental Coordinator immediately.	All
Testing of material (to classify material) will be conducted by a trained and competent person. shall be conducted to classify material prior to it leaving site.	Project Engineer
The movement of materials shall be tracked via the Materials Tracking Form.	Project Engineer
Water runoff from contaminated land and stockpiles must be contained, treated or disposed to ensure there is no pollution of land or waterways.	Supervisor

Acid Sulphate Soils (ASS)	
Key Management Measures	Responsibility
If PASS is excavated during rectification and upgrading activities, it is to be stockpiled in a bunded area fitted with a guard layer.	Supervisor
PASS/ASS Material must be classified and SPOCAS testing performed. Lime must be applied to the material in accordance with this test and tested to confirm it has been sufficiently neutralized.	Project Engineer
Communicate known areas of ASS/PASS via the induction, toolbox talks, mud maps, pre starts and Site Environmental Plans.	Inductor Supervisor
Avoid excavation of site unless absolutely necessary to minimise disturbance to ASS/PASS areas	Supervisor
Track ASS/PASS materials handling and movement.	Project Engineer

Community and Visual Amenity	
Key Management Measures	Responsibility
Graffiti on hoarding of compound visible to community members must be removed promptly.	Supervisor
The Project name and DPIE number must remain visible at entry point to compound.	Supervisor
Light spill to be monitored regularly to ensure adjacent receivers are not being impacted by compound lighting.	Environmental Coordinator
Access to site only from West Botany Street.	Supervisor

Evaluating Performance	Responsibility
Daily	Supervisor
1. Inspect erosion and sediment controls	
2. Inspect dust emissions & controls	
3. Inspect waste management practices	
Weekly	Environmental Coordinator
1. Inspect erosion and sediment controls	
2. Inspect dust emissions & controls	
3. Inspect waste management practices	
4. Inspect No Go Zones and associated protection flagging/fencing	
Immediately notify Supervisor of:	All
<ul style="list-style-type: none"> Environmental incidents Spills Unexpected finds of ASS/PASS, heritage or contaminated soils Encroachment into No Go Zones Risk or damage to native flora/fauna Dust/air pollution Water pollution 	

Points of Contact	
Superintendent	
Environment Coordinator	
Project Community Hotline	1800 789 297
Safety	To be advised and written in each prestart

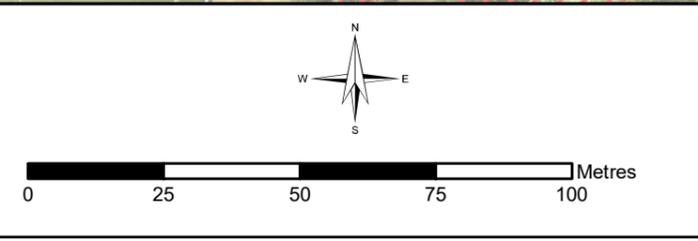


- Activities to be undertaken during site establishment (in no particular order):
- Demolition of existing structures including property adjustments:
 - Disconnection of existing services to buildings
 - Adjustment to services including sewer and overhead powerlines
 - Installation of crib huts
 - Construction of work platforms and pads for subsequent construction activities:
 - Removal of existing pavement
 - Importing clean fill material
 - Compacting and grading to design levels
 - Installation of chain-link fence and/or noise walls
 - Construction of pedestrian pathway for general public
 - Installation of wheel wash
 - Clearing of vegetation
 - Site levelling, creation of haul roads, pads and hardstands which involves:
 - Topsail stripping or removal of existing pavement
 - Installation of geofabric/mesh
 - Importing of clean fill material
 - Compacting and grading to design levels
 - Stabilisation of haul road and hardstands
 - Installation and use of office amenities including property adjustments (installation and connection of services to amenities)
 - Construction of stabilised access (excluding operation of access)
 - Installation of environmental controls including erosion and sediment controls, stockpile areas and establishment of exclusion zones
 - Establishment and use of workshop to facilitate the delivery, inspection and assembly of construction plant and equipment

Procedures	
Traffic and Access Management Procedure M6S1-CGU-NWW-ENPE-PRO-000418	Clearing and Grubbing Procedure
Flora and Fauna Management Procedure M6S1-CGU-NWW-ENPE-PRO-000419	Fauna Handling Procedure
	Weed Management Procedure
	Green and Golden Bell Frog Stop Work Procedure
Heritage Management Plan M6S1-CGU-NWW-ENPE-PRO-000420	Unexpected Heritage Finds Procedure
	Unexpected Find of Human Remains Procedure
Soil and Surface Water Management Procedure M6S1-CGU-NWW-ENPE-PRO-000421	Erosion and Sediment Control Procedure
	Water Reuse and Discharge Procedure
	Stockpile Management Procedure
	Spill Management Procedure
CEMP Sub-plans	
Noise and Vibration Preliminary CEMP Sub-plan and CNVIS M6S1-CGU-NWW-ENNV-PLN-000403	
Air Quality and Odour CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000407	
Contamination CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000413	
Waste CEMP Sub-plan M6S1-CGU-NWW-ENPE-PLN-000414	

- ★ Spill Kit
- Indicative School Access Path
- Noise Wall
- Noise Catchment Area
- Brighton-Le-Sands Public School
- Site Access: 1st Feb 2022
- No-Go Zone: Vegetation Exclusion Zone
- Haul Road
- Water Treatment Plant
- Concrete Washout
- Wheel Wash

Key Contacts		
Role	Name	Contact Number
Project Manager	TBC	TBC
Superintendent	TBC	TBC
Community Relations Advisor	TBC	TBC
Environment Area Coordinator	TBC	TBC



Designed By	PB	Drawn	GIS
Coordinate System	MGA ZONE 56	Date Printed	13/08/2021
Height Datum	AHD	Date Issued	13/08/2021
Filename:	Site Environment Plan - Bicentennial Park (SEMP).mxd		

Site Environment Plan

Bicentennial Park (C3)

Document Number





Appendix A5

Document register

M6 Stage 1

October 2021

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Table 1: Environmental document register

Environmental management document	Purpose	Document no.	Review timeframe and status	Approval requirement	Agency Consultation
Construction Environmental Management Plan	Policy Legal and other requirements Risk assessment Objectives and targets Roles and responsibilities Communication and training Monitoring, auditing and reporting Corrective action Management review Management actions	M6S1-CGU-NWW-PE-MPL-000400	Annual	Approval from Planning Secretary, DPIE	N/A
Staging Report	Set out how construction of the CSSI will be staged and how compliance with CoA conditions will be achieved across and between each stage	M6S1-CGU-NWW-PE-PLN-000401	Before commencement of any new stage.	Information only	N/A

Environmental management document	Purpose	Document no.	Review timeframe and status	Approval requirement	Agency Consultation
Site Establishment Management Plans	Outline the environmental management practices and procedures to be implemented during the establishment of construction ancillary facilities and for ongoing analysis of environmental risks arising from site establishment	Refer to Appendix A4 of the CEMP	Annual	Approval from Planning Secretary, DPIE	Bayside, Georges River and Canterbury/Bankstown Council
Sustainability Strategy	Outline the sustainability requirements, opportunities and risks for the Project	M6S1-CGU-NWW-SB-PLN-001400	Annual	Information only	N/A
Communications Strategy	Provide mechanisms to facilitate communication about construction and operation with the community, relevant councils and government agencies	M6S1-CGU-NWW-CY-PLN-000900	Annual	Approval from Planning Secretary, DPIE	N/A
Compliance Monitoring and Reporting Program	Identify the compliance requirements, and set out the methodology and the type of data / evidence to be collected to assess whether compliance has been achieved	CGU has elected to implement the DPIE Independent Audit Post-Approvals Requirements May 2020 (PAR 2020). Construction compliance reporting has been removed under this version, however CGU will carry out a compliance monitoring and reporting program in accordance with CoA C13.			

Environmental management document	Purpose	Document no.	Review timeframe and status	Approval requirement	Agency Consultation
Independent Audit Program	Detail the independent audit methodology including scope of the audit and selection/acceptance process for auditors, and set out the form and content requirements for audit findings.	In development	Annual	Approval from Planning Secretary, DPIE	N/A
Traffic and Access Management Procedure	Describe the requirements for planning and managing CEMP activities and control the interface between public traffic, construction traffic and workers	M6S1-CGU-NWW-PE-PRO-000418	Annual	Approval from Planning Secretary, DPIE	N/A for Procedure.
Noise and Vibration Preliminary Sub-plan	Describe how to manage potential noise and vibration impacts during preliminary construction activities	M6S1-CGU-NWW-PE-PLN-000403	Annual	Approval from Planning Secretary, DPIE	NSW Health and Bayside Council
Out of Hours Work and Construction Fatigue Protocol	Identify a process for the consideration, management and approval of works which are outside standard hours, which are not subject to an EPL	M6S1-CGU-NWW-PE-PRO-000425	Annual	Approval from Planning Secretary, DPIE	N/A

Environmental management document	Purpose	Document no.	Review timeframe and status	Approval requirement	Agency Consultation
Flora and Fauna Management Procedure	Describe how to manage impacts to flora and fauna encountered during CEMP activities	M6S1-CGU-NWW-PE-PRO-000419	Annual	Approval from Planning Secretary, DPIE	N/A for Procedure.
Air Quality and Odour CEMP Sub-plan	Describe how to manage and protect air quality during CEMP activities	M6S1-CGU-NWW-PE-PLN-000407	Annual	Approval from Planning Secretary, DPIE	NSW Health Bayside Council, Georges River and Canterbury/Bankstown Council
Air Quality Monitoring Program	Describe how CGU will spatially and temporally monitor air quality during CEMP activities	M6S1-CGU-NWW-PE-PLN-000408	Annual	Approval from Planning Secretary, DPIE	EPA
Soil and Surface Water Management Procedure	Describe how CGU will manage soil and surface water impacts during CEMP activities	M6S1-CGU-NWW-PE-PRO-000421	Annual	Approval from Planning Secretary, DPIE	N/A for Procedure.
Contamination CEMP Sub-plan	Describe how to identify contaminated land and manage potential impacts to human health and the environment when encountering contaminated land	M6S1-CGU-NWW-PE-PLN-000413	Annual	Approval from Planning Secretary, DPIE	Bayside, Georges River and Canterbury/Bankstown Council

Environmental management document	Purpose	Document no.	Review timeframe and status	Approval requirement	Agency Consultation
Waste CEMP Sub-plan	Describe how to manage and protect waste and resources during CEMP activities	M6S1-CGU-NWW-PE-PLN-000414	Annual	Approval from Planning Secretary, DPIE	Bayside, Georges River and Canterbury/Bankstown Council
Heritage Management Plan	Manage unexpected heritage finds and ensure construction does not have an adverse effect on any heritage items	M6S1-CGU-NWW-PE-PLN-000417	Annual	Information only	N/A
Construction Parking and Access Strategy	Identify and mitigate impacts resulting from on- and off-street parking changes during construction.	In development	Annual	Approval from Planning Secretary, DPIE	Bayside Council
Green and Golden Bell Frog Plan of Management	Detail the management and mitigation measures to limit impacts on Green and Golden Bell frogs including monitoring and re-instatement of habitat	In development	Annual	Approval from Planning Secretary, DPIE	NSW Department of Environment, Energy and Science



Appendix A6

Sensitive Area Plans

M6 Stage 1

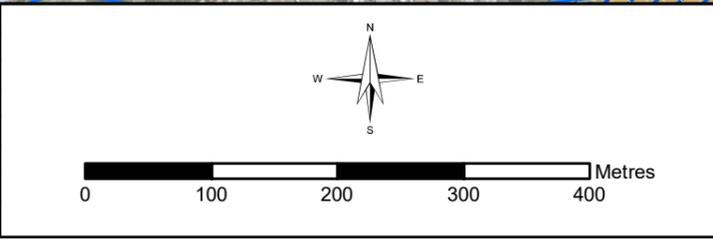
16 July 2021

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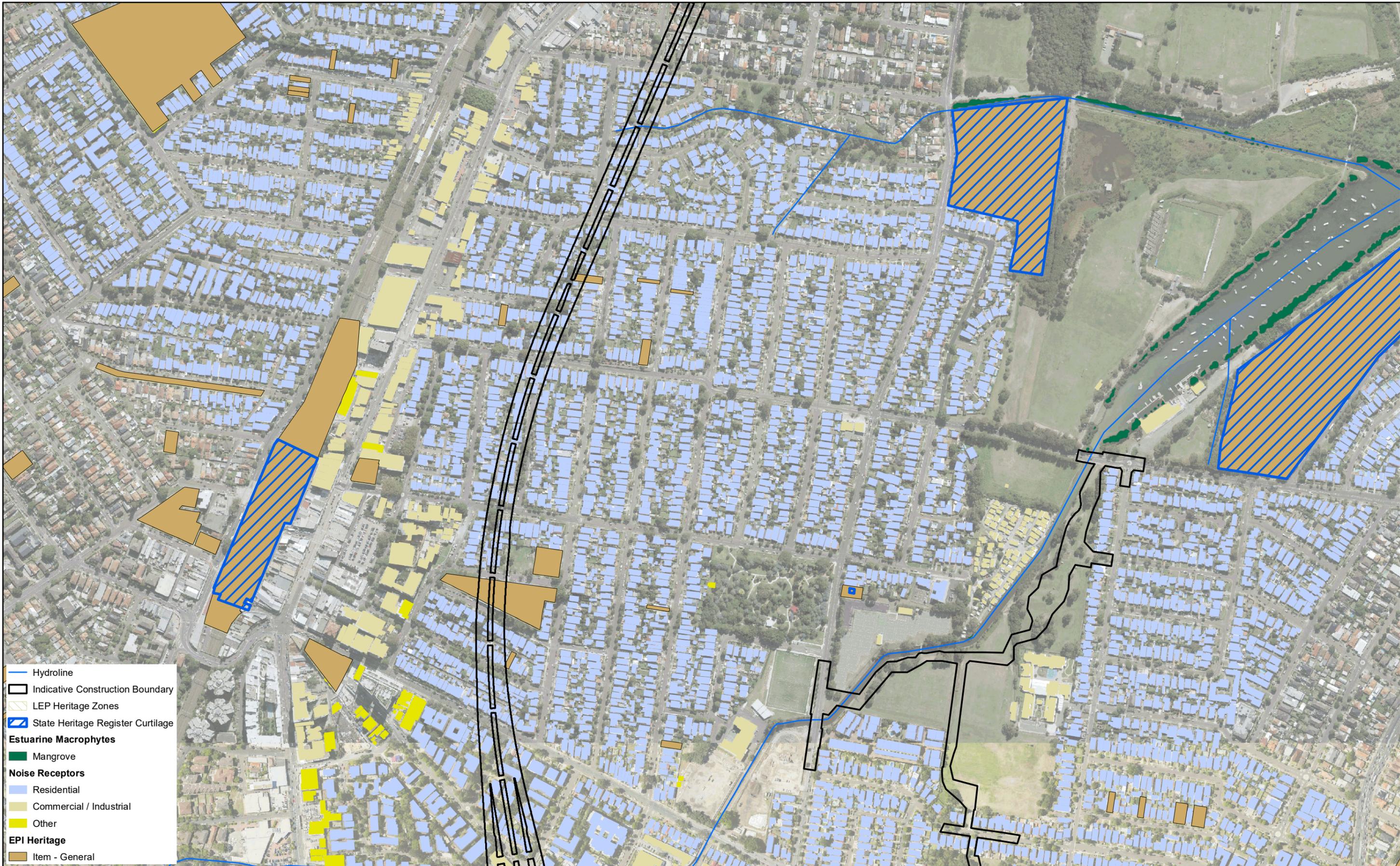
- Hydroline
- Indicative Construction Boundary
- Prop Environmental Exclusion Zone
- LEP Heritage Zones
- State Heritage Register Curtilage
- EPI Heritage
- Item - General
- Green and Golden Bell Frog Habitat
- Noise Receptors**
- Residential
- Commercial / Industrial
- Other
- Estuarine Macrophytes**
- Mangrove

A	Sensitive Area Plan created	01/07/2021			
Rev	Description	Date			



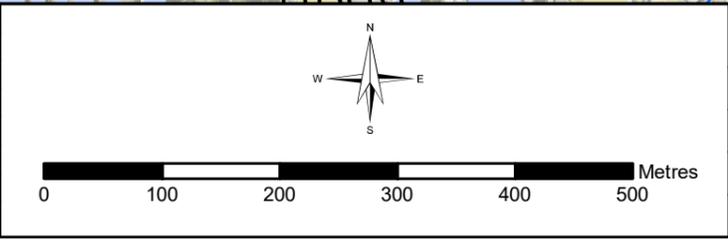
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Coordinate System	MGA ZONE 56	Date Printed	01/07/2021
Height Datum	AHD	Date Issued	01/07/2021
Filename:	Sensitive Area Plan - Arncliffe.mxd		

Sensitive Area Plan
Arncliffe (C1)
Document Number



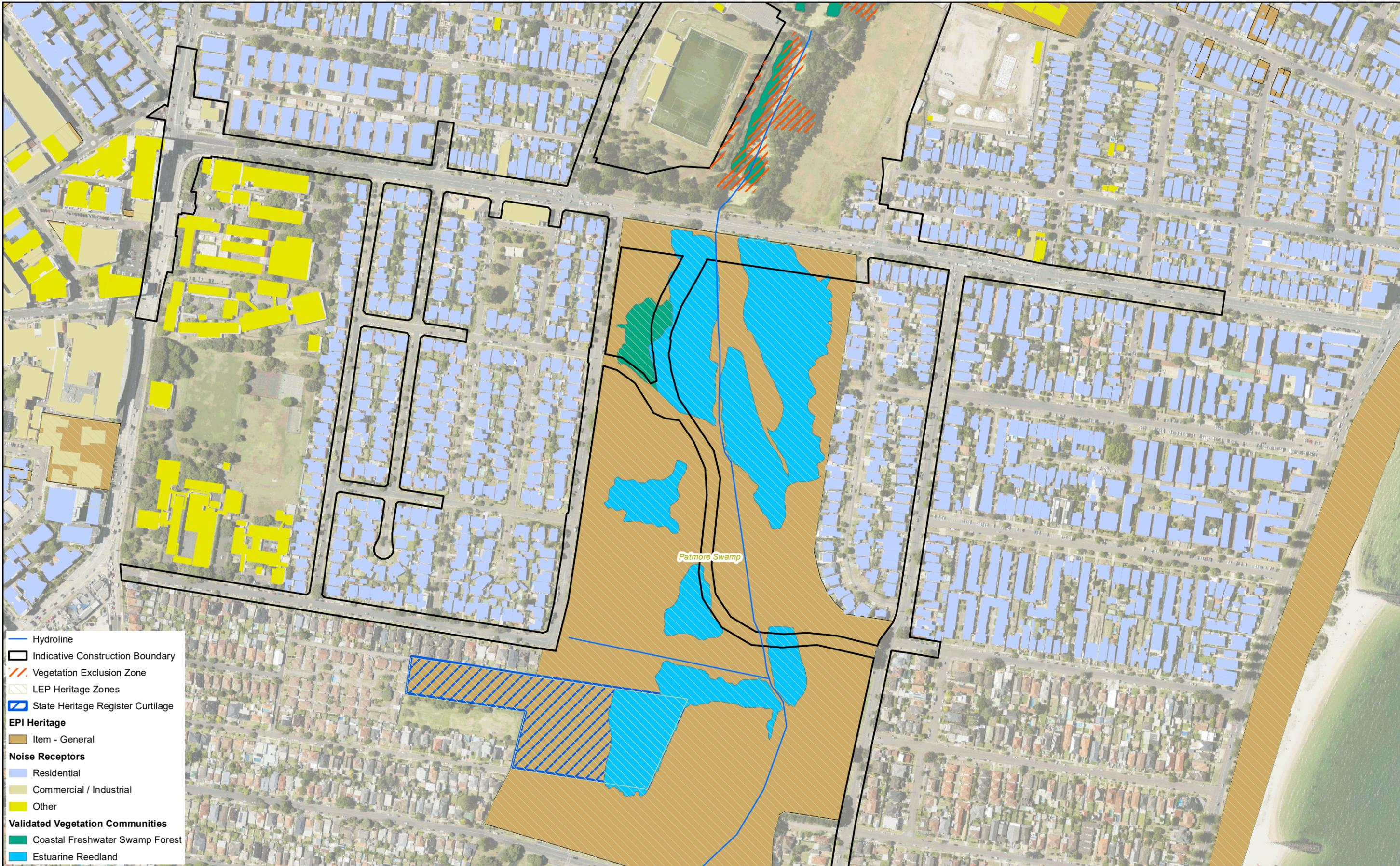
- Hydroline
- Indicative Construction Boundary
- LEP Heritage Zones
- State Heritage Register Curtilage
- Estuarine Macrophytes**
- Mangrove
- Noise Receptors**
- Residential
- Commercial / Industrial
- Other
- EPI Heritage**
- Item - General

A	Sensitive Area Plan created	01/07/2021
Rev	Description	Date



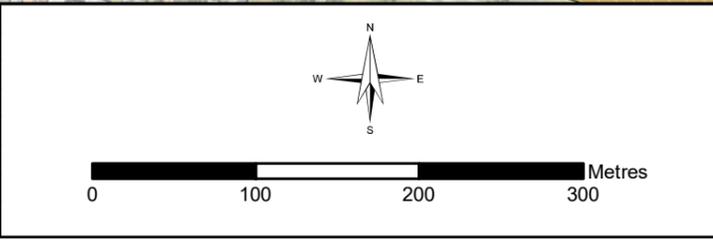
Designed By	PB	Drawn	GIS
Coordinate System	MGA ZONE 56	Date Printed	01/07/2021
Height Datum	AHD	Date Issued	01/07/2021
Filename:	Sensitive Area Plan - Tunnel.mxd		

Sensitive Area Plan
Tunnel / ATC
Document Number



- Hydroline
- Indicative Construction Boundary
- Vegetation Exclusion Zone
- LEP Heritage Zones
- State Heritage Register Curtilage
- EPI Heritage**
- Item - General
- Noise Receptors**
- Residential
- Commercial / Industrial
- Other
- Validated Vegetation Communities**
- Coastal Freshwater Swamp Forest
- Estuarine Reedland

A	Sensitive Area Plan created	01/07/2021
Rev		Date



Designed By	PB	Drawn	GIS
Coordinate System	MGA ZONE 56	Date Printed	01/07/2021
Height Datum	AHD	Date Issued	01/07/2021
Filename:	Sensitive Area Plan - Presidents Ave.mxd		

Sensitive Area Plan
Presidents Ave / Princes Hwy (C6)
Document Number



Appendix A7

Transport for New South Wales Environmental Incident Classification and Reporting Procedure

M6 Stage 1

July 2021

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Environmental Incident Procedure

Procedure Number: EMF-13-PR-0001 Environmental Incident Procedure

Effective Date: 19/07/2021

Review Date: 19/07/2023

1 Who is this document for?

All Ongoing / Temporary/ Seconded/Casual staff of TfNSW	YES
Transport Service Senior Managers and Executives	YES
Labour Hire, Consultants and Professional Service Contractors	YES
Delivery Partners / Contractors	YES

2 Purpose and Scope

2.1 Purpose

The purpose of this document (Procedure) is to set out the procedure to be followed if, during an activity being carried out by or on behalf of TfNSW, there is:

- a report-only event
- a non-compliance
- regulatory action received
- an environmental incident.

The Procedure sets out the steps for the:

- identification,
- classification and
- reporting

of report-only events, non-compliances, regulatory action and environmental incidents.

2.2 Scope

The Procedure sets out internal only reporting processes for environmental events and the additional process for 'notifiable events', which are environmental incidents that must be reported externally (see section 3.3).

The Procedure is applicable to all TfNSW activities where report-only events, non-compliances, regulatory action and environmental incidents may occur. The requirements of the Procedure must be communicated to all TfNSW employees and contractors (e.g. during inductions) who undertake those activities.

This includes (but is not limited to):

- Activities undertaken by contractors on behalf of TfNSW
- Temporary activities, such as preliminary investigations (e.g. geotechnical and environmental surveys)
- Construction and maintenance of TfNSW assets
- Activities at TfNSW properties and facilities (including TAHE)
- Maritime vessels operated by TfNSW.

The procedure does NOT cover report-only events, non-compliances, regulatory action and environmental incidents relating to:

- Operating agencies embedded within TfNSW, such as Sydney Metro. At the time of release of the Procedure, there was a Corporate Functions Review underway, which sought to incorporate Sydney Trains and NSW TrainLink into TfNSW. The single operating model may involve the future amalgamation of environmental incident procedures. Regardless, it is noted that all agencies provide their incident data to Environment and Sustainability (E&S) Branch for the purposes of cluster reporting;
- Operational road and traffic activities of the general public (e.g. vehicle accidents, fires caused by discarded cigarette butts);
- Boating accidents (except those involving TfNSW Maritime vessels);
- Dumping of materials by members of the public on TfNSW managed land (except where hazardous materials are unexpectedly found during construction or maintenance activities);
- Marine oil and chemical spills covered by the National Plan for Maritime Environmental Emergencies (Australian Maritime Safety Authority, 2014).

The Procedure does not provide guidance on management responses or corrective actions required following environmental incidents and non-compliances, which are site specific and should be addressed by those with responsibility for the activity that caused the incident or non-compliance.

However, TfNSW E&S Branch is available to provide advice on appropriate responses and corrective actions in relation to individual incidents or non-compliances.

3 Requirements

3.1 Environmental incidents, report-only events, non-compliances and regulatory action

This Procedure is applicable to a range of environmental incidents, report-only events, non-compliances and regulatory action that may occur during activities undertaken by, or on behalf of, TfNSW. Each of these events and their reporting requirements are described in the following sections.

Personnel using this Procedure should consider the definitions of each of these events when reporting. Definitions are provided in Section 6.

Note that a set of circumstances may be both a non-compliance and an environmental incident. An environmental incident could also result in regulatory action.

3.1.1 Environmental incidents

Environmental incidents are defined in section 6. Reporting requirements are detailed in section 3.2.

The person responsible for operational management of the site/activity that caused the incident should assume responsibility for reporting in accordance with this Procedure, together with coordinating the response to the incident, including directing actions as necessary.

The TfNSW Environment Manager will classify reported incidents for the purposes of internal environmental performance reporting and analysis of environmental incident trends (as outlined in Figure 3.2.1).

Environmental incident classifications are described in Table 3.1.1, below. The classification system is aligned to the consequence levels (C6 – C1) from the [TfNSW Enterprise Risk Management Standard](#) and considers the key risk areas of:

- Environment

- Reputation and Integrity
- Regulations and Compliance.

The appropriate consequence level for each of the three key risk areas will be recorded for each incident, but only the highest recorded consequence level will be used as the incident classification for reporting purposes.

Note that not all criteria described for each consequence level in Table 3.1.1 need to be met in order to assign an incident classification – the most appropriate criteria should be considered when determining the consequence level for each key risk area for each incident.

Table 3.1.1: Environmental Incident Classification

Key risk area	Incident Category					
	C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
Environment	No appreciable changes to environment.	Change from existing conditions that can be rectified immediately (< 1 day) with available resources.	Short-term (< 1 year) and/or well-contained environmental impact. Minor remedial actions probably required.	Short to medium term (between 1 and <5 years) environmental impact. Considerable remedial actions probably required.	Medium-term (>5 years) environmental impact. Extensive remedial actions probably required.	Long-term (>10 years) large-scale environmental impact. Extensive and ongoing remedial actions probably required.
Reputation and integrity	Single negative article in local media. Limited social media commentary. Goodwill, confidence and trust retained. Confined to the Branch. Local council may want to discuss.	Series of negative articles in local media (District / electorate based adverse media). Some social media commentary. Confidence remains - minor loss of goodwill. Confined to Branch but requiring notification to Division. Council requires written explanation. Recoverable with little effort or cost. Some continuing scrutiny/attention.	Extended local media coverage with some broader Regional media coverage. Extended negative social media coverage. Confidence and trust of stakeholders dented (recoverable at modest cost within existing budget and resources). Division formal response needed to State Government/Regulator.	State media coverage, short term negative national media coverage. Widespread social media coverage Confidence/trust impaired. Project/activity credibility under question. TfNSW and/or Ministers Department requires update.	Sustained negative State media coverage. Regular 'talk-back' programs questioning credibility and capability. Confidence and trust are severely damaged. Widespread negative social media coverage. Regular updates demanded by Minister. Stakeholders withdraw their support recoverable at considerable cost, time and staff effort.	Sustained, high profile media attention at National level. Material change in the public perception of the Agency. Extensive negative social media coverage Confidence and trust non-existing. Government forced to reverse decision. Stakeholders are actively campaigning against the organisation.

Table 3.1.1: Environmental Incident Classification

Key risk area	Incident Category					
	C6 Insignificant	C5 Minor	C4 Moderate	C3 Major	C2 Severe	C1 Catastrophic
Regulations and compliance	<p>Low-level/Technical non-compliance with legal and/or regulatory requirement or duty by individuals or TfNSW- not reportable.</p> <p>Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify.</p>	<p>Non-compliance with whole or significant aspects of Government policy not reportable but requiring internal activity to put in place.</p> <p>Formal investigation and/or formal notification to regulator.</p> <p>Minor breach of contract by either party rectified through local management discussion.</p>	<p>Non-compliance with key Government policy - reportable and/or explanation required – need to put in place as soon as possible.</p> <p>Non-compliance – key obligation.</p> <p>Formal notification to regulator.</p> <p>Agency on notice.</p> <p>Breach of contract by either party rectified at Branch level management discussion.</p> <p>Small fine and no disruption to services.</p>	<p>Technical non-compliance with a minor Government Policy - not reportable.</p> <p>Low level non-compliance.</p> <p>Technical non-conformance.</p> <p>Minor non-compliance to a low impact contract clause – little or no interest by either party to pursue or rectify.</p> <p>Substantial fine and no disruption to services.</p>	<p>Non-compliance with high profile, outward facing Government policy or Ministerial decree - immediately reportable to Government body (e.g. Treasury) and action to put in place required immediately (high priority).</p> <p>Continuous breach resulting in prohibition notices.</p> <p>Breach of significant, key aspects of contract by either party leading to lodgement (threat) to sue and recompense at severe financial levels Cessation of contract may occur.</p> <p>Large fines as a result of non-compliance.</p> <p>Licence or accreditation restricted or conditional affecting ability to operate.</p>	<p>Non-compliance with high profile Government policy or Ministerial decree - immediately reportable to Ministerial level requiring actions to put in place immediately (high priority) and progress to be reported to the Minister on an agreed and appropriate schedule.</p> <p>Litigation and potentially imprisonment.</p> <p>Loss of Operating licenses.</p> <p>Continued breach cannot be tolerated.</p> <p>Major contract breach by either party leading to significant litigation and financial costs</p> <p>Total breakdown and cessation of contract.</p> <p>Criminal prosecution as a result of non-compliance.</p>

3.1.2 Significant environmental incidents

Significant Incidents are environmental incidents that are serious in nature and have significant consequences warranting escalation to TfNSW senior management.

An environmental incident is to be defined and treated by the TfNSW Environment Manager as a potential Significant Incident if it meets one or both of the following:

- the severity of the incident is likely to be classified as C3, C2, or C1 in accordance with Section 3.1.1
- the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to be the subject of a penalty notice or prosecution

Potential Significant Incidents are escalated by TfNSW to the Executive Director Environment and Sustainability, who will determine whether the incident is deemed to be a Significant Incident and require further escalation to the Secretary and other senior management, to ensure they are aware of the incident and can implement or authorise any required responses.

The Significant Incident escalation process is detailed in Appendix A and Figure 3.2.1.

3.1.3 Report-only events

Report-only events are defined in section 6. Reporting requirements are detailed in section 3.2. Examples of report-only events include:

- Environmental incidents caused by weather events that are beyond the design capacity of environmental controls and/or mitigation measures in accordance with project specific requirements;
- Environmental incidents caused by persons or entities not associated with an activity being undertaken by TfNSW;
- Pre-existing conditions not associated with an activity being undertaken by TfNSW;
- Unexpected finds that are managed in accordance with relevant procedures / guidelines.

Despite these events being outside the scope of control of an activity, it is likely that a management response will be required to address them. As such, it is important that they are still reported (see section 3.2) to understand any resulting environmental impacts, inform trend analysis and any future activities in that location and allow any required management responses to be developed.

Report-only events can be considered to be unavoidable and so not reflecting the performance of a site, and will not be included in performance reporting. However, the response to a report-only event should be taken into account when considering site performance, as a deficient or inappropriate management response could result in a non-compliance and/or an environmental incident.

Where a report-only event relates to an unexpected find and the same issue can then reasonably be expected to be found at the same location in future, additional finds from that location need not be reported.

3.1.4 Non-compliances

Non-compliance is defined in section 6. Reporting requirements are detailed in section 3.2.

A non-compliance could also be an environmental incident.

3.1.5 Regulatory action

Regulatory action is defined in section 6. Reporting requirements are detailed in section 3.2.

Regulatory action includes, but is not limited to:

- Prosecutions
- Penalty notices
- Clean up notices
- Prevention notices
- Official cautions
- Formal warnings
- EPA show cause notifications.

Copies of any regulatory action issued by an environmental regulator must be provided as part of the reporting that is undertaken in accordance with section 3.2.

3.2 Reporting process

3.2.1 Standard reporting process

The standard reporting process for all environmental incidents, significant environmental incidents, report-only events, non-compliances and regulatory action is detailed in Figure 3.2.1.

Where the reporting process requires submission of a written report to TfNSW, the person making the report must use the following formats and meet the information requirements detailed within each:

- Road based and maritime projects: Environmental Event Reporting Form (624/400)
- Rail based projects: INX reporting system

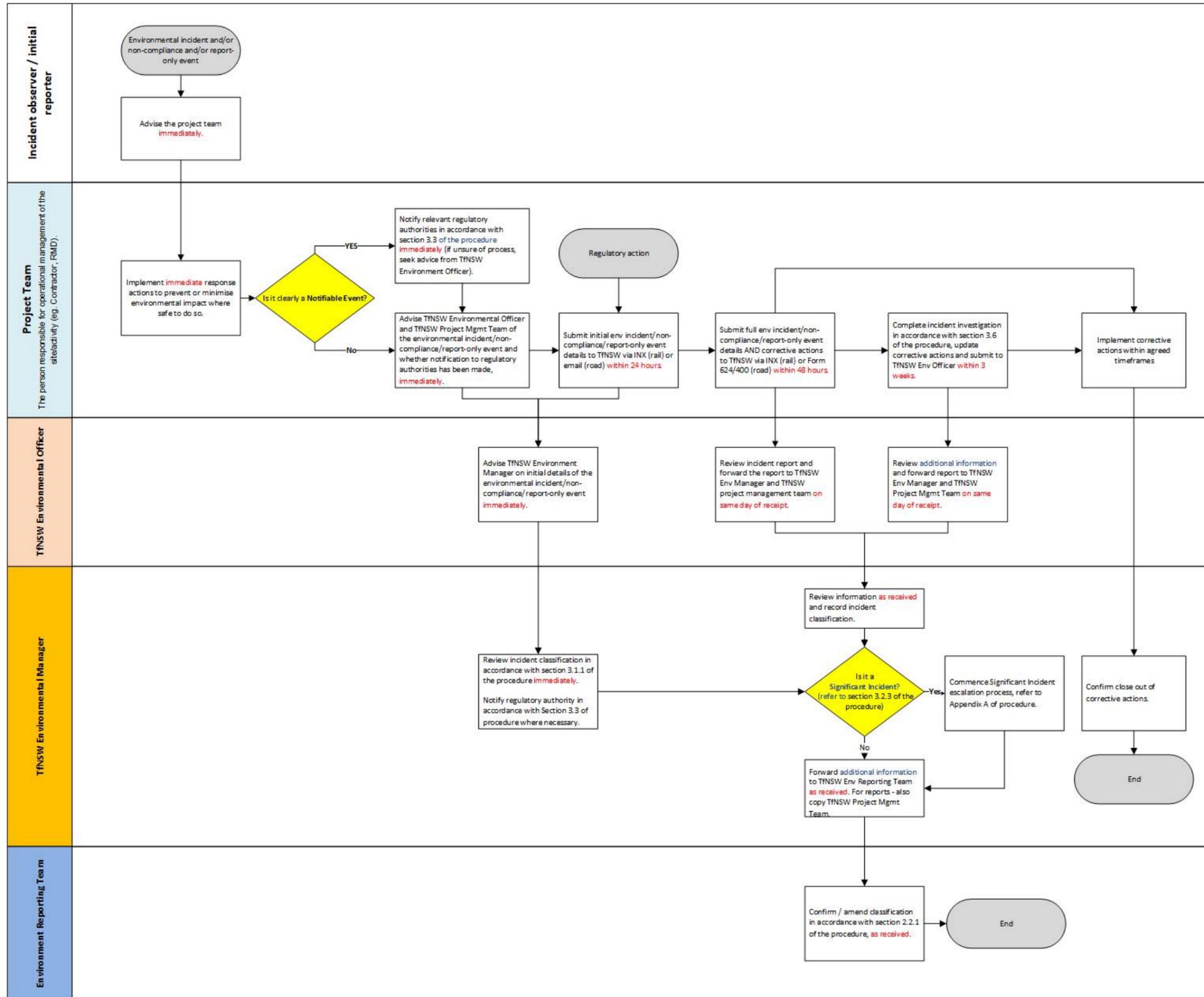
Information included in reporting must be factual and accurate.

For the initial 24-hour email notification for road projects, the following information must be provided:

- Date of event
- Project / site name
- Type of event that has occurred (ie- environmental incident, incident and non-compliance, non-compliance, report-only or regulatory action)
- Description of the event
- Quantity / volume
- Immediate response actions that were implemented
- Notification/s undertaken.

In the case that regulatory action is received relating to a previously reported environmental incident, non-compliance or report-only event, reference to the relevant event must be made in the report for the regulatory action.

Figure 3.2.1: Reporting process



3.2.2 Other internal notifications

When reporting in accordance with Figure 3.2.1, TfNSW project management teams should also undertake the following internal notifications as appropriate:

- Corporate Communications / Media for any environmental incidents, report-only events, non-compliances and regulatory action that have potential for negative community or media attention;
- Legal Branch, for any environmental incidents, report-only events, non-compliances and regulatory action that could result in a (further, in the case of the latter) regulatory response against TfNSW. In these instances, limit written commentary on the incident by all staff, including emails;
- Safety Branch for any incidents that involve actual or potential risks to the health and safety of workers or the general public.

3.3 Notifiable events

A notifiable event is any environmental incident, report-only event or non-compliance (see section 3.1, above) that triggers a specific statutory requirement to notify an authority.

The key notification requirements are described below. Note each statutory requirement to notify may specify a particular person who is responsible to make the notification as well as the timing of when this must occur. The details of any notification conducted must be included in the reporting that is undertaken in accordance with section 3.2.

3.3.1 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 3.3.2) 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.

3.3.2 Notification of Material Harm pollution incidents

The relevant authorities that must be notified for a Material Harm pollution incident are listed in tables 3.3.2a and 3.3.2b 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 3.3.2a: 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: <ul style="list-style-type: none"> 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 3.3.2b: 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: <ul style="list-style-type: none"> 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.

When notifying authorities, do not speculate on the origin, causes or outcomes of a pollution incident. Rather, state very simply and concisely the following only:

- 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.

If further information becomes known after the initial notification, that information must immediately be notified to all authorities in accordance with Section 150 of the POEO Act. The verbal notification must be followed by written notification to each relevant authority within seven days of the date on which the incident occurred, setting out the above information.

3.3.3 Summary of other regulatory agency notification requirements

A summary of the other key statutory notification requirements that could arise from TfNSW environmental incidents, report-only events and non-compliances is provided in Table 3.3.3.

Table 3.3.3: Regulatory agency notification requirements

Event type	Legislation	Part / section	Agency	Notification requirement
Discover Aboriginal object	<i>National Parks and Wildlife Act 1974</i>	Section 89A	Heritage NSW	Notify the Secretary of the Department of Planning, Industry and Environment in writing using the form approved by the Secretary (if any) within a reasonable time after becoming aware
Discover Aboriginal remains	<i>Commonwealth Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	Section 20	Commonwealth Department of Agriculture, Water and the Environment	Notify the Commonwealth Minister in writing as soon as practicable after becoming aware, giving particulars of the remains and their location
Discover non-Aboriginal relic	<i>Heritage Act 1977</i>	Section 146	Heritage NSW	Notify the Heritage Council in writing within a reasonable time after becoming aware
Fires	<i>Rural Fires Act 1997</i>	Section 64	NSW Rural Fire Services	Notify an appropriate fire officer of the inability to extinguish any fire burning during a bush fire danger period applicable to the land.
Land contamination	<i>Contaminated Land Management Act, 1997</i>	Section 60(1)	EPA	Notify EPA in writing as soon as practicable after becoming aware of the contamination, where required as prescribed in the EPA ‘Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997’
Non-compliance	Various	N/A	Various	Requirements to notify the relevant regulatory authority when a non-compliance has occurred (eg- with a Condition of Approval issued under Division 5.2 of the EP&A Act)
Pollution incident (material harm)	<i>Protection of the Environment Operations Act, 1997</i>	Part 5.7	EPA	See section 3.3.2
Pollution incident in water supply catchment area	Various	N/A	N/A	Notify the relevant water supply authority if an environmental incident has the potential for unapproved impacts on a drinking water supply

3.4 Requests for written reports from regulatory authorities

If TfNSW receives a request from an environment regulatory authority for a written report regarding an environmental incident, report-only event or non-compliance, the relevant Environment Manager must be immediately contacted for advice. No further correspondence (including email) about the event should be distributed either internally or externally until advice is received. E&S will then coordinate with Legal Branch to:

- assist in the investigation of the environmental incident, report-only event or non-compliance
- provide legal advice to the project
- co-ordinate the preparation of the written response to the regulatory authority.

3.5 Corrective actions

A key aspect of the TfNSW Environment and Sustainability Policy that is addressed through this procedure is being accountable for addressing and minimising the environmental impacts of TfNSW activities. This can be achieved by developing appropriate corrective actions and implementing them within a timely manner following an environmental incident, with the aim of avoiding a repeat of that incident.

There are a variety of scenarios in which an environmental event may occur on a TfNSW project. It is important that corrective actions are:

- specific to the incident that has occurred
- meaningfully address the root cause(s) of the incident
- designed to prevent incident reoccurrence.

Corrective actions could include (but are not limited to) the following:

- physical works to install, augment or rectify controls or a site issue
- testing and/or monitoring
- review and improvement of construction methods or work practices
- review and update of management plans, procedures or other tools
- communication, training and awareness initiatives for workers.

In most cases it will not be sufficient to simply notify workers of correct systems / procedures (e.g. via toolbox talk). A review should be undertaken by the project team following an incident or non-compliance to determine why the systems / procedures failed (or alternatively a formal investigation, when required by section 3.6), and necessary changes made to ensure they do not fail in future. Site staff should then be made aware of the changes and trained as necessary.

Immediate/short-term corrective actions including timeframes for completion must be clearly described in incident/non-compliance reporting. Updates about longer-term corrective actions including timeframes for completion can be provided to the TfNSW Environment Officer and TfNSW Project Management Team post submission of the incident/non-compliance report.

3.6 Investigations

Serious environmental incidents and non-compliances must be investigated to identify the causes, with the purpose of preventing a recurrence. A root cause analysis investigation must be completed by the project team for all environmental incidents with a classification of C1, C2 or C3, or any other environmental incidents or non-compliances as determined by TfNSW.

The scope of the investigation will be determined by the TfNSW Environment Officer or Environment Manager. The project team must provide TfNSW with a final investigation report

within three weeks of the environmental incident or non-compliance being identified. The report must include the minimum information described in Table 3.6 (below).

Table 3.6: Investigations	
Element	Description
Sequence of events	The sequence of events that led to the incident or non-compliance
Findings	Given the sequence of events, what are the key findings of the investigation (i.e. what are the main causes of the incident or non-compliance).
Management methods	A record of the management methods to be changed and/or implemented to avoid the incident or non-compliance reoccurring.
Key learnings	Describe the key learnings from the investigation into the incident or non-compliance. Detail which learnings may be relevant to other transport projects.

4 Accountabilities

Table 4 details the key accountabilities for implementing this Procedure.

Table 4: Key accountabilities	
Requirement	Detail
Environment Director	Oversee compliance with the procedure and make the final determination on the classification of all environmental incidents, report-only events and non-compliances
Environment reporting team	Recording of all environmental incidents, report-only events, non-compliances and regulatory action, confirm / amend the classification of environmental incidents, report-only events and non-compliances in accordance with section 3.1 and monitor compliance with the Procedure
Executive Director Environment and Sustainability	Make determinations on whether an environmental incident will be considered a Significant Incident (see section 3.1.2). Assume the role of Information Distributor when a Significant Incident has occurred (see Appendix A).
Observer of environmental incident, report-only event, non-compliance or regulatory action	Immediately report in accordance with Figure 3.2.1
Person/s responsible for environmental incident, report-only event, non-compliance or regulatory action	Report and respond in accordance with Figure 3.2.1
Project Managers	Provide appropriate resources to respond to an environmental incident, report-only event, non-compliance or regulatory action in accordance with this Procedure

Table 4: Key accountabilities

Requirement	Detail
TfNSW Environment Manager	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, assign initial classification in accordance with section 3.1.1, monitor corrective actions, and actively promote compliance with this procedure at a program level. Assume the role of Information Controller when a Significant Incident has occurred (see Appendix A).
TfNSW Environment Officer	Report environmental incidents, report-only events, non-compliances or regulatory action in accordance with Figure 3.2.1, monitor corrective actions and actively promote compliance with this procedure at a project level

5 Related policy, systems and documents

The following documents and systems are available on agency intranets and the internet:

- Environmental Event Report Form (for use by road and maritime sites and projects)
- INX system (for use by rail and light rail sites and projects)
- Environment and Sustainability Policy
- Unexpected finds procedures – refer to relevant guideline/procedure

6 Definitions and acronyms

All terminology in this Procedure is taken to mean the generally accepted or dictionary definition with the exception of the following terms which have a specifically defined meaning:

- **Significant incident** – an environmental incident that is likely to receive a classification of C3, C2 or C1, OR the history of the project, past performance and/or previous regulatory interest, indicate the project is likely to receive a penalty notice or be subject to prosecution, and therefore requires escalation to the Secretary and other TfNSW senior management
- **DPIE** – Department of Planning, Industry and Environment
- **Environment Director** – consists of Associate Director Environmental Management; Director Environment Motorways; Director Environment Regions; Director Environment Sydney
- **Environment Manager** – consists of Environment Manager or Senior Manager Environment from Environment and Sustainability Branch
- **Environment Officer** – consists of Environment Officer and Environment and Planning Manager from Environment and Sustainability Branch
- **Environment Reporting team** – consists of those in Environment and Sustainability Branch responsible for administering and maintaining the EnvOps mailbox and INX reporting system (for environment entries)
- **Environmental event** – a report-only event, non-compliance, regulatory action or environmental incident
- **Environmental incident** - An environmental incident is an event or set of circumstances, as a consequence of which pollution (air, water, noise, or land) or an adverse environmental impact has occurred, is occurring, or is likely to occur. Adverse environmental impact includes contamination, harm to flora and fauna (either individual

species or communities), damage to heritage items and adverse community impacts. An unexpected find that is not managed in accordance with relevant procedures / guidelines is also considered an environmental incident

- **EPA** - NSW Environment Protection Authority
- **EPL** – Environment Protection Licence (issued by EPA)
- **E&S** – (Safety, Environment and Regulation) Environment and Sustainability Branch
- **Investigation** – The process by which the cause(s) of an environmental incident is examined and identified.
- **INX reporting system** – the online system used to record and track environmental incidents, report-only events, non-compliances and regulatory action relating to rail projects and premises.
- **Non-compliance** - a failure to comply with any condition of approval, environmental assessment safeguard / mitigation measure, licence condition, permit or any other statutory approval relevant to the activity and/or area where the activity occurs;
- **Notifiable event** - Any environmental incident, report-only event or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.
- **POEO Act** - Protection of the Environment Operations Act 1997
- **Pollution** – Pollution (including air pollution, water pollution, noise pollution and land pollution) as defined in the dictionary to the POEO Act.
- **Pollution incident** – Has the same meaning as defined in the dictionary to the POEO Act.
- **Regulatory action** - any formal regulatory response from an environmental regulator including but not limited to penalty notices, clean-up notices, prevention notices, official cautions, show cause notices and formal warnings.
- **Report-only event** - An environmental incident or unexpected find resulting from circumstances outside the scope of controls and of an activity.
- **RMS** – Roads and Maritime Services
- **TfNSW** – Transport for NSW (excludes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- **Transport Cluster** – all TfNSW divisions and operating agencies (includes the operating agencies: Sydney Trains; Sydney Metro; State Transit Authority; NSW TrainLink)
- **Unexpected find** – An unexpected discovery such as a heritage item, threatened species, contamination, asbestos or hazardous substance.
- **WHS** – Work Health and Safety

7 Document control

7.1 Superseded documents

This Procedure replaces the following documents:

- Roads and Maritime Services Environmental Incident Classification and Reporting Procedure (RMS 17.374)
- Transport for NSW Environmental Incident Classification and Reporting (PR-105)

7.2 Document history

Date & Procedure No	Document owner	Approved by	Amendment notes
19/07/2021 EMF-13/PR-0001	Environment Manager Performance Improvement	Executive Director Environment and Sustainability	N/A

7.3 Feedback and help

For advice on using this Procedure please contact:

Environment Manager Performance Improvement

Email: envops@rms.nsw.gov.au

Phone: (02) 8849 2586.

Appendix A: Significant Incident escalation process

A1 Confirmation of a Significant Incident

Where an Environment Manager believes that a Significant Incident has occurred (see section 3.1.2 and Figure 3.2.1), they must immediately phone the relevant Environment Director. The Environment Director will consult with the Executive Director Environment and Sustainability, who will determine whether the incident will be considered a Significant Incident. Once a Significant Incident has been determined, the escalation process will commence in accordance with sections A2 and A3, below.

A2 Significant Incident information management

Following determination of a Significant Incident (see section A1, above), it is essential that there is fast, consistent and accurate reporting of information to the TfNSW senior management. As such, clear roles and responsibilities must be established in two key areas, as described in Table A2.

Table A2: Roles and responsibilities during a Significant Incident

Role	Who	Responsibilities
Information Controller	Environment Manager (or relevant Environment Officer in their absence)	<ul style="list-style-type: none"> Liaise between the on-site TfNSW project management team and the Information Distributor (below) Be the single point of contact to provide information and updates about the status of the Significant Incident to the Information Distributor
Information Distributor	Executive Director Environment and Sustainability (or relevant Environment Director in their absence)	<ul style="list-style-type: none"> Identify the relevant members of the Executive and other senior management that will form the distribution group to be informed about the Significant Incident (see Table A3) Consolidate information from the Information Controller, and distribute it to the distribution group Provide key ongoing updates to the distribution group as it becomes available Respond to enquiries from the distribution group, ensuring all members of the distribution group are copied into every response

A3 Parties to be notified

As described in Table A2, the Information Distributor must identify relevant TfNSW senior management from delivery and client divisions that will form the distribution group to be informed about the Significant Incident, including ongoing updates. Table A3 provides the key positions that must be included (at a minimum), depending on who is undertaking the activity. Depending on the type and location of the activity, there may be other areas of TfNSW that should be included in the distribution group – see section 3.2.2.

The distribution group should all be notified concurrently in a single email that a Significant Incident has occurred. The email should be sent by the Information Distributor within five minutes of making the determination of the Significant Incident.

Table A3: TfNSW distribution group to be notified during a Significant Incident

	Greater Sydney (Client)	Regional & Outer Metropolitan (Client)
Transport exec notification	<ul style="list-style-type: none"> Secretary 	<ul style="list-style-type: none"> Secretary
SER exec notification	<ul style="list-style-type: none"> Deputy Secretary, Safety Environment and Regulation 	<ul style="list-style-type: none"> Deputy Secretary, Safety Environment and Regulation
Client exec notification	<ul style="list-style-type: none"> Deputy Secretary, Client Division Executive Director, Community and Place Relevant City Director (Harbour/River/Parkland) 	<ul style="list-style-type: none"> Deputy Secretary, Client Division Executive Director, Community and Place Relevant Regional Director
Delivery exec notification	<ul style="list-style-type: none"> Deputy Secretary, relevant Delivery Area Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Sydney Project Delivery, Head of Rail Delivery, Chief Operations Officer, Executive Director Planning and Programs) Director of relevant Delivery Area (e.g. WSPO, GSPO, Parramatta Light Rail, Rail Infrastructure Delivery, Sydney Maintenance, Easing Sydney's Congestions etc.) 	<ul style="list-style-type: none"> Deputy Secretary, relevant Delivery Area Executive Director (or equivalent) of relevant Delivery Area (e.g. Head of Regional Project Delivery, Executive Director Network and Assets) Director of relevant Delivery Area (e.g. Regional Maintenance, NPO, SaWPO)
Project Team notification	<ul style="list-style-type: none"> Project Director (or equivalent) of relevant Delivery Area Senior Project Manager Project Manager Environment Manager 	<ul style="list-style-type: none"> Project Director (or equivalent) of relevant Delivery Area Senior Project Manager Project Manager Environment Manager



Appendix B1

Traffic and Access Management Procedure

M6 Stage 1: Preliminary Construction including commencement activities

October 2021

M6S1-CGU-NWW-ENPE-PRO-000418

Rev 01

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Document control

Approval and authorisation

Title	M6 Stage 1 Traffic and Access Management Procedure
Endorsed by Environment Representative	Derek Low
Signed	
Dated	20/10/2021
Approved on behalf of TfNSW by	Roy Morizzi
Signed	
Dated	21/10/2021
Approved on behalf of CGU by	Craig Gibson
Signed	
Dated	20/10/2021

Document status

Revision	Date	Description	Approval
A.01	23/07/2021	Draft issued for TfNSW review	
A.02	18/08/2021	Updated with TfNSW comments and issued for consultation	
00	17/09/2021	Issued for Approval	
01	20/10/2021	Updated in accordance with DPIE Stage 1 CEMP comments	

Distribution of controlled copies

This Procedure as part of the CEMP for preliminary construction including commencement activities is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the Project website.

The document is uncontrolled when printed. One controlled hard copy of the Procedure as part of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project Office.

Copy number	Issued to	Version

1 Introduction to Procedure

1.1 Context

This Traffic and Access Management Procedure (the Procedure) forms part of the Construction Environmental Management Plan (CEMP) for preliminary construction including commencement activities of the M6 Stage 1 Motorway (the Project). The full scope of activities which will occur under the CEMP for preliminary construction are outlined in Section 1.1 of the CEMP and Staging Report.

A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Stage 2 CEMP. The CTAMP will detail processes to minimise delays and disruptions and identify and respond to changes in road safety as a result of project construction works.

The CTAMP will be prepared in accordance with applicable guidelines and relevant standards, guides and manual and will include Project staging plans in consultation with relevant traffic and transport stakeholders, which would include measures to manage impacts during special events (such as sporting events), Minimise the number of changes to the road users' travel paths and, where changes are required, implement a high standard of traffic controls which effectively warn, inform and guide and Comprehensively communicate changes in traffic conditions on roads or paths to emergency services, public transport operators, other road user groups and other affected stakeholders. This information is not included within this Procedure as it is not applicable to Stage 1 works and these impacts will not occur.

An Aspects and Impacts Register was developed (refer to Appendix A2 of the CEMP) and identified minor residual traffic and access impacts associated with preliminary construction including commencement activities. This Procedure has been developed to address and manage the minor residual impacts.

1.2 Impacts and Risks

Traffic and Access aspects and impacts are listed within the Aspects and Impacts Register contained within CEMP Appendix A2. These Traffic and Access Impacts, specific to preliminary construction activities at each site have been extracted and presented in Table 1 (C1 Arncliffe construction ancillary facility), Table 2 (C2 Rockdale depot construction ancillary facility) and Table 3 (C3 President Ave construction ancillary facility).

Table 1 Extract from A2 Aspects and Impacts Register for C1 Arncliffe construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<ul style="list-style-type: none"> • Light vehicles entering site: <ul style="list-style-type: none"> • Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 68 • Workforce, staff and visitors vehicles • Delivery of small-scale construction materials in vans • Heavy vehicles entering site: <ul style="list-style-type: none"> • Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 30 • Delivery of plant and equipment on semi-trailers, some oversized • Delivery of construction materials on flatbed trucks • Delivery of concrete and shotcrete via concrete agitator • Delivery and removal of portable buildings • Fuel tankers distributing fuel and refilling at designated refuelling area • Other: <ul style="list-style-type: none"> • Street sweeper routinely maintaining internal haul roads and Marsh Street • Special purpose trucks servicing waste skips and front-loading bins • Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within construction ancillary facility 	Increased vehicle movements into construction ancillary facility	12 (moderate)	Direct: <ul style="list-style-type: none"> • The preliminary construction and commencement activities undertaken at C1 will not include activities which impact the operation of the road network • Spoil haulage will not be undertaken during preliminary construction including commencement activities • All utility services are connected to the existing C1 construction ancillary facility and there are no foreseeable changes which would require works to be undertaken outside of the C1 ancillary facility • Access to C1 will be via the existing access point (Marsh Street): <ul style="list-style-type: none"> • When travelling in north bound lane, access to site will only occur from designated right turning lane at signalised intersection • When travelling in south bound lane, access to site can occur in far-left hand lane • Left hand turn to exit site only • No access from Flora Street • All site personnel would undergo a site induction and ongoing toolbox talks detailing traffic, parking, transport and access management measures • Vehicle Management Plan will be distributed to all subcontractors who need to attend site Indirect: <ul style="list-style-type: none"> • Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure • Implementation of Construction Access and Parking Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> • Anticipated peak daily vehicle movements to C1 • Development of Vehicle Management Plans • Access arrangements for C1 • Communication and training to be undertaken

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Out of hour works that could disrupt sensitive receivers including: <ul style="list-style-type: none"> Deliveries of plant and equipment 	12 (moderate)	Direct: <ul style="list-style-type: none"> Out of hour deliveries may be unloaded within existing acoustic sheds and in the mechanical workshop only Impacted sensitive receivers to be notified of any OOH deliveries The OOHW and Construction Fatigue Protocol to be implemented Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan 	6 (minor)	Appendix B1 Traffic and Access Management Procedure: <ul style="list-style-type: none"> Section 2.2 Road occupancy licenses Section 2.6 Communication and training Appendix B3 Noise and Vibration Preliminary Sub-plan: <ul style="list-style-type: none"> Appendix C OOHW and Construction Fatigue Protocol Appendix F CNVIA preliminary construction including commencement activities Community Communication Strategy
		Parking in local streets	12 (moderate)	Direct: <ul style="list-style-type: none"> Parking is available on site for workforce, staff and visitors All on site personnel would undergo a site induction and ongoing toolbox talks that detail parking and transport management measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure. Implementation of Construction Parking and Access Strategy. 	7 (minor)	Appendix B1 Traffic and Access Management Procedure: <ul style="list-style-type: none"> Section 2.6 Communication and training Construction Parking and Access Strategy
		Vehicles using local roads	12 (moderate)	Direct: <ul style="list-style-type: none"> All construction traffic will use the most direct route to the closest arterial and motorway network to minimise impacts on local roads. No access to C1 ancillary facility from Flora Street. Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Access arrangements for C1 Communication and training which would be undertaken

Table 2 Extract from A2 Aspects and Impacts Register for C2 Rockdale Depot construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<ul style="list-style-type: none"> Light vehicles entering site: <ul style="list-style-type: none"> Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 30 Workforce, staff and visitors vehicles Delivery of small-scale construction materials in vans Heavy vehicles entering site: <ul style="list-style-type: none"> Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 40 Delivery of plant and equipment on semi-trailers, some oversized Delivery of construction materials on flatbed trucks Delivery of concrete and shotcrete via concrete agitator Delivery and removal of portable buildings Fuel tankers distributing fuel and refilling at designated refuelling area Importing clean material to build pads, haul roads and laydown areas Other: <ul style="list-style-type: none"> Street sweeper routinely maintaining West Botany Street Special purpose trucks servicing waste skips and front-loading bins 	Increased vehicle movements into construction ancillary facility	12 (moderate)	Direct: <ul style="list-style-type: none"> The preliminary construction and commencement activities undertaken at C2 will not include activities that impact the operation of the road network Spoil haulage will not be undertaken during preliminary construction including commencement activities Access to C2 will be via the existing access point from West Botany Street (shared with existing depot): <ul style="list-style-type: none"> Access to site is from left hand lane when travelling in south bound lane Egress from site is left out of site into the south bound lane No access via Bay Street All on site personnel would undergo a site induction and ongoing toolbox talks that will detail traffic and access management measures Vehicle Management Plan will be distributed to all subcontractors who need to attend site Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Anticipated peak daily vehicle movements to C2 Development of Vehicle Management Plans Outline of access/egress to C2 Communication and training which will be undertaken CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.5 Selection and management of subcontractors Section 3.6 Competence, training and awareness Construction Parking and Access Strategy
		<ul style="list-style-type: none"> Other: <ul style="list-style-type: none"> Street sweeper routinely maintaining West Botany Street Special purpose trucks servicing waste skips and front-loading bins 	Congestion at shared access point with TfNSW depot	12 (moderate)	Direct: <ul style="list-style-type: none"> Consultation with adjacent stakeholders will be undertaken in accordance with Community Consultation Strategy Access to depot to remain available to stakeholders Where works temporarily restrict access, stakeholders will be engaged to determine access arrangements Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy Implementation of management measures outlined in the Community Communication Strategy 	6 (minor)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
	<ul style="list-style-type: none"> Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within construction ancillary facility Traffic control facilitating the removal of overhead powerlines at entrance to C2 construction ancillary facility 	<p>Out of hour works that could disrupt sensitive receivers including:</p> <ul style="list-style-type: none"> Deliveries of plant and equipment Relocation of overhead powerlines 	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Out of hour deliveries are to be unloaded during standard construction hours to avoid disruption to sensitive receivers Sensitive receivers to be notified of any OOH deliveries or works Where possible, removal of overhead powerlines will be removed during standard construction hours <ul style="list-style-type: none"> Where this is not permitted under a ROL, the OOHW and Construction Fatigue Protocol will be implemented (Appendix C of the Noise and Vibration Preliminary CEMP Sub-plan) Mitigation measures will follow those outlined in the CNVIA for Preliminary construction including commencement activities <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure:</p> <ul style="list-style-type: none"> Section 2.2 Road occupancy licenses Section 2.6 Communication and training <p>Appendix B3 Noise and Vibration Preliminary Sub-plan:</p> <ul style="list-style-type: none"> Appendix C OOHW and Construction Fatigue Protocol Appendix F CNVIA preliminary construction including commencement activities <p>Community Communication Strategy</p>
	Parking in local streets	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Parking on site would be available for workforce, staff and visitors Parking at C2 ancillary construction facility would be nearby and would be utilised by workforce, staff and visitors if additional spaces are required All on site personnel would undergo a site induction and ongoing toolbox talks that will detail parking and transport management measures <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure:</p> <ul style="list-style-type: none"> Section 2.6 Communication and training <p>Construction Parking and Access Strategy</p>	
	Vehicles using local roads	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> All construction traffic will use the most direct route to the closest arterial and motorway network to minimise impacts on local roads No access to C2 ancillary construction facility from Bay Street. <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	<p>Appendix B1 Traffic and Access Management Procedure which includes:</p> <ul style="list-style-type: none"> Outline of access rules to C2 Communication and training which will be undertaken 	

Table 3 Extract from A2 Aspects and Impacts Register for C3 President Avenue (Bicentennial Park and MOC3) construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Traffic and Access	<ul style="list-style-type: none"> Light vehicles entering site: <ul style="list-style-type: none"> Anticipated peak daily light vehicle movements (i.e. movement of vehicle in and out of site): 52 Workforce, staff and visitors vehicles Delivery of small-scale construction materials in vans Heavy vehicles entering site: <ul style="list-style-type: none"> Anticipated peak daily heavy vehicle movements (i.e. movement of vehicle in and out of site): 80 Delivery of plant and equipment on semi-trailers, some oversized 	Increased vehicle movements into construction ancillary facility	12 (moderate)	Direct: <ul style="list-style-type: none"> The preliminary construction and commencement activities undertaken at C3 will not include activities that impact the operation of the road network Spoil haulage will not be undertaken during preliminary construction including commencement activities Access to C3 would be via the existing access points on West Botany Street (Access arrangements and direction within procedure). All on site personnel would undergo a site induction and ongoing toolbox talks that will detail traffic and access management measures Vehicle Management Plan will be distributed to all subcontractors who need to attend site Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Parking and Access Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Anticipated peak daily vehicle movements to C3 Development of Vehicle Management Plans Outline of site access requirements Communication and training which will be undertaken CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.4 Resources, responsibilities and authority Section 3.5 Selection and management of subcontractors Section 3.6 Competence, training and awareness Construction Parking and Access Strategy
	<ul style="list-style-type: none"> Delivery of construction materials on flatbed trucks Delivery of concrete and shotcrete via concrete agitator Delivery and removal of portable buildings Fuel tankers distributing fuel and refilling at designated refuelling area Other: <ul style="list-style-type: none"> Street sweeper routinely maintaining internal haul roads and Marsh Street Special purpose trucks servicing waste skips and front-loading bins Vacuum trucks conducting service investigation, cleaning of drains, pipes and services within construction ancillary facility Traffic control facilitating the removal of overhead powerlines outside MOC3 construction ancillary facility, sewer relocation and street trees which limit access into site 	Out of hour works that could disrupt sensitive receivers including: <ul style="list-style-type: none"> Deliveries of plant and equipment Removal of overhead powerlines 	12 (moderate)	Direct: <ul style="list-style-type: none"> Out of hour deliveries would be unloaded during standard construction hours to avoid disruption to sensitive receivers Sensitive receivers to be notified of any OOH deliveries or works Where possible, overhead powerlines will be removed during standard construction hours <ul style="list-style-type: none"> Where this is not permitted under a ROL, the OOHW and Construction Fatigue Protocol will be implemented (Appendix C of the Noise and Vibration Preliminary CEMP Sub-plan) Mitigation measures will follow those outlined in the CNVIA for Preliminary construction including commencement activities Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of management measures outlined in the Appendix B3 Noise and Vibration Preliminary Sub-plan 	6 (minor)	Appendix B1 Traffic and Access Management Procedure: <ul style="list-style-type: none"> Section 2.2 Road occupancy licenses Section 2.6 Communication and training Appendix B3 Noise and Vibration Preliminary Sub-plan: <ul style="list-style-type: none"> Appendix C OOHW and Construction Fatigue Protocol Appendix F CNVIA preliminary construction including commencement activities Community Communication Strategy
	<ul style="list-style-type: none"> Traffic control facilitating the removal of overhead powerlines outside MOC3 construction ancillary facility, sewer relocation and street trees which limit access into site 	Parking in local streets	12 (moderate)	Direct: <ul style="list-style-type: none"> Parking on site would be available for workforce, staff and visitors All on site personnel would undergo a site induction and ongoing toolbox talks that will detail parking and transport management measures Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure. Implementation of Construction Parking and Access Strategy. 	6 (minor)	Appendix B1 Traffic and Access Management Procedure: <ul style="list-style-type: none"> Section 2.6 Communication and training Construction Parking and Access Strategy

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Vehicles using local roads	12 (moderate)	Direct: <ul style="list-style-type: none"> All construction traffic would use the most direct route to the closest arterial and motorway network to minimise impacts on local roads Access to C3 construction ancillary facility from West Botany Road Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure Implementation of Construction Access and Parking Strategy 	6 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Outline of access requirements Communication and training which will be undertaken Construction Parking and Access Strategy
		Traffic disruption	12 (moderate)	Direct: <ul style="list-style-type: none"> Traffic control will be carried out in accordance with Traffic Guidance Schemes Programming of works to minimise the duration of works Community liaison and notification All complaints will be handled in accordance with the Complaints Management System Where required, pedestrians will be directed around work areas on alternative footpaths using signage, variable message boards or traffic controllers Indirect: <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B1 Traffic and Access Management Procedure 	7 (minor)	Appendix B1 Traffic and Access Management Procedure which includes: <ul style="list-style-type: none"> Mitigation Measures for Vehicle Movements Communication and training which will be undertaken

1.3 Scope

To facilitate delivery of the Project, the CGU has elected to stage construction of the Project. A Staging Report (M6S1-CGU-NWW-ENPE-PLN-000401) has been prepared and details the strategy for staging and the compliance requirements for each of the two construction stages:

- Stage 1 – Preliminary Construction; and
- Stage 2 - Construction.

Activities which would impact the operation of the road network (such as bulk excavation, spoil haulage and traffic staging for road upgrade works) will not commence in Stage 1 (preliminary construction). Based on the limited scope of works within Stage 1 (primarily site establishment and enabling works), few impacts to the local community and road users are anticipated. This Procedure addresses residual impacts that may occur during preliminary construction including commencement activities.

Conditions relevant to this Management Procedure are outlined in Table 4 and Table 5 below.

Table 4 Relevant Ministers Conditions of Approval

CoA	Condition text	Where this addressed
E117	Safe pedestrian and cyclist access must be maintained around work sites during construction. In circumstances where pedestrian and cyclist access is restricted or removed due to construction activities, an alternate route which complies with the relevant standards must be provided and signposted prior to the restriction or removal of the relevant pedestrian and cyclist access.	Section 1.7 Section 1.6 Section 2.0 Section 2.4 Section 2.5
E118	During construction, where bus stops are required to be temporarily closed or relocated, such closure must not occur until relocated bus stops are functioning, have similar capacity and amenity and are relocated within a 400 metre walking distance of the existing bus stop. Closures and relocation of bus stops during construction must be undertaken in consultation with Transport for NSW and relevant council(s). Wayfinding signage must be provided directing commuters to adjacent or relocated bus stops. Footpaths and (where required) road crossing facilities must be provided to any relocated bus stops such that accessibility and safety standards are met.	No bus stops will be relocated or temporarily closed during preliminary construction activities.
E119	Prior to the commencement of operation, all bus stops temporarily closed or relocated must be reinstated in a manner that provides equal or improved capacity, amenity and accessibility (including footpaths and road crossings) in consultation with Transport for NSW and relevant council(s).	No bus stops will be relocated or temporarily closed during preliminary construction activities.
E120	Access to all utilities and properties must be maintained during construction, where practicable, unless otherwise agreed with the relevant utility owner, landowner or occupier.	Section 1.6 Section 2.4
E121	Any property access physically affected by the CSSI must be reinstated to at least an equivalent standard, unless otherwise agreed by the landowner or occupier.	Section 2.4
E122	Access to and from the Rockdale construction ancillary facility (C2) by heavy vehicles must only be via West Botany Street, unless otherwise approved by the Planning Secretary.	Section 1.6, Figure 2
E129	Construction vehicles (including staff vehicles) associated with the CSSI must be managed to minimise parking, idling and queuing on public roads.	Appendix A4 Site Establishment Management Plan, Table 6 Section 2.0 Parking: Section 1.5 and Section 2.3 Access: Section 1.6 and Section 2.4 Construction Parking and Access Strategy

CoA	Condition text	Where this addressed
E127	Before any local road is used by a heavy vehicle for the purposes of the CSSI, a Road Dilapidation Report must be prepared for the road. A copy of the Road Dilapidation Report must be provided to the relevant council within three (3) weeks of completion of the survey and no later than one (1) month prior to the road being used by heavy vehicles associated with the CSSI.	Refer to Section 2.1 Communication Strategy
E128	(a) If damage to roads occurs as a result of the CSSI, the Proponent must either (at the relevant road authority's discretion): compensate the relevant road authority for the damage so caused; or (b) rectify the damage to restore the road to at least the condition it was in pre-works as identified in the Road Dilapidation Report(s).	Refer to Section 2.1 Communication Strategy
E130	A Construction Parking and Access Strategy must be prepared and implemented to identify and mitigate impacts resulting from on- and off-street parking changes during construction. The Strategy must include, but not necessarily be limited to: (a) confirmation and timing of the removal of on- and off-street parking associated with construction (including during site establishment when access to off-street parking at construction ancillary facilities has yet to be established); (b) parking accumulation surveys (consistent with Austroads requirements) of parking spaces to be removed to determine current demand during peak, off-peak, school drop off and pickup, and weekend periods; (c) consultation with affected stakeholders, including property occupants with driveway access along President Avenue between Civic Avenue and Princes Highway, utilising existing on- and off-street parking stock which will be impacted as a result of construction and impacted by the introduction of temporary clearways on President Avenue; (d) review of the impacts of changes to on- and off-street parking stock taking into consideration outcomes of consultation with affected stakeholders; (e) identification of mitigation measures to manage impacts to stakeholders as a result of on- and off-street parking changes including, but not necessarily limited to, staged removal and replacement of parking and provision of alternative parking arrangements; (f) strategies to address shortfalls in car parking spaces at individual construction ancillary facilities and disincentivising construction personnel from parking on the street near work sites instead of further afield at a different construction ancillary facility where car spaces are available, including managed staff parking arrangements and working with relevant council(s) to introduce parking restrictions adjacent to work sites and compounds; (g) review of the provision of a shuttle bus service(s) to transport workers to site(s) and details of the shuttle bus service(s), including service timing and frequency, where; reasonable and feasible (h) mechanisms for monitoring, over appropriate intervals, to determine the effectiveness of implemented mitigation measures;	Construction Parking and Access Strategy

CoA	Condition text	Where this addressed
	(i) provision of contingency measures should the results of mitigation monitoring indicate implemented measures are ineffective; and (j) provision of reporting of monitoring results to the Planning Secretary and relevant council(s) at three (3) monthly intervals. The Construction Parking and Access Strategy must be submitted to the Planning Secretary for information prior to the commencement of any works that impact parking.	
E131	During construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access, and parking arrangements must be developed in consultation with affected businesses and implemented prior to the disruption. Adequate signage and directions to businesses must be provided prior to, and for the duration of, any disruption.	Section 1.6 Section 2.0 Section 2.4

Table 5 Relevant Environmental Mitigation Measures

EMM	Condition text	Where this addressed
TT1	A Construction Traffic and Access Management Plan (CTAMP) will be prepared as part of the Construction Environmental Management Plan. The CTAMP will detail processes to minimise delays and disruptions and identify and respond to changes in road safety as a result of project construction works. The CTAMP will be prepared in accordance with applicable guidelines and relevant standards, guides and manuals. The CTAMP will: <ul style="list-style-type: none"> - Develop project staging plans in consultation with relevant traffic and transport stakeholders, which would include measures to manage impacts during special events (such as sporting events) - Minimise the number of changes to the road users' travel paths and, where changes are required, implement a high standard of traffic controls which effectively warn, inform and guide - Comprehensively communicate changes in traffic conditions on roads or paths to emergency services, public transport operators, other road user groups and other affected stakeholders 	Section 1.1
TT3	During construction, work with the TMC to observe traffic flows and incidents from CCTV footage and where reasonable and feasible, modify sites and activities to address issues identified by TMC.	Section 2.1
TT5	Minimise local road closures and maintain adequate property access to the road network. Property owners would be consulted and agree to any changes to access.	Section 1.6 Section 2.4

EMM	Condition text	Where this addressed
TT7	Prior to impacting roads, a road dilapidation report will be prepared, in consultation with relevant council(s) and road owners, identifying existing conditions of local roads and mechanisms to repair damage to the road network caused by heavy vehicle movements associated with the project.	Refer to Section 2.1 Communication Strategy

1.4 Anticipated Peak Daily Vehicle Movements

Table 6 below outlines the anticipated peak daily vehicle movements for each construction ancillary facility during preliminary construction including commencement activities. The types of vehicles which will be used include:

- Heavy Vehicles:
 - Semi-trailers: delivery of portable buildings.
 - Flat-bed trucks: delivery of construction materials, plant and equipment.
 - Bogies: removal of demolition waste, removal of material associated with preliminary construction and commencement activities (no bulk excavation at Stage 1).
 - Truck and dog: importing clean fill material to construct piling pads and leveling out some areas on site.
 - Concrete agitators: Concrete delivery for construction of hardstands, haul roads and other activities if required
 - Special purpose trucks: delivery, removal and servicing of skip bins.
 - Special purpose vehicles: small tankers distributing fuel to plant and equipment, street sweepers, vacuum trucks.
 - Oversized trucks: delivery of plant and equipment.
- Light Vehicles:
 - Worker and visitor vehicles.
 - Vans: delivery of small-scale construction materials.

Table 6 Anticipated Peak Daily Vehicle Movements

Support Site	Location	Road classification	Anticipated number of daily movements (peak)	
			Light	Heavy
C1 Arncliffe construction ancillary facility	13 Marsh Street, Arncliffe	State Road	68	30
C2 Rockdale construction ancillary facility	400 West Botany Street, Arncliffe	Regional Road	30	40
C3 President Avenue construction ancillary facility	468 West Botany Street, Rockdale 112-132 President Avenue, Rockdale	Regional Road State Road	52	80
C4 & C5 Active Transport Corridor	No works associated with this site will be undertaken during Stage 1 Preliminary Construction			
C6 Princes Highway construction ancillary facility	No works associated with this site will be undertaken during Stage 1 Preliminary Construction			

Work hours for access to the construction ancillary facilities during preliminary construction including commencement activities are outlined in Table 7.

Table 7 Work hours and expected peak travel periods

Activity	Standard Construction Hours	Expected peak travel periods
CEMP Preliminary construction and commencement activities	7am to 6pm Monday to Friday 8am to 6pm* Saturday (no high impact works after 1pm) No works on Sundays or Public Holidays	6am – 7am and 5pm to 7pm Monday to Friday 7am to 8am and 6pm* Saturdays

*in accordance with Condition of Approval E63

1.5 Parking Impacts

Significant impacts to the availability of parking during preliminary construction including commencement activities are not anticipated in the vicinity of the C1 Arncliffe construction ancillary facility and C2 Rockdale construction ancillary facility, due to the availability of onsite parking. However, the establishment of the C3 President Avenue construction ancillary facility, includes occupation of a site which includes 65 public parking spaces. The Construction Access and Parking Strategy (CPAS) will be developed and implemented for this change in parking.

1.6 Access Impacts

Access to construction ancillary facilities will be via existing laybacks and access points during preliminary construction including commencement activities, however some works may commence to facilitate the construction of new access points. The Arncliffe construction ancillary facility (C1) will only be accessed via Marsh Street, with no access from Flora Street (refer to Figure 1). The Rockdale construction ancillary facility (C2) will be accessed via West Botany Street, via a shared driveway with the existing TfNSW Depot (refer to Figure 2). The President Avenue construction ancillary facility (C3), including the MOC3 site, will be accessed from West Botany Street. Access points are illustrated in Figure 3. Management and mitigation measures related to minimising idling and queuing on public roads are outlined in Section 2.4.

Access to properties (i.e. residential, businesses etc.) and utilities will be maintained where possible. Agreement with properties (landowners or occupiers) will be obtained if access cannot be maintained, and where restricting access is unavoidable, disruption should be minimised. Any proposed closures will be consulted on prior to implementation through measures outlined in the Communication Strategy and in accordance with CoA E131, E120 and G36. The Project will provide safe alternatives with adequate signage and directions to alternative arrangements. Where applicable, alternative access to utilities will be agreed upon with the utility owner prior to works commencing.



Figure 1 Access to C1 Arncliffe construction ancillary facility



Figure 2 Access to C2 Rockdale Depot construction ancillary facility

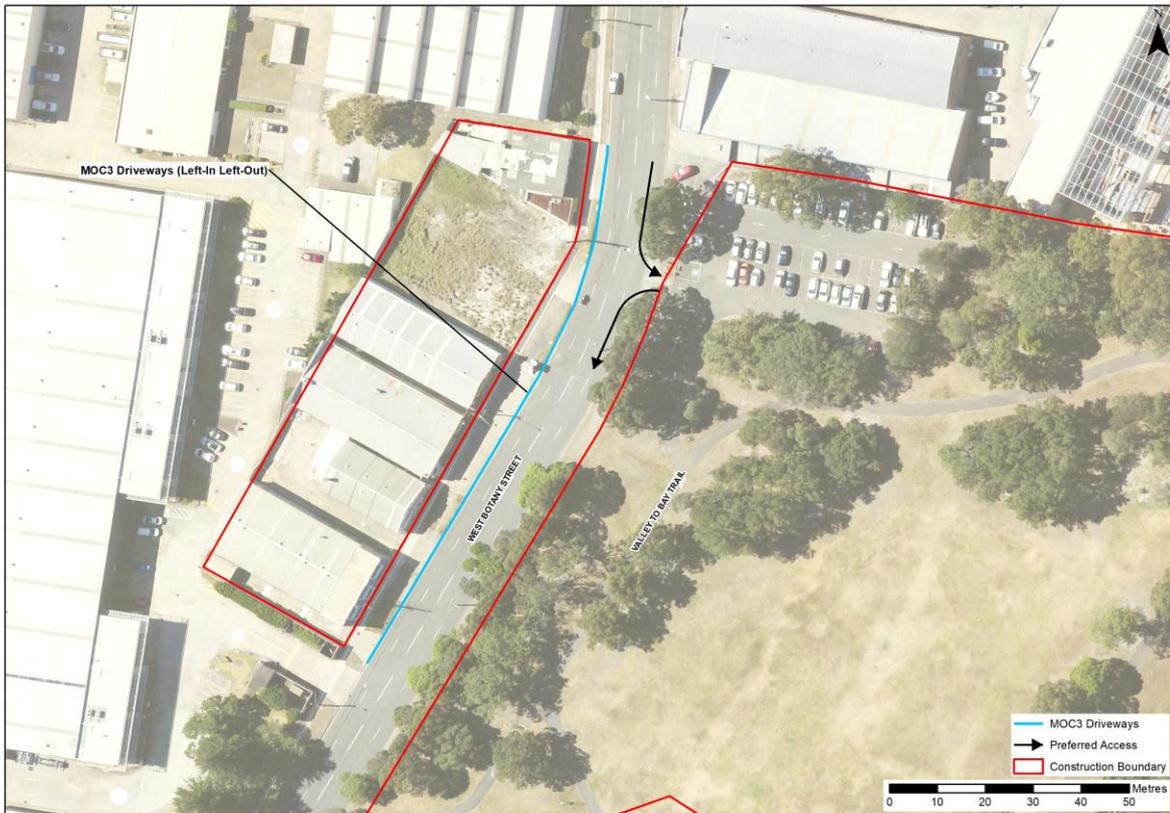


Figure 3 Access to C3 Rockdale Bicentennial Park and MOC3

1.7 Impacts to pedestrians, cyclists and bus stops

There is the potential for impacts to pedestrians (including disabled persons) and cyclists as a result of pedestrian footways and cycle paths being diverted during activities. Pedestrian, cyclists and bus stop impacts will also be identified in the Site-Specific Construction Traffic and Transport Management Plan, which is a requirement under the TfNSW Safety Management System. This Plan is developed in accordance with relevant Standards and Codes, and in consultation with the Customer Journey Planning (CJP), TfNSW, relevant Councils, emergency services, transport operators and any other relevant Authorities.

During preliminary construction including commencement activities, no impacts are anticipated in the vicinity of the Arncliffe construction ancillary facility (C1). Pedestrians will be managed at entrances to the Rockdale construction ancillary facility (C2) to facilitate the delivery of plant and equipment to site. Access to recreational facilities adjacent to the President Ave construction ancillary facility (C3) will be maintained and pedestrians and cyclists will be managed at entrances to the construction ancillary facility (C3) including MOC3. During Stage 2 Construction, the pedestrian footbridge within C3 will be removed. As a result, during Stage 1 Preliminary Construction, a pedestrian footpath will be constructed along the northern boundary of the C3 to provide access from West Botany Street through to Brighton-Le-Sands Public School.

Access to existing recreational facilities at Bicentennial Park will be maintained during preliminary construction.

2 Management and Mitigation Measures

Under TfNSW Safety Management System, CGU will prepare Site Specific Construction Traffic and Transport Management Plans. The purpose of this document is to detail the proposed changes for each discrete construction area that interfaces with the road and pedestrian footpaths. These Plan/s will remain in place over the duration of the Project and will be updated as the construction ancillary facilities evolve, and new stages of work commence and are completed. The Plans may include:

- Work location map and extents of work zone;
- Existing and proposed speed limits for justification;
- Safety barrier positioning and type (including crash cushioning);
- Design drawings, including design speed and certification;
- Impacts on traffic, pedestrian, cyclists, property access, public transport, emergency service vehicles access, parking etc.
- Pavement marking, colour and type;
- Signage details including location, type, size, design;
- Details of existing signs to be maintained, removed relocated, covered and altered (along with new signs which may need to be implemented);
- Traffic signal changes and traffic control signal drawings; and
- Public notifications and communication strategy (in line with Project Communication Strategy), including register of stakeholder consultation.

2.1 Vehicle movements

Management and mitigation measures related to vehicle movements include:

- No heavy vehicles are anticipated to use local roads during preliminary construction activities:
 - If the use of local roads is unavoidable, dilapidation surveys will be completed the local roads which will be used by heavy vehicles (associated with preliminary construction activities).
 - A Road Dilapidation Report will be submitted to the relevant council within 3 weeks of the survey being completed and 1 month prior to the road being used by heavy vehicles.
 - This work will be executed through the Construction Area Plan and coordinated between Construction Project Manager and the Traffic Project Manager.
 - Where damage to a local road by the Project has been identified, the damage will be investigated and rectified to restore the condition the road was in pre-works as identified in the Road Dilapidation Reports, or compensation issued to the relevant road authority.
- Development and implementation of Vehicle Movement Plans (VMP) for implementation on site, which would include:
 - Swept path analysis;
 - Speed limits;
 - Delineation between heavy and light vehicles; and
 - Separation of plant/vehicles and personnel

- Development and implementation of Traffic Guidance Schemes (TGS) (formerly Traffic Control Plans (TCP)), for implementation where sites have access onto and from arterial roads, which would include
 - Outcomes of swept path analysis;
 - Speed limits of public roads;
 - Contact details.
 - Access routes to compound; and
 - Required signage.
- All vehicles must give way to pedestrians and users of footpaths.
- Where reasonable and feasible, sites and preliminary construction activities will be modified and/or adapted to address issues identified by Customer Journey Planning (CJP) through monitoring of CCTV Footage in consultation with the Transport Management Centre (TMC).

2.2 Road Occupancy Licenses

CGU will obtain necessary approvals prior to occupying or conducting works in the road or the road reserve. A Road Occupancy Licence (ROL) authorises the occupation of a portion of the road that would normally be available to traffic and will be obtained for any work which:

- Slows, stops or otherwise delays or affects the normal flow of traffic;
- Diverts traffic from its normal course along the road, including lane closures and detours; and
- Occupies any portion of the road related area, including the footpath that is normally available for vehicular, pedestrian or bicycle movement.

2.3 Parking and Idling

Management and mitigation measures related to parking and idling include:

- Providing onsite parking
- Sub-contractors to provide employee transport strategies as part of the procurement process;
- Communication of parking restrictions to workers;
- Vehicle idling will be limited to a total of 3 minutes within a sixty-minute period.

Detailed management and mitigation measures related to parking are also outlined in Section 5.4 and Section 6 of the CPAS which has been prepared and will be submitted in accordance to E130 prior to the commencement of Stage 1 works.

2.4 Access

Management and mitigation measures related to access include:

- Vehicular and pedestrian access to properties would be maintained throughout activities;
- All vehicles are to access construction ancillary facilities via existing access points (refer to Figure 1, Figure 2 and Figure 3);
- Where reasonable and feasible, access to properties and utilities must be maintained;
 - Where access to properties and utilities cannot be maintained, disruption must be minimised where possible,

- Alternative pedestrian and vehicle access must be developed in consultation with the property owner in accordance with the Communication Strategy,
- Alternative access for the asset owner will be undertaken in accordance with the Communication Strategy prior to works commencing,
- Adequate signage and directions must be displayed prior to the disruption occurring,
- Permanent reinstatement of access must be to the equivalent standard or as agreed with the property owner.
- Access points will be stabilised to minimise loose material from being tracked onto public roads:
 - Controls for minimising tracking onto public road must be carried out in accordance with Appendix B7 Air Quality and Odour CEMP Sub-plan and the Appendix B4 Soil and Surface Water Management Procedure.
- Queuing and congestion on public roads due to increased vehicles movements related to the Project will be minimised through:
 - Coordinating deliveries,
 - Maximising available space within compounds for delivery vehicles,
 - Implementing traffic control where required, and
 - Finalising design for construction access points and signalised intersections for implementation during Stage 2 Construction.

2.5 Changes to pedestrian footpaths, cyclists and bus stops

Management and mitigation measures related to changes in pedestrian footpath and cycling routes and bus stops include:

- Implementation of the Construction Site Specific Traffic and Transport Management Plan, which is developed in accordance with relevant Standards and Codes;
- Access to recreational facilities will be maintained;
- Access between West Botany and Brighton-Le-Sands School will be maintained;
- Alternate pedestrian and cycle arrangements would be implemented where necessary and would aim to minimise inconvenience to users with the primary goal of maintaining clear space between users, vehicular traffic and active work areas; and
- There are no anticipated impacts to bus stop location or operations during preliminary construction including commencement activities.

2.6 Communication and training

Management and mitigation measures related to communication and training include:

- All project personnel will be required to complete a project induction which includes information on the management and mitigation measures of this procedure including information on vehicle routes, parking locations, acceptable delivery hours specific to the site and other relevant practices (i.e. minimising the use of engine brakes, and no extended periods of engine idling);
- Sub-contractor packs will include information of management and mitigation measures outlined in Section 2;
- Adequate signage and directions to businesses must be provided prior to, and for the duration of, any disruption;

- Adequate signage and visual warning of any proposed traffic access changes will be provided, including identification of entrance and exit points and amendments to pedestrian and cyclist access; and
- Ongoing reminders will be communicated through pre-starts and toolboxes, including feedback from residents (where relevant).



Appendix B2

Flora and Fauna Management Procedure

M6 Stage 1: Preliminary construction including commencement activities

October 2021

M6S1-CGU-NWW-ENPE-PRO-000419

Rev 02

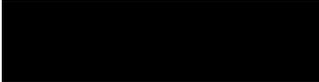
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Document control

Approval and authorisation

Title	M6 Stage 1 Flora and Fauna Management Procedure
Endorsed by Environment Representative	
Signed	
Dated	26/10/2021
Approved on behalf of NSW Roads and Maritime Services by	
Signed	
Dated	
Approved on behalf of CGU by	
Signed	
Dated	26/10/2021

Document control

Revision	Date	Description	Approval
A.01	15/07/2021	Initial TfNSW Review	
A.02	16/08/2021	Updated to reflect TfNSW comments and issue for consultation	
00	14/09/2021	Issued	
01	20/10/2021	Updated as per DPIE comments	
02	26/10/2021	Updated as per DPIE comments	

Distribution of controlled copies

This Procedure as part of the CEMP for preliminary construction including commencement activities is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the Project website.

The document is uncontrolled when printed. One controlled hard copy of the Procedure as part of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project Office.

Copy number	Issued to	Version

1 Introduction

1.1 Context

This Flora and Fauna Management Procedure forms part of the Construction Environmental Management Plan for preliminary construction including commencement activities (CEMP) of the M6 Stage 1 Motorway (the Project). The full scope of activities that will occur under the CEMP for preliminary construction are outlined in Section 1.1 of the CEMP and Staging Report.

An Aspect and Impacts Register was developed (refer to Appendix A2 of the CEMP) and identified minor residual flora and fauna risks and impacts associated with preliminary construction including commencement activities. This Procedure has been developed to address and manage the minor residual risks and impacts.

1.2 Impacts and Risks

Table 1, Table 2 and Table 3 contains an extract from the Aspects and Impacts Register, related to Flora and Fauna during preliminary construction including commencement activities.

Table 1 Extract from Appendix A2 Aspect and Impacts Register for C1 Arncliffe construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Flora and Fauna	<ul style="list-style-type: none"> Inspection and maintenance of erosion and sediment controls and frog fence on boundary of C1 construction ancillary facility Installation of hoarding and frog fence in Lot 2E (adjacent to M8 Motorway Operations Centre) Activities being undertaken within the existing C1 construction ancillary facility 	<ul style="list-style-type: none"> Unexpected encounter of Green and Golden Bell Frog (GGBF) while inspecting and maintaining erosion and sediment controls and frog fence Unexpected encounter of GGBF while installing hoarding and frog fence in Lot 2E Unexpected encounter of GGBF while undertaking activities within C1 construction ancillary facility 	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> All Stage 1 Preliminary Construction activities are to take place within C1 boundary A No-Go Zone will be established outside the C1 boundary. Entry to No-Go Zone will be managed through a permit system: Boundary controls including frog fence are to be inspected and maintained Frog fence must be installed in accordance with the design outlined in the Green and Golden Bell Frog Plan of Management If a GGBF is encountered, the GGBF Stop Works Procedure must be implemented immediately Workforce and staff members to be educated on GGBF, the risks posed to this species and control measures to be implemented on site through inductions and information posters Frog handling training (by Project Herpetologist) will be undertaken with workforce and staff who undertake frog fence inspection and maintenance activities <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B2 Flora and Fauna Management Procedure. Implementation of Green and Golden Bell Frog Plan of Management. 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure which contains:</p> <ul style="list-style-type: none"> GGBF Stop Works Procedure Appendix E Unexpected flora or fauna finds procedure <p>CEMP Section 3.6 Competence, training and awareness:</p> <ul style="list-style-type: none"> Inductions Frog handling training Information posters (SEPs) <p>Green and Golden Bell Frog Plan of Management</p>
		Encountering fauna within C1 (including injured fauna)	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> If fauna is encountered, the Fauna Handling Procedure will be implemented. Boundary controls including frog exclusion fence, hoarding and noise walls are to be inspected, maintained and any gaps rectified immediately. <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B2 Flora and Fauna Management Procedure. 	3 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure which contains:</p> <ul style="list-style-type: none"> Fauna Handling Procedure

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		<ul style="list-style-type: none"> Spread of weeds Spread of pathogens including Chytrid or Phytophthora fungus 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> The application of pesticides will be modified, reduced or controlled during high or unfavourable wind conditions where wind can carry pesticides beyond the C1 project boundary An Environmental Work Method Statement will be developed on the application of pesticides and activity carried out in accordance with this EWMS Hygiene practices will be enforced before entering No-Go Zone to prevent the risk of spreading Chytrid and Phytophthora Fungus Prior to entry onsite plant and equipment need to be free of soil, foliage/leaves and mud. Declare if plant and equipment had previously worked in areas where Myrtle Rusk and Phytophthora is present, and provide evidence that all plant, equipment and vehicles have been washed down, where required <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the Appendix B7 Air Quality and Odour CEMP Sub-plan Implementation of management measures outlined in the Weed Management Procedure found in Appendix B2 Flora and Fauna Management Procedure Implementation of management measures outlined in the EWMS 	6 (Minor)	<p>Appendix B7 Air Quality and Odour CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures (Table 9) Section 7 Compliance management Appendix A Air Quality Monitoring Program <p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure Appendix C Weed Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)
		Lighting	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> Avoid or minimise artificial light impacts on biodiversity within and immediately adjacent to the project site. <p>Indirect:</p> <ul style="list-style-type: none"> Implementation of management measures outlined in the CEMP – Appendix A4 Site Establishment Management Plan 	3 (minor)	CEMP – Appendix A4 Site Establishment Management Plan

Table 2 Extract from Appendix A2 Aspect and Impacts Register for C2 Rockdale Depot construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Flora and Fauna	<ul style="list-style-type: none"> Removal of vegetation within construction ancillary facility (urban native and exotic cover) 	<ul style="list-style-type: none"> Clearing outside an approved area and/or the removal or pruning of tree/s not approved under Clearing and Grubbing Plan 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> No PCT and TECs are located within the C2 construction ancillary facility Clearing is to be undertaken in accordance with Guide 2 Exclusion Zones of Roads and Maritime's Biodiversity Guidelines Where feasible minimise native vegetation and habitat removal Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of any habitat trees (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place Clearly delineate the C2 construction ancillary boundary (survey) prior to clearing activities taking place in accordance with the Clearing and Grubbing Plan Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation Pre and Post Clearing checklist to be completed <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist
		<ul style="list-style-type: none"> Damage to vegetation (including) tree roots 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist

				<ul style="list-style-type: none"> ○ Details on stages of work ○ Working hours ○ Location of weed (if applicable E42) <ul style="list-style-type: none"> • Implement tree protection measures as identified by arborist (E146) • Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and any tree protection measure implemented • Pre-Clearing checklist to be completed to check controls are in place • Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation • If damage is identified in Post Clearing Checklist, arborist will be assigned to assess tree <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 		
		<ul style="list-style-type: none"> • Injury / encounter with fauna 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Pre-clearing surveys to be undertaken prior to the removal of any vegetation. • Habitat trees must be identified in accordance with the Approved Clearing and Grubbing Report and Permit to Clear Land and Vegetation • If fauna is encountered and/or injured, Fauna Handling Procedure will be implemented <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> • Appendix A Clearing and Grubbing Procedure • Appendix B Fauna Handling Procedure • Appendix E Unexpected flora or fauna finds procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> • Pre-clearing Survey under E43 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> • Pre-clearing checklist • Post clearing checklist
		<ul style="list-style-type: none"> • Spread of weed species • Spread of pathogens including Chytrid or Phytophthora fungus 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> • Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> ○ Location of habitat trees or threatened flora (Pre-Clearing Survey E42) ○ No-Go Zones (Safety, Heritage or Ecological) ○ Sensitive Areas ○ Noise Catchment Areas ○ Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) ○ Clearance boundary ○ Details on stages of work ○ Working hours ○ Location of weed (if applicable E42) 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> • Appendix A Clearing and Grubbing Procedure • Appendix C Weed Management Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> • Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> • Pre-clearing checklist • Post clearing checklist <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> • Section 6 Environmental Control Measures

				<ul style="list-style-type: none"> • Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and weeds identified within Permit • Weeds to be identified on site prior to clearing activities taking place • Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation • Pre and Post Clearing checklist to be completed by CGU Environmental Advisor to identify that weed were managed in accordance with Permit • Disposal of weeds it to occur in accordance with Waste CEMP Sub-plan (MMW6) • Hygiene practices will be enforced before entering No-Go Zone to prevent the risk of spreading Chytrid and Phytophthora Fungus • Prior to entry onsite plant and equipment need to be free of soil, foliage/leaves and mud. Declare if plant and equipment had previously worked in areas where Myrtle Rusk and Phytophthora is present, and provide evidence that all plant, equipment and vehicles have been washed down, where required <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure • Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 		
		<ul style="list-style-type: none"> • Lighting 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> • Avoid or minimise artificial light impacts on biodiversity within and immediately adjacent to the project site. <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the CEMP – Appendix A4 Site Establishment Management Plan 	3 (minor)	CEMP – Appendix A4 Site Establishment Management Plan

Table 3 Extract from Appendix A2 Aspects and Impacts Register for C3 Bicentennial Park (including MOC3) construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Flora and Fauna	<ul style="list-style-type: none"> Removal of vegetation within C3 (urban native and exotic cover) 	<ul style="list-style-type: none"> Clearing outside an approved area and/or the removal or pruning of tree/s not approved under Clearing and Grubbing Plan 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Clearly delineate exclusion zone of the PCT and TECs: <ul style="list-style-type: none"> PCT and TECs will not to be cleared during Stage 1 preliminary construction Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees or threatened flora (Pre-Clearing Survey E43) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) Clearance boundary Details on stages of work Working hours Location of weed (if applicable E42) Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place Clearly delineate the C3 construction ancillary facility boundary (survey) prior to clearing activities taking place in accordance with the Clearing and Grubbing Plan Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation Pre and Post Clearing checklist to be completed by CGU Environmental Advisor Clearing is to be undertaken in accordance with Guide 2 Exclusion Zones of Roads and Maritime's Biodiversity Guidelines Where feasible minimise native vegetation and habitat removal <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> Pre-clearing checklist Post clearing checklist <p>CEMP: preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan Appendix A Site Environmental Plan for C3
		<ul style="list-style-type: none"> Damage to vegetation (including) tree roots 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> Location of habitat trees or threatened flora (Pre-Clearing Survey) No-Go Zones (Safety, Heritage or Ecological) Sensitive Areas Noise Catchment Areas 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> Appendix A Clearing and Grubbing Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> Pre-clearing checklist

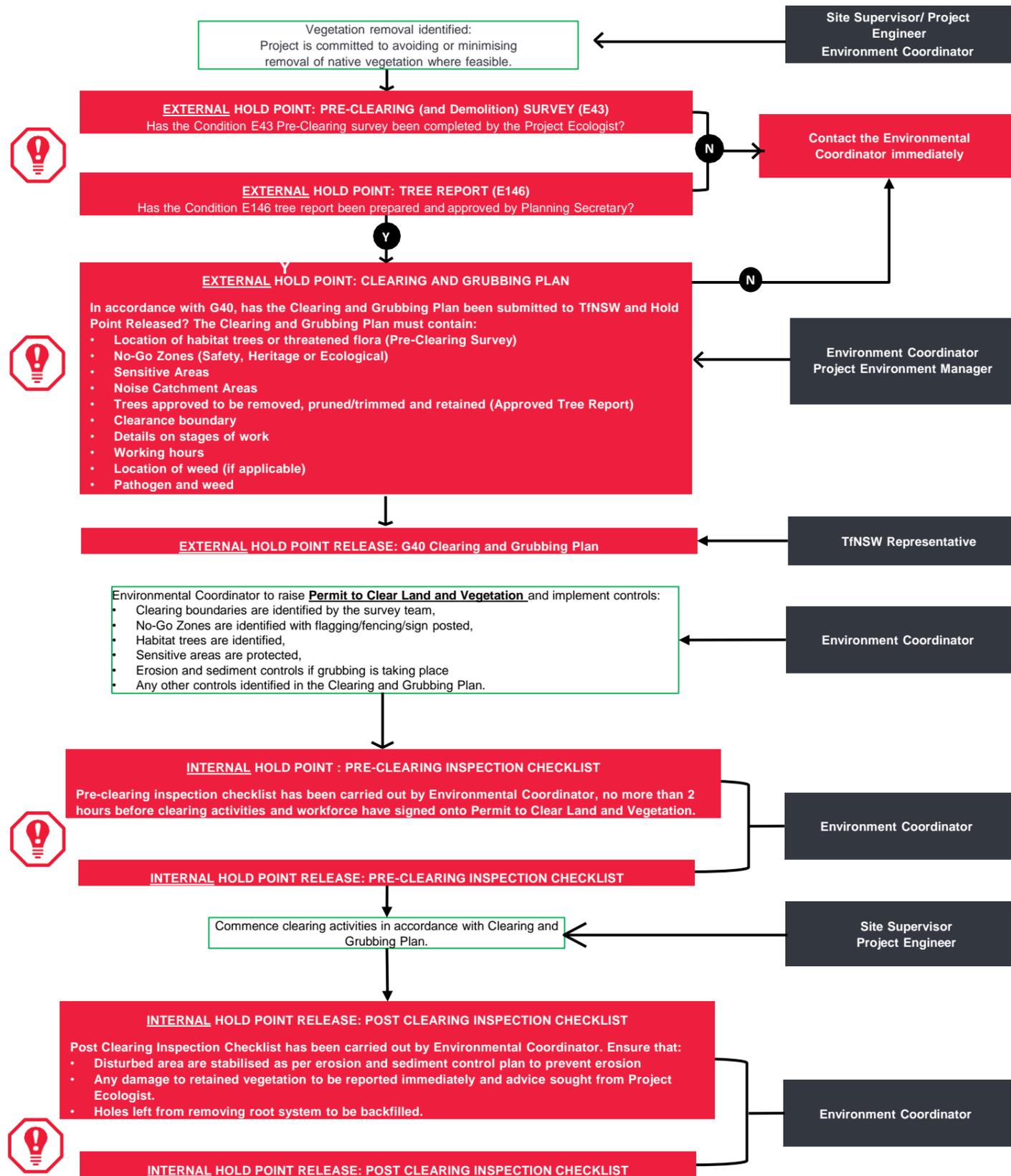
				<ul style="list-style-type: none"> ○ Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) ○ Clearance boundary ○ Details on stages of work ○ Working hours ○ Location of weed (if applicable E42) ● Implement tree protection measures as identified by arborist (E146) ● Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and any tree protection measure implemented ● Pre-Clearing checklist to be completed by CGU Environmental Advisor to check controls are in place ● Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation ● If damage is identified in Post Clearing Checklist, arborist will be assigned to assess tree <p>Indirect:</p> <ul style="list-style-type: none"> ● Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 		<ul style="list-style-type: none"> ● Post clearing checklist
		<ul style="list-style-type: none"> ● Injury / encounter with fauna 	9 (Moderate)	<p>Direct:</p> <ul style="list-style-type: none"> ● Pre-clearing surveys (E43) to be undertaken prior to the removal of any vegetation. ● Any habitat trees would be identified in accordance with the Approved Clearing and Grubbing Report and Permit to Clear Land and Vegetation ● If fauna is encountered and/or injured, Fauna Handling Procedure will be implemented <p>Indirect:</p> <ul style="list-style-type: none"> ● Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> ● Appendix A Clearing and Grubbing Procedure ● Appendix B Fauna Handling Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> ● Pre-clearing Survey under E43 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> ● Pre-clearing checklist ● Post clearing checklist
		<ul style="list-style-type: none"> ● Spread of weed species ● Spread of pathogens including Chytrid or Phytophthora fungus 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> ● Hold point for the Clearing and Grubbing Plan must be released prior to any clearing activities taking place. The Clearing and Grubbing Plan must include: <ul style="list-style-type: none"> ○ Location of habitat trees or threatened flora (Pre-Clearing Survey E42) ○ No-Go Zones (Safety, Heritage or Ecological) ○ Sensitive Areas ○ Noise Catchment Areas ○ Trees approved to be removed, pruned/trimmed and retained (Approved Tree Report under E146) ○ Clearance boundary ○ Details on stages of work ○ Working hours 	6 (minor)	<p>Appendix B2 Flora and Fauna Management Procedure:</p> <ul style="list-style-type: none"> ● Appendix A Clearing and Grubbing Procedure ● Appendix C Weed Management Procedure <p>Clearing and Grubbing Plan:</p> <ul style="list-style-type: none"> ● Approved Tree Report under E146 <p>Permit to Clear Land and Vegetation:</p> <ul style="list-style-type: none"> ● Pre-clearing checklist ● Post clearing checklist <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> ● Section 6 Environmental Control Measures

				<ul style="list-style-type: none"> ○ Location of weed (if applicable E42) • Permit to Clear Land and Vegetation must be in place prior to any clearing activities taking place and weeds identified within Permit • Weeds to be identified on site prior to clearing activities taking place • Work crew involved with clearing activities to read and sign onto Permit to Clear Land or Vegetation • Pre and Post Clearing checklist to be completed by CGU Environmental Advisor to identify that weed were managed in accordance with Permit • Disposal of weeds it to occur in accordance with Waste CEMP Sub-plan (MMW6) • Hygiene practices will be enforced before entering No-Go Zone to prevent the risk of spreading Chytrid and Phytophthora Fungus • Prior to entry onsite plant and equipment need to be free of soil, foliage/leaves and mud. Declare if plant and equipment had previously worked in areas where Myrtle Rusk and Phytophthora is present, and provide evidence that all plant, equipment and vehicles have been washed down, where required <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B2 Flora and Fauna Management Procedure • Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan 		
		<ul style="list-style-type: none"> • Lighting 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> • Avoid or minimise artificial light impacts on biodiversity within and immediately adjacent to the project site. <p>Indirect:</p> <ul style="list-style-type: none"> • Implementation of management measures outlined in the CEMP – Appendix A4 Site Establishment Management Plan 	3 (minor)	CEMP – Appendix A4 Site Establishment Management Plan

Appendix A Clearing and Grubbing Procedure

TREE CLEARING AND GRUBBING MANAGEMENT PROCEDURE

MANAGEMENT AND RESPONSIBILITY



PROTOCOL

NOTE: No clearing works are to commence until the applicable **Clearing and Grubbing Plan TfNSW Hold Point has been released and the **Pre-Clearing Inspection Checklist** has been completed. Clearing is to be undertaken as per Guide 2 Exclusion Zones of Roads and Maritime's Biodiversity Guidelines.**

Delineate Vegetation to be Cleared or Trimmed

Environment Coordinator and Site Supervisor to delineate the area of vegetation to be cleared or trimmed based on a survey, by the use of fencing or flagging. Delineate area of vegetation to be retained and install "No-Go Zone – Protected Vegetation" signage. Different coloured flagging can be used to differentiate clearing boundary, exclusions zones and protected species. This is to be documented in the Clearing and Grubbing Plan and communicated to work crews by the Supervisor.

Pre-clearing Survey and Inspection of Vegetation

- Before the removal or clearing of any vegetation, or the demolition of structures identified as potential roosting sites for microbats commences, pre-clearing/demolition inspections for the threatened species must be undertaken. The inspections, and any subsequent relocation of fauna and associated management/offset measures, must be undertaken under the guidance of a suitably qualified and experienced ecologist.
- Pre-clearing Survey to be completed by Project Ecologist and habitat trees marked.
- A Clearing and Grubbing Plan needs to be compiled in accordance with **TfNSW G40 Clearing and Grubbing** and submitted at least seven days prior to clearing activities.
 - Once Hold Point has been released by TfNSW, clearing activities can proceed in accordance with Clearing and Grubbing Plan.
- Project Ecologist and/ or Environment Coordinator to inspect for presence of fauna prior to any work commencing and manage any native fauna.
- The Project Ecologist is to determine a suitable relocation area if fauna is encountered.
- Toolbox talk or Pre-start Meeting to be undertaken to discuss limit of clearing, clearing procedures, fauna handling and any weed identification and control measures.

Implement Environmental Controls

- If grubbing is to be undertaken then erosion and sediment controls will be installed, where required, prior to grubbing to ensure that soil laden with seed does not run off site.
- Equipment storage areas and stockpile areas are to be located in cleared areas.
- Prior to entry onsite plant and equipment need to be free of soil, foliage/leaves and mud. Declare if plant and equipment had previously worked in areas where Myrtle Rust and Phytophthora is present, and provide evidence that all plant, equipment and vehicles have been washed down, where required
- Top soil is to be separated from sub soil and green waste and stockpiled for reuse onsite or offsite. Stockpiles must be appropriately delineated and not be compacted.

Remove Vegetation

- Only clear within delineated area. **ANY CLEARING OR TRIMMING NEEDED OUTSIDE THE PROJECT FOOTPRINT MUST BE APPROVED BY THE PROJECT ENVIRONMENT MANAGER BEFORE THE ACTIVITY IS STARTED.**

Procedure for initial site clearing is as follows:

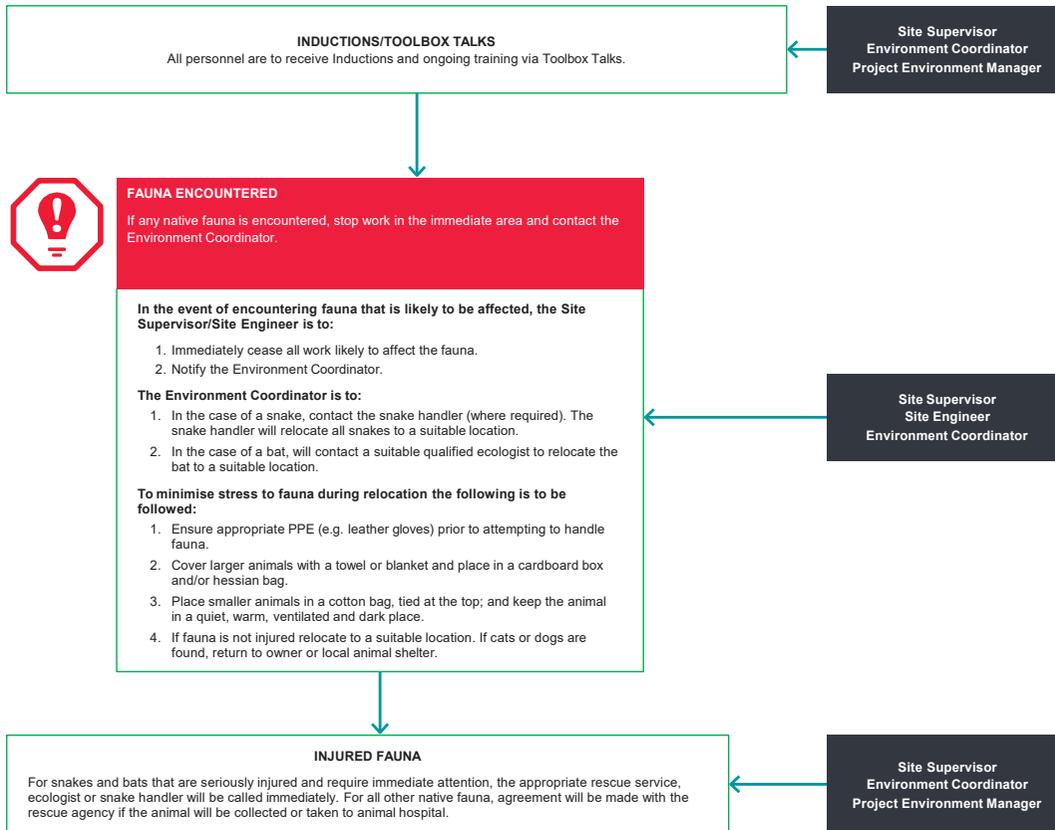
1. All non-marked trees and features will be removed first. Groundcover habitat features that are not too large to be moved will be removed and searched by the Environment Coordinator and/or Project Ecologist. All remaining marked habitat trees will be left intact.
2. Groundcover features such as logs will be gently rolled and searched for the presence of animals at the end of the shift.
3. At least 24 hours* after the clearance of non-marked vegetation, each habitat tree will be carefully removed in the presence of a suitably qualified ecologist and/or fauna rescue personnel, and thoroughly searched for the presence of animals:
 - Marked trees will be shaken prior to felling using an excavator or similar equipment to allow any fauna using the hollows to be observed.
 - Hollow-bearing trees will be slowly pushed over, with care taken to avoid damage to hollows.
 - Fauna rescue personnel (Environment Coordinator or qualified ecologist) will instruct the equipment operators regarding how and which side to fell the trees so that hollows can be quickly checked. In some circumstances sections of a tree containing a hollow or habitat may be individually removed prior to felling. For example, a hollow branch could be individually removed and placed gently on the ground for checking by fauna rescue personnel, prior to felling the tree.
4. Habitat features to be used for habitat enhancement or in rehabilitation works will be relocated to adjacent habitat (subject to landowner consent).
 - Any tree clearing will require presence of the Environment Coordinator:
 - Ensure all environmental controls (where required) are in place before removal of vegetation occurs.
 - Report any injured native fauna to the Environment Coordinator immediately.
 - Native fauna should be relocated to the specified relocation area.
 - If personnel are unsure where clearing may or may not be undertaken, contact the Environment Coordinator or Project Environment Manager prior to carrying out works.
 - Mulch may be reused on-site for erosion and sediment control, if practicable. Residual mulch is to be taken to a recycling facility. Records of mulch/ green waste sent off site will be recorded.
5. Impacts to plant community types must not exceed approved locations, unless otherwise approved by the Planning Secretary. In requesting the Planning Secretary's approval, CGU must provide to the Planning Secretary an assessment of the additional impact(s) to plant community types and an updated ecosystem and/or species credit requirement under Condition E40, if required.

*as referenced in *Transport Roads and Traffic Authority Biodiversity Guidelines: Protection and managing biodiversity on RTA projects.*

Appendix B Fauna Handling Procedure

FAUNA HANDLING PROCEDURE

MANAGEMENT AND RESPONSIBILITY



Rescue Service Contact

WIRES	1300 094 737
RSPCA (Emergency Line)	02 9770 7556
Sydney Snake Catchers	1300 599 938
Kogarah Veterinary Hospital	02 9588 4588
Sydney Wildlife	02 9413 4300

PROTOCOL

HANDLING PROCEDURE

1. If the animal cannot be handled (i.e. venomous reptile or bats), the exact location of the animal is to be recorded and provided to the snake handler or suitable qualified ecologist. All personnel and/or subcontractors are to be excluded from the vicinity.

Once the snake handler or ecologist arrives on site they are responsible for the fauna. Any decisions regarding the care of the animal will be made by them.

2. If the animal does not require immediate attention, as determined by the Environment Coordinator in consultation with the fauna specialist (where required), a rescue service will be called to collect any animals requiring attention.

3. In the event the rescue service cannot attend, the Environment Coordinator will deliver the injured/captured animal (other than snakes or bats) to the animal service/shelter as soon as practically possible.

RELEASE PROCEDURE

(native fauna other than snakes or bats)

If the animal is not injured, the Environment Coordinator in consultation with the ecologist (where required) may release the fauna into a suitable area in accordance with the following procedures:

1. The Environment Coordinator in consultation with the ecologist (where required) is to be responsible for undertaking the release
2. If the species is nocturnal, release should be carried out at dusk if practicable.

DOMESTIC ANIMALS

(i.e. dogs & cats)

If the animal is not aggressive, the Environment Coordinator in consultation with the Community and Stakeholder Team to make arrangements for the animal to be returned to its owner (if details are provided on the animals collar). If there are no details, the Environment Coordinator in consultation with the Community and Stakeholder team to make arrangements for the animal to be taken to the local council animal shelter. If the animal is aggressive, the Environment Coordinator is to arrange for the local council animal control officer to collect the animal.

If the animal is injured and not aggressive, the Environment Coordinator in consultation with the Community and Stakeholder team will take the animal to the nearest vet.

REPORTING

Records of any fauna handling will be recorded by the Environmental Coordinator

IMAGE	FAUNA	OEH ACT	EPBC ACT
	Grey-headed Flying Fox	Vulnerable	Vulnerable
	Green and Golden Bell Frog	Endangered	Vulnerable

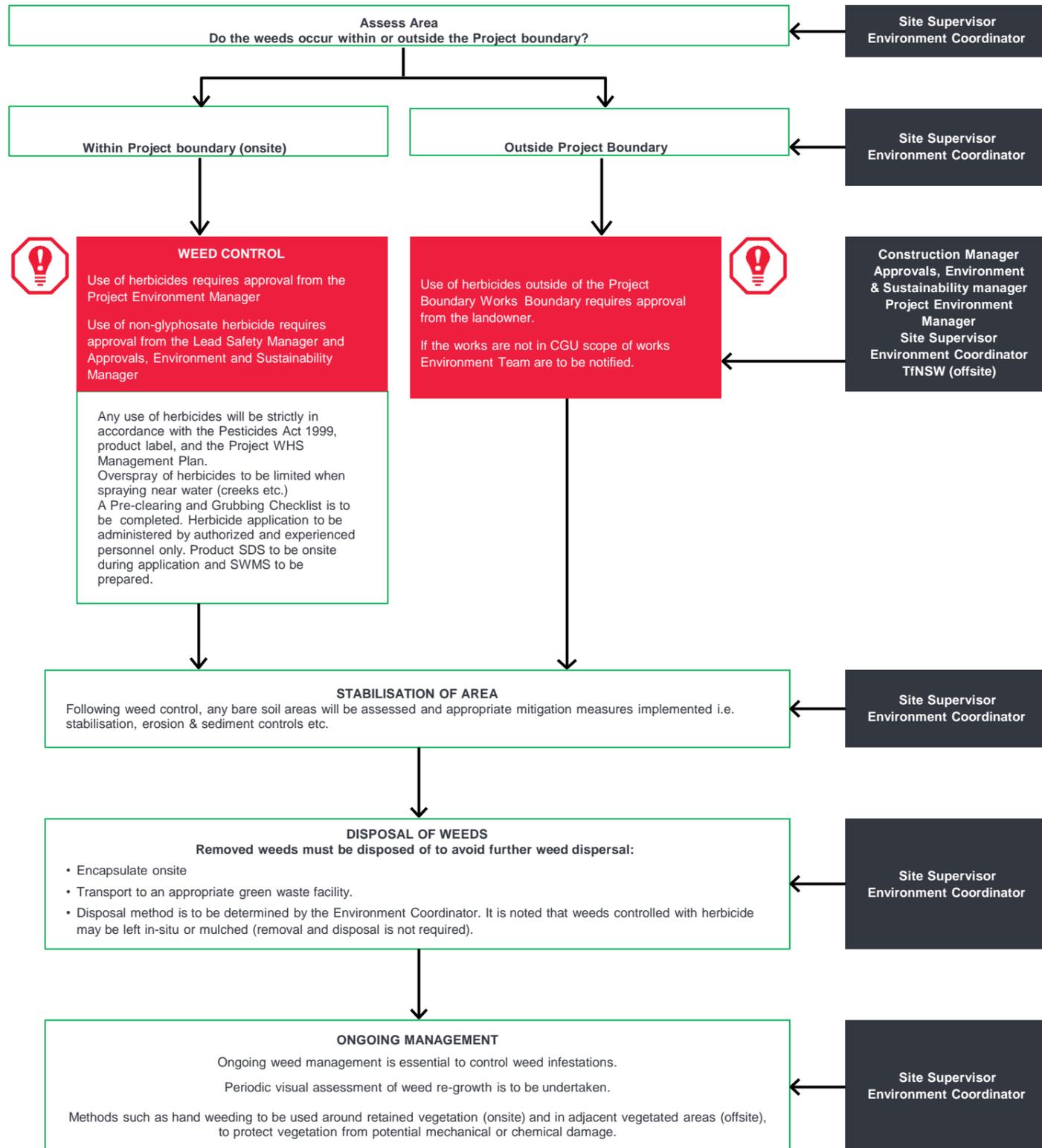
If the above fauna are located within site boundaries, stop works in the vicinity and contact Environmental Coordinator immediately.



Appendix C Weed Management Procedure

WEED MANAGEMENT PROCEDURE

MANAGEMENT AND RESPONSIBILITY



NOXIOUS WEEDS TO BE CONTROLLED

(Identified in EIS)

WEED	SOLUTION	WEED	SOLUTION
Scientific name: Anredera cordifolia Common name: Madeira Vine		Common name: Foeniculum vulgare Scientific name: Fennel	
Scientific name: Araujia sericifera Common name: Moth Vine		Scientific name: Ipomoea alba Common name: A Morning Glory	
Scientific name: Bidens pilosa Common name: Cobbler's Pegs		Scientific name: Lantana camara Common name: Lantana	
Scientific name: Cestrum parqui Common name: Green Cestrum		Scientific name: Ochna serrulata Common name: Mickey Mouse Bush	
Scientific name: Chrysanthemoides monilifera subsp. rotundata Common name: Bitou Bush		Scientific name: Parietaria judaica Common name: Asthma Weed	
Scientific name: Cinnamomum camphora Common name: Camphor Laurel		Scientific name: Paronychia brasiliiana	
Scientific name: Conyza bonariensis Common name: Fleabane		Scientific name: Pennisetum clandestinum Common name: Kikuyu	
Scientific name: Ehrharta erecta Common name: Panic Veldt Grass		Scientific name: Ricinus communis Common name: Castor Oil Plan	
Scientific name: Erythrina crista-galli Common name: Cockspur Coral		Scientific name: Rumex crispus Common name: A Dock	
Scientific name: Rubus fruticosus sp. agg. Common name: Blackberry		Scientific name: Tradescantia fluminensis Common name: Trad	

KEY

- Cut and paint herbicide treatment
- Hand weeding
- Spray with herbicide treatment

Pathogen Management

Prior to entry onsite plant and equipment need to be free of soil, foliage/leaves and mud.

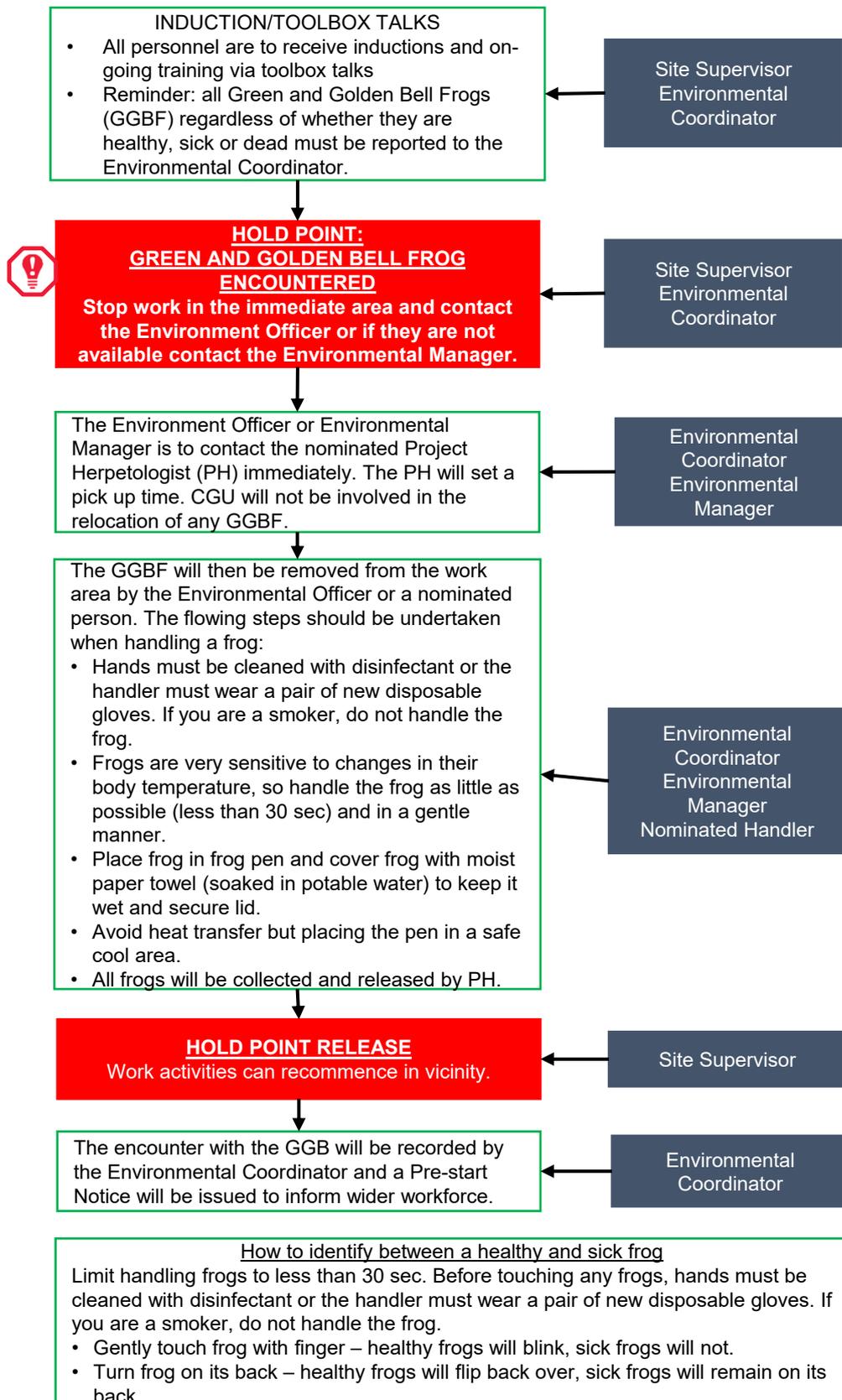
Prior to entry onsite declare if plant and equipment had previously worked in areas where Myrtle Rusk and Phytophthora is present, and provide evidence that all plant, equipment and vehicles have been washed down, where required

Prior to entering RTA Ponds area personnel are required to clean and disinfect boots and equipment before entering the area

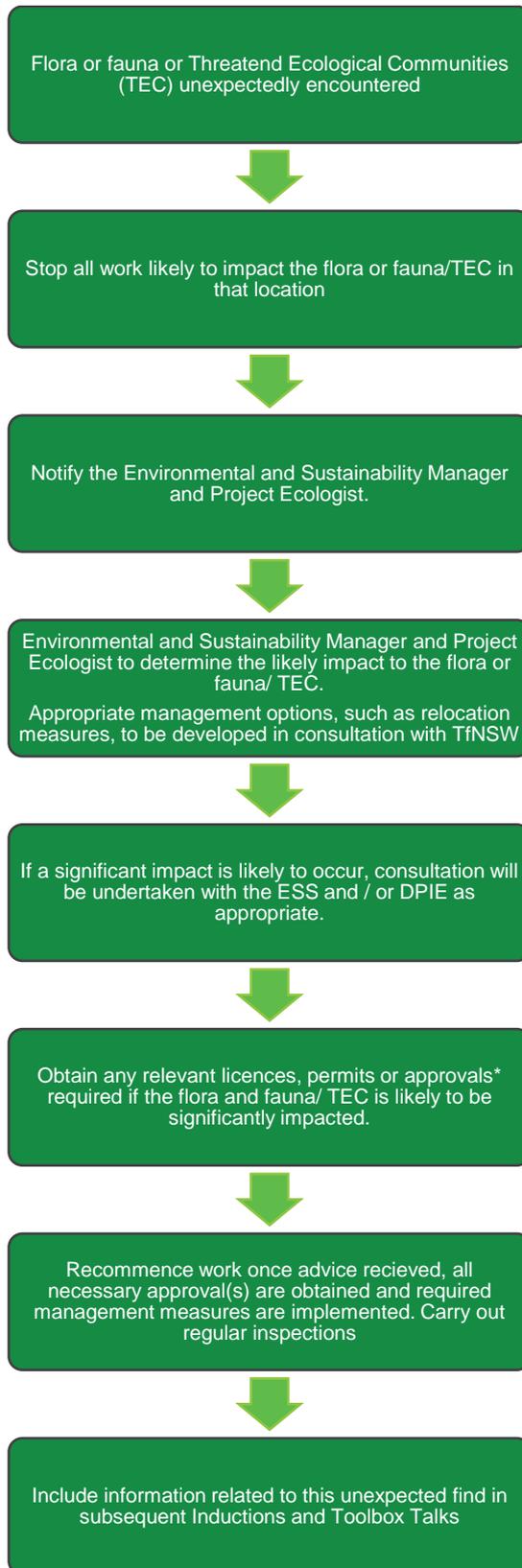
Appendix D Green and Golden Bell Frog Stop Work Procedure

GREEN AND GOLDEN BELL FROG STOP WORK PROCEDURE

MANAGEMENT AND RESPONSIBILITY



Appendix E Unexpected Flora or Fauna Finds Procedure





Appendix B4

Soil and Surface Water Management Procedure

M6 Stage 1: Preliminary construction including commencement activities

October 2021

M6S1-CGU-NWW-ENPE-PRO-000421

Rev 02

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Document control

Approval and authorisation

Title	M6 Stage 1 Soil and Surface Water Management Procedure
Endorsed by Environment Representative	
Signed	
Dated	26/10/2021
Approved on behalf of TfNSW by	
Signed	
Dated	
Approved on behalf of CGU by	
Signed	
Dated	21/10/2021

Document status

Revision	Date	Description	Approval
A.01	12/07/2021	Initial TfNSW review	
A.02	16/08/2021	Updated to reflect TfNSW comments and issued for consultation	
00	14/09/2021	Updated	
01	20/10/2021	Updated to address DPIE comments	
02	26/10/2021	Updated to address DPIE comments	

Distribution of controlled copies

This Procedure as part of the CEMP for preliminary construction including commencement activities is available to all personnel and sub-contractors via the Project document control management system. An electronic copy can be found on the Project website.

The document is uncontrolled when printed. One controlled hard copy of the Procedure as part of the CEMP and supporting documentation will be maintained by the Quality Manager at the Project Office.

Copy number	Issued to	Version

1 Introduction

1.1 Context

This Soil and Surface Water Management Procedure (the Procedure) forms part of the Construction Environmental Management Plan for preliminary construction including commencement activities (Stage 1 CEMP) of the M6 Stage 1 Motorway (the Project). The Procedure addresses soil and surface water impacts to the extent of Stage 1, only. The full scope of activities which will occur under the CEMP for preliminary construction are outlined in Section 1.1 of the CEMP, Staging Report and below:

- Installation of environmental controls at construction compounds such as fencing, hoarding and noise walls
- Removal of existing structures where required
- Establishment of site facilities such as offices, amenities and storage, including installation and connection of services such as water, sewer and electricity
- Delivery of plant and other construction equipment
- Construction commencement activities including site clearing, construction of haul roads and hardstands
- Delivery and installation of construction facilities such as water treatment plants
- The repair, refurbishment and replacement of existing construction facilities and services.

CGU notes the Project must be designed, constructed and operated so as to maintain the NSW Water Quality Objectives where they are being achieved as at the date of Project approval, and contribute towards achievement of the NSW Water Quality Objectives over time where they are not being achieved as at the date of Project approval, unless an EPL in force in respect of the Project contains different requirements in relation to the NSW Water Quality Objectives, in which case those requirements must be complied with. Discharge criteria for construction water treatment plant discharges will be included in the EPL for the project.

An Aspect and Impacts Register was developed (refer to Appendix A2 of the Preliminary CEMP) and identified minor residual soil and surface water risks and impacts associated with preliminary construction including commencement activities. This Procedure has been developed to address and manage the minor residual risks and impacts.

1.2 Impacts and Risks

Table 1, Table 2 and Table 3 contains an extract from the CEMP Appendix A2 Aspects and Impacts Register, related to soil and water during preliminary construction including commencement activities.

Table 1 Extract from Appendix A2 Aspect and Impacts Register for C1 Arncliffe construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Soil and Surface Water	<ul style="list-style-type: none"> • Operation of the existing construction water treatment plant (WTP) including water discharge • Maintenance of WTP pond • Cleaning and where required, upgrade of internal stormwater drains and sumps • Installation of environmental control including erosion and sediment controls and hoarding in Lot 2E • Stockpiling of material generated from activities listed above • Ongoing management of pre-existing stockpile 	Impact to surface waters from inappropriate discharge	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Existing water collection and treatment systems to be maintained. • Water for discharge from C1 ancillary facility will only be from the licenced discharge point (pre-existing construction WTP) • Engineering controls at WTP maintained to prevent non-compliant water from being discharged • Sampling and monitoring of treated water carried out in accordance with Project EPL • All discharge activities to occur in accordance with the Water Reuse and Discharge Procedure. This includes implementation of a Permit to Dewater for all discharge events. • The WTP will only be operated by personnel trained to operate the WTP including what to in the event of an emergency • Ongoing monthly pre-construction groundwater and surface water monitoring to continue <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure • Operate and maintain construction WTP in accordance with construction WTP operating manual • Implementing the TfNSW incident procedure in the event of a non-compliance 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> • Water Reuse and Discharge Procedure • Permit to Dewater • Appendix E Groundwater Monitoring Procedure <p>Project EPL</p> <ul style="list-style-type: none"> • CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) • Section 3.2.3 Regulatory requirements and compliance • Section 3.8 Emergency and Incident Planning • Appendix A7 TfNSW Incident Procedure • Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
	<ul style="list-style-type: none"> • Use of plant and equipment, including refuelling • Concrete works (including washout of agitators) • Vehicles and trucks exiting C1 ancillary facility 	Sediment laden water leaving C1 boundary during rainfall event	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control Plans (ESCP) would be prepared and implemented for all work areas and stages • All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures • Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) • Targeted training for key on site personnel who are involved in the installation and maintenance of erosion and sediment controls • An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control • Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers <p>Indirect:</p> <ul style="list-style-type: none"> • Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> • Erosion and Sediment Control Procedure • Stockpile Management Procedure <ul style="list-style-type: none"> • CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> • Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) • Section 3.4 Resources, responsibility and authority • Section 3.6 Competence, training and awareness

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> ESCP to be included in Work Packs which detail activities working in close proximity to the site boundary (e.g. construction of hoarding in Lot 2E) 		<ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Mismanagement of sludge produced from cleaning stormwater drains, leading to escape of material beyond boundary	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Slurry to be collected in vacuum truck from internal stormwater drains Works to only occur within C1 construction ancillary facility (no live stormwater drainage connected to external systems) Erosion and Sediment Controls as per the ESCP will be implemented and maintained <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Procedure
		ASS/PASS encountered during hoarding installation works in Lot 2E	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> No bulk excavation occurring during Stage 1 preliminary construction Completion of Site Contamination Report/s prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Material from footings of noise wall to be stockpiled in a bunded area within an acoustic shed. Material to be classified (SPOCAS testing to be undertaken to determine liming rates if required) Material to be neutralised using lime in accordance (where required) Material to be removed to a licenced facility <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan Control measures to be included in Work Pack for construction of hoarding in Lot 2E 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1 <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures
		<p>Contamination of soil or water due to spills of oils and chemicals related to:</p> <ul style="list-style-type: none"> Mechanical failures Refuelling activities WTP operation 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> Spill kits available at locations within the C1 ancillary facility at all times The use of any hazardous substances that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds Any refuelling on site must follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. All spills or leakages will be immediately contained and cleaned up 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Spill Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6)

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Spill containment kits will be placed at locations where chemicals are stored or used and where refuelling is permitted Inspection regime for chemical storage facilities Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Handling and storage of chemicals to follow Safe Work Method Statement and SDS Implement the TfNSW incident procedure 		<ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1 Appendix A7 TfNSW Incident Procedure
		Concrete Washout water escaping beyond C1 boundary	8 (minor)	Direct: <ul style="list-style-type: none"> Any washout areas will be adequately sized, regularly maintained (emptied), and located in a designated area Concrete Agitator truck drivers will be directed to the designated washout area Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Ongoing monthly pre-construction groundwater and surface water monitoring to continue 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Appendix E Groundwater Monitoring Procedure <ul style="list-style-type: none"> CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Tracking of material onto Marsh Street	12 (moderate)	Direct: <ul style="list-style-type: none"> Wheel wash to be installed at C1 ancillary facility Vehicles exiting site (excluding vehicles using car park) to travel through wheel wash Street sweeper to be used to maintain internal haul roads and Marsh Street Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure <ul style="list-style-type: none"> CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C1
		Increase use of resources (potable water)	8 (minor)	Direct: <ul style="list-style-type: none"> Treated water from WTP will be readily available from a designated refilling area for water trucks, street sweepers etc. Treated water usage to be tracked Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implementation of Water Reuse Strategy 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Water Reuse Strategy

Table 2 Extract from Appendix A2 Aspect and Impacts Register for C2 Rockdale Depot construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Soil and Surface Water	<ul style="list-style-type: none"> Vegetation removal: soil caught in root systems of trees Construction of noise walls and chain link fencing Where design mandates, minor piling works for footings of construction WTP, noise wall and bentonite plant Site leveling for haul roads, piling pads and hardstand areas which involves: <ul style="list-style-type: none"> Importing clean material Spreading and compaction to design levels (on top of existing pavement) Stabilisation Property adjustments including: <ul style="list-style-type: none"> Disconnection of services to existing buildings Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Installation of erosion and sediment controls ASS/PASS management 	Impact to surface waters from inappropriate discharge	12 (moderate)	Direct: <ul style="list-style-type: none"> No water to be discharged from C2 ancillary facility Excavations to be protected to divert surface water around excavations (clean water diversion) Existing stormwater drains to be isolated from construction impacts or live network. Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implementing the TfNSW incident procedure in the event of a non-compliance 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Erosion and Sediment Control Management Procedure Project EPL <ul style="list-style-type: none"> CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.2.3 Regulatory requirements and compliance Section 3.8 Emergency and Incident Planning Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 Appendix A7 TfNSW Incident Procedure
		Sediment laden water leaving C2 boundary during rainfall event (including from hardstands, stockpiles, site leveling activities)	12 (moderate)	Direct: <ul style="list-style-type: none"> Erosion and Sediment Control Plans (ESCP) would be prepared and implemented Stockpiles to be managed in accordance with Stockpile Management Procedure Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) Targeted training for key on site personnel who are involved in the installation and maintenance of erosion and sediment controls An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers Monitoring program All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures Indirect:	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure ESCP to be included in Work Packs 		<ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2
		<p>Mishandling, treatment or disposal of ASS/PASS encountered during:</p> <ul style="list-style-type: none"> Where design requires piled footing for noise wall installation works Where design requires piled footings for grout/bentonite plant and construction WTP Property adjustment activities 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> No bulk excavation would occur Completion of Site Contamination Report/s (including investigation of groundwater) prior to ground disturbance activities (E112) Implementation of specific management measures identified in Site Contamination Report/s (E112) and Contamination CEMP Sub-plan Material from minor works (fencing etc) to be stockpiled in a bunded area with guard layer Material to be classified by contamination consultant (with CRS/SPOCAS testing to determine liming rates if required) Material to be neutralised with lime in accordance with CRS/SPOCAS results, if required Material to be removed to a licenced facility <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implement management measures outlined in the Appendix B9 Waste CEMP Sub-plan Control measures to be included in Work Pack/s 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Stockpile Management Procedure Appendix E Groundwater Monitoring Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures
		<p>Contamination of soil or water due to spills of hydrocarbons and chemicals related to:</p> <ul style="list-style-type: none"> Mechanical failures Refuelling activities 	8 (minor)	<p>Direct:</p> <ul style="list-style-type: none"> Spill kits are to be readily available within the C2 construction ancillary facility at all times The use of any hazardous substances that could result in a spill will be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds Any refuelling on site must follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. All spills or leakages will be immediately contained and cleaned up Spill containment kits will be placed at locations where chemicals are stored or used and where refuelling is permitted Inspection regime for chemical storage facilities and spill kits <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure When handling chemicals it will be done in accordance with Safe Work Method Statement and SDS Implementing the TfNSW incident procedure in the event of a non-compliance 	4 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Spill Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2 Appendix A7 TfNSW Incident Procedure <p>Appendix B9 Waste CEMP Sub-plan:</p> <ul style="list-style-type: none"> Section 6 Environmental control measures

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
		Concrete works (including concrete washout water) escaping containment	8 (minor)	<ul style="list-style-type: none"> Direct: <ul style="list-style-type: none"> Any washout areas will be adequately sized, regularly maintained, and located in a designated area Concrete agitator truck drivers will be directed to the designated washout area Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2
		Tracking of material onto West Botany Street	12 (moderate)	<ul style="list-style-type: none"> Direct: <ul style="list-style-type: none"> Wheel wash to be installed at C2 construction ancillary facility Vehicles exiting site to travel through wheel wash Street sweeper to be used to maintain internal haul roads and West Botany Street Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C2

Table 3 Extract from Appendix A2 Aspect and Impacts Register for C3 Bicentennial Park (including MOC3) construction ancillary facility

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
Soil and Surface Water	<ul style="list-style-type: none"> Vegetation removal: soil caught in root systems of trees Construction of footings for noise walls and chain link fencing Site levelling for haul roads, piling pads and hardstand areas which involves: <ul style="list-style-type: none"> Importing clean material Spreading and compaction to design levels (on top of existing pavement) Stabilisation Property adjustments: <ul style="list-style-type: none"> Disconnection of existing services to buildings Connection of potable water, power and sewer to facilities Removal of redundant services for safety purposes Installation of erosion and sediment controls Construction of pedestrian footpath from West Botany Street through to Brighton-Le-Sands Public School 	Impact to surface waters from inappropriate discharge	12 (moderate)	Direct: <ul style="list-style-type: none"> No water to be discharged from C3 during preliminary construction Divert surface water around disturbed areas (clean water diversion) Existing stormwater drains to be isolated No activities to occur within wetland during Stage 1 preliminary construction Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Implementing the TfNSW incident procedure in the event of a non-compliance 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure Erosion and Sediment Control Management Procedure Project EPL CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.2.3 Regulatory requirements and compliance Section 3.8 Emergency and Incident Planning Appendix A7 TfNSW Incident Procedure Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Sediment laden water leaving C3 boundary during rainfall event (including from hardstands, stockpiles, site leveling activities)	12 (moderate)	Direct: <ul style="list-style-type: none"> Erosion and Sediment Control Plans (ESCP) would be prepared and implemented Stockpiles to be managed in accordance with Stockpile Management Procedure Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) Targeted training for key on site personnel All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control Hardstand areas and surrounding public roads would be cleaned as required using methods such as brooms, bobcat attachments or street sweepers Indirect:	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure Stockpile Management Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.9 Monitoring, inspections and auditing

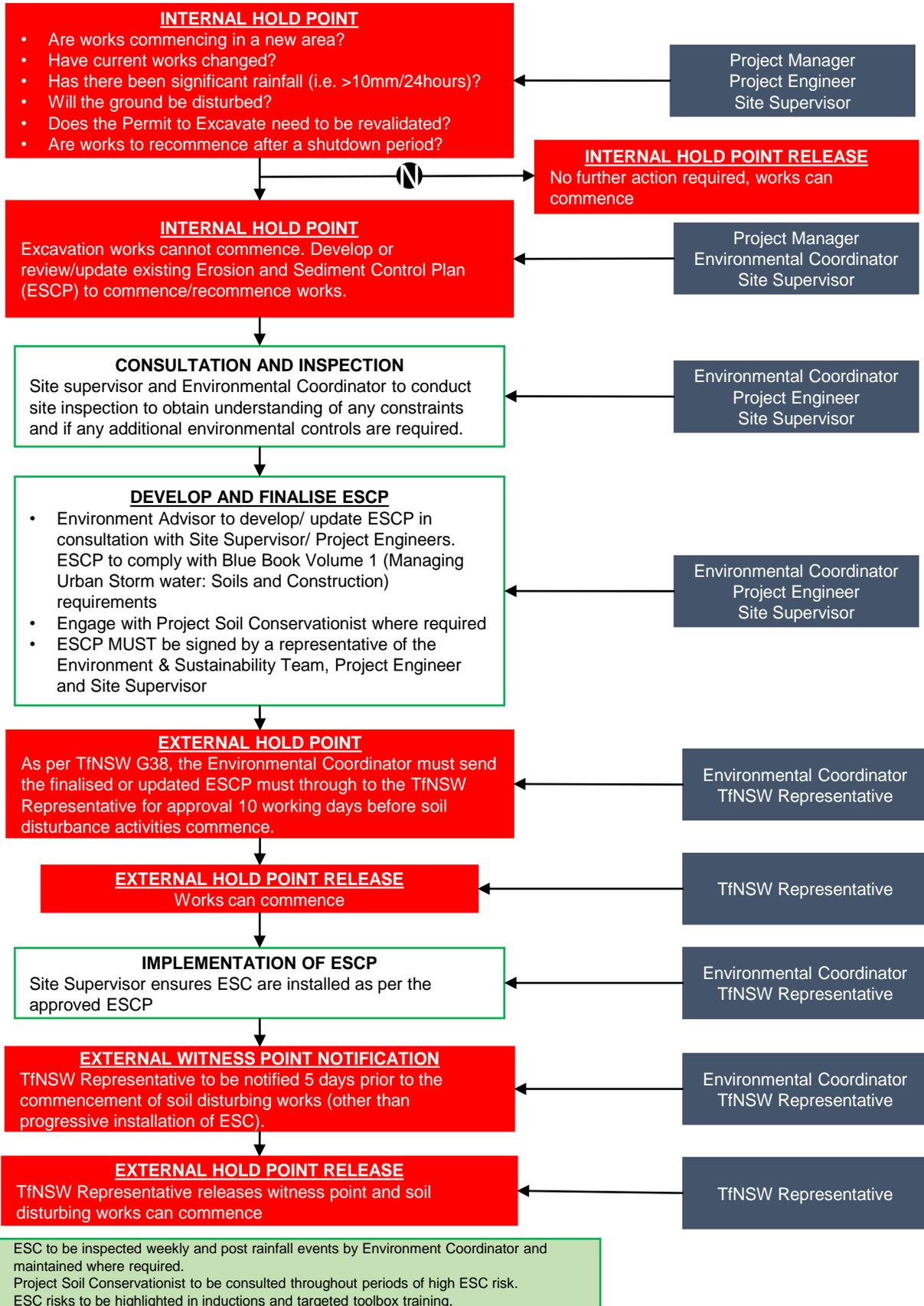
Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
				<ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure ESCP to be included in Work Packs 		<ul style="list-style-type: none"> Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Contamination of soil or water due to spills of hydrocarbon, oils and chemicals related to: <ul style="list-style-type: none"> Mechanical failures Refuelling activities 	8 (minor)	Direct: <ul style="list-style-type: none"> Spill kits would be readily available within the C3 (including MOC3) construction ancillary facility The use of any hazardous substances that could result in a spill would be undertaken away from drainage or stormwater lines and, wherever possible, within defined bunds Any refuelling on site would follow a refuelling procedure which includes details on where this activity is permitted, management measures and emergency equipment requirements. All spills or leakages would be immediately contained and cleaned up Spill containment kits would be placed at locations where chemicals are stored or used and where refuelling is permitted Inspection regime for chemical storage facilities Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Storage and handling chemicals would be done in accordance with Safe Work Method Statement and SDS Implementing the TfNSW incident procedure in the event of a non-compliance 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Spill Management Procedure Appendix A of CLMP Unexpected Contaminated Land and Asbestos Finds Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3 Appendix A7 TfNSW Incident Procedure
		Washout water from concrete agitator travelling beyond C3 boundary	8 (minor)	Direct: <ul style="list-style-type: none"> Washout areas will be adequately sized, regularly maintained, and located in a designated area Concrete agitator truck drivers will be directed to the designated washout area Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure 	4 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Water Reuse and Discharge Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment Management Plan: Site Environment Plan for C3
		Tracking of material onto West Botany Street	12 (moderate)	Direct: <ul style="list-style-type: none"> Wheel wash to be installed at C3 construction ancillary facility Vehicles exiting site will be directed through wheel wash, once installed Street sweeper to be used to maintain internal haul roads and West Botany Street Indirect: <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Vehicle Management Plan to direct exiting vehicles through wheel wash 	6 (minor)	Appendix B4 Soil and Surface Water Procedure: <ul style="list-style-type: none"> Erosion and Sediment Control Procedure CEMP preliminary construction including commencement activities: <ul style="list-style-type: none"> Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment

Issue	Construction activity/aspect	Potential impact	Risk level prior to mitigation	Indicative Mitigation Measures	Risk level following mitigation	Management Documents / Training Required
						Management Plan: Site Environment Plan for C3
		Sediment escaping from pedestrian footpath works into Kings Wetland	12 (moderate)	<p>Direct:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Plans (ESCP) would be prepared and implemented Regular inspection and maintenance of ESCP controls (as per Erosion and Sediment Control Procedure) An experienced soil conservation specialist (CPESC) would be engaged to provide advice regarding erosion and sediment control All on site personnel would undergo a site induction and ongoing toolbox talks that will detail erosion and sediment control management measures <p>Indirect:</p> <ul style="list-style-type: none"> Implement management measures outlined in the Appendix B4 Soil and Surface Water Procedure Control measures to be included in Work Pack/s 	6 (minor)	<p>Appendix B4 Soil and Surface Water Procedure:</p> <ul style="list-style-type: none"> Erosion and Sediment Control Procedure Stockpile Management Procedure <p>CEMP preliminary construction including commencement activities:</p> <ul style="list-style-type: none"> Section 3.2.1 Environmental Risk Assessment Workshop including the use of Work Packs (Table 6) Section 3.4 Resources, responsibility and authority Section 3.6 Competence, training and awareness Section 3.9 Monitoring, inspections and auditing Appendix A4 Site Establishment <p>Management Plan: Site Environment Plan for C3</p>

Appendix A – Erosion and Sediment Control Procedure

EROSION AND SEDIMENT CONTROL PROCEDURE

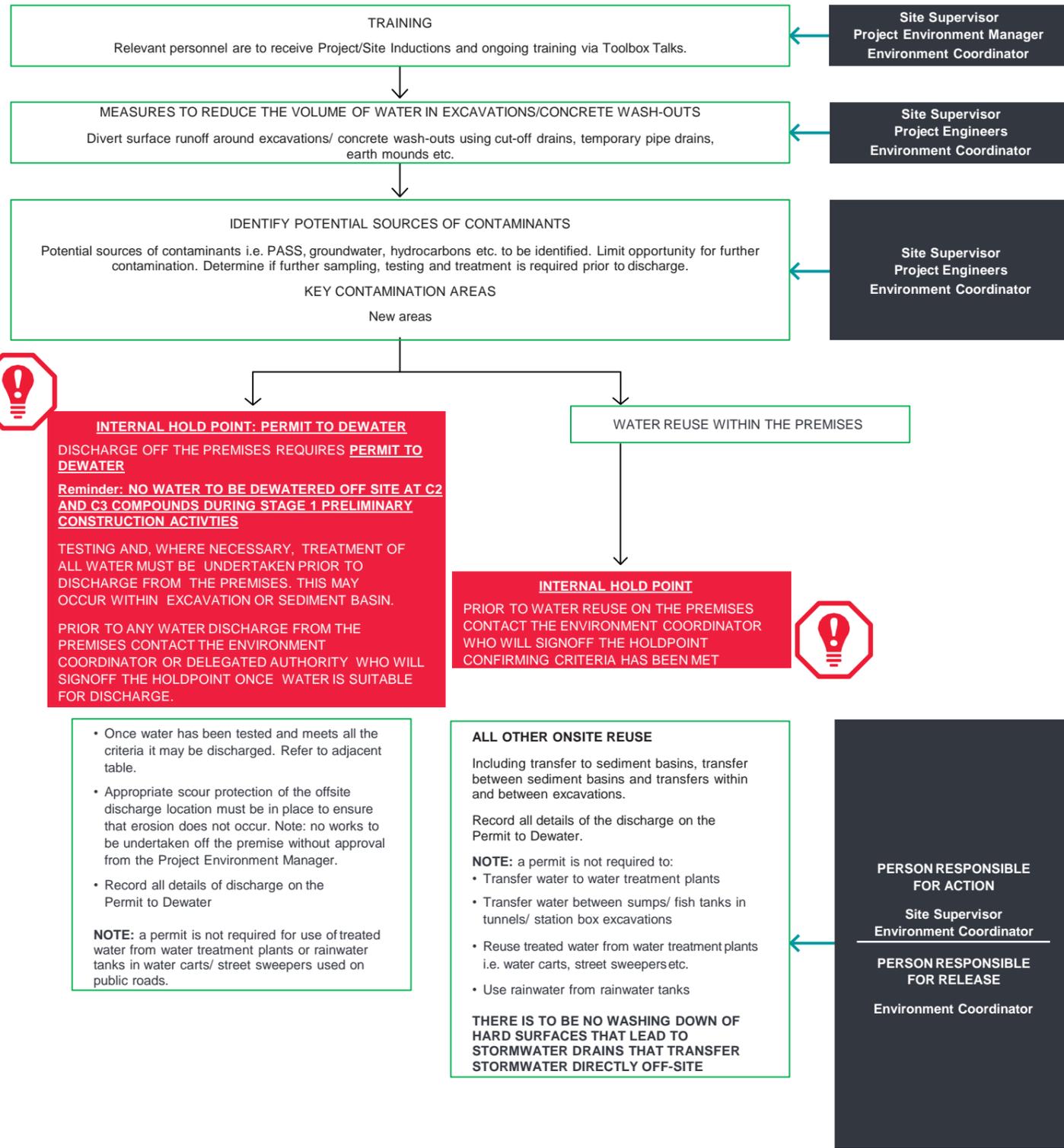
MANAGEMENT AND RESPONSIBILITY



Appendix B – Water Reuse and Discharge Management Procedure

WATER REUSE AND DISCHARGE MANAGEMENT PROCEDURE

MANAGEMENT AND RESPONSIBILITY



MONITORING

Use of calibrated water monitoring equipment and/ or visual assessment will be undertaken for the below parameters during all discharges and reuse to ensure water criteria is met.

DISCHARGE OFF THE PREMISES

Parameter and Criteria	Sampling method
TSS (<50mg/L)*	Sampling and laboratory testing and/or probe/ turbidity tube
pH (6.5 -8.5)*	Probe
Oil and Grease (none visible)*	Visual Inspection

*Subject to Project EPL

REUSE WITH THE PREMISES

Parameter and Criteria	Sampling method
Oil and Grease (none visible)	Visual Inspection
No potential for water to leave the premises	Visual Inspection
No surface runoff will be generated from the reuse (reuse includes dust suppression, watering retained vegetation etc.)	Visual Inspection
No potential for water to reach any watercourse	Visual Inspection
Concrete Washout Water only no visible fines (in addition to criteria above)	Visual Inspection
If transporting water to sediment basins, the sediment basin must not be overfilled	Visual Inspection

Environmental Protection Licence

All dewatering activities are to be carried out in accordance with the discharge concentrations featured in the Project Environmental Protection Licence. Prior to sediment basins or water treatment plants becoming active the Discharge Point Register must be updated and sent through to the EPA by the Environmental and Sustainability Manager. The EPA must approve the updated Discharge Point Register prior to any discharges occurring.

Further Guidance

- Environment Coordinator to complete the Permit to Dewater prior to discharge for all discharges within the Premises and off the Premises.
- Visual inspection is required for the duration of the discharge operation** to ensure sediment from the bottom is not discharged. Pump Inlet hoses are too fixed in place to restrict movement to stop mud being sucked in. Pumps must be monitored at all times while running. Syphons/ water release valves may be used to dewater sediment basins to minimise reliance on pumps. Prior to release sediment levels to be inspected to ensure the level is below the syphon/ valve inlet. Visual inspection of receiving area to ensure the criteria for reuse within the Premises is also required.
- Environmental Inspection Checklist to be completed following significant rainfall events (i.e. >10 mm/24 hours) by the Environment Coordinator and/or Site Supervisor.
- Weekly inspections are to be conducted by the environment team to monitor erosion and sediment controls in active worksites. Weekly inspections will be documented on the Environmental Inspection Checklist.
- Monitoring of rainfall will be carried out as described in the Construction Air Quality and Odour Management Plan.
- Based on a 5-day rainfall depth (mm) for 85th percentile, should rainfall received within a 5 day period exceed 38.8 mm, it is expected that sediment basins may discharge naturally over their spillway without an opportunity to flocculate and test basins for TSS, pH or the presence of oil and grease. It should also be noted that other types of erosion controls may also fail during such an event and that repair work will be undertaken when it has been determined by the Site Supervisor that it is safe to do so.
- Erosion and Sediment Control Plans (ERSED) must be reviewed prior to commencing work if there has been significant rain (i.e. >10 mm/24hr) and if a sediment basin is at or near capacity works that direct water towards the basin cannot be undertaken (see Erosion and Sediment Control Procedure).
- Discharge permits for water treatment plants will be issued in accordance with the Project EPL.
- No dewatering off site to occur at C2 and C3 compounds during Stage 1 Preliminary Construction.

Safety and Sampling

- Always wear appropriate PPE (refer to SWMS)
- Always ensure personal safety when sampling (refer to SWMS).
- DO NOT** inhale gases or aerosols formed from sampled material or associated preservatives in sample bottles.
- Maintain high standards of personal hygiene when sampling, **DO NOT** eat or smoke when sampling and **ALWAYS** wash hands prior to and following sampling.
- DO NOT** enter sediment basins during sampling.

Treatment of Water

pH Levels

- If pH of water is outside the range 6.5-8.5 it needs to be neutralised. If the water is above 8.5, acid is used to lower the pH. If the water is below 6.5 a base is used to raise the pH.
- To treat water, safety requirements must be followed.

Treatment to Lower pH

- Acid is used to lower pH. As a guide, a dosage rate of approx. 500ml of acid lowers 7000L of water by approx. 1.5 pH.
- Good mixing of the acid in the water is to occur otherwise it is not as effective.

Treatment to Raise pH

- Caustic e.g. Builders Lime is used to raise the pH.
- Good mixing of the base in the water is to occur otherwise it is not as effective.

Turbidity

- If the water is greater than 50mg/L then it needs to have the sediment settled out.
- Water must be treated using Gypsum, unless another flocculant/s have been approved by TfNSW under **G38 3.3.2 Using Flocculants or Coagulants Other Than Gypsum**
- When treating in sediment basins or excavations even chemical application across the water surface is to be undertaken to increase effectiveness of sediment drop out. Application rates should be based upon the Blue Book and/or manufacturer's specifications. Note that even application over the captured water is essential for effective flocculation.



Appendix C - Stockpile Management Procedure

STOCKPILE MANAGEMENT PROCEDURE

Material identified to be stockpiled

Segregation and Protection

Keep material separate if it needs to be classified in accordance with EPA Waste Classification Guidelines.

Where material has been classified, keep segregated and easily identifiable to workforce (signage or identified on a map/drawing). This is to prevent material being cross contaminated and more material being added to the stockpile.

If PASS/ASS is encountered, material is to be contained in a banded stockpile area with base guard layer. SPOCAS lab testing must be undertaken to determine the dosage of lime required to neutralise the material. Contact Environmental Coordinator for further information.

Cover stockpile if material contains properties which are hazardous or can emit odours e.g. asbestos contaminated material, PASS. Contact the Safety Advisor and/or Environmental Coordinator for further information and consult the Site Environment Plan.

Location of stockpile

Consult Site Environment Plan for location of stockpile areas.

Stockpile to be located outside of drip line of trees and within Project Boundary.

Locate stockpiles at least 5m away from waterways.

Locate stockpiles at least 5m away from areas where there are high velocity and concentrated flows e.g. drains, streams, driveways.

Erosion and Sediment Control

Stockpiles to have erosion and sediment controls downstream of stockpile location.

Surface flows are to be diverted around stockpiles.

Stockpiles to be stabilised during shutdown periods.

Where non-active stockpiles are greater than 2m high, additional controls to be applied can include; benching of batters, stabilised batter shoots, application of stabilisation agents.

Material excavated during invert repair at C1 to be stored within acoustic sheds.

Where stockpiled material is susceptible to wind or water erosion, stabilisation will occur within 10 days of establishing the stockpile.

After stockpile area is demobilised, undertake clean-up of the area.

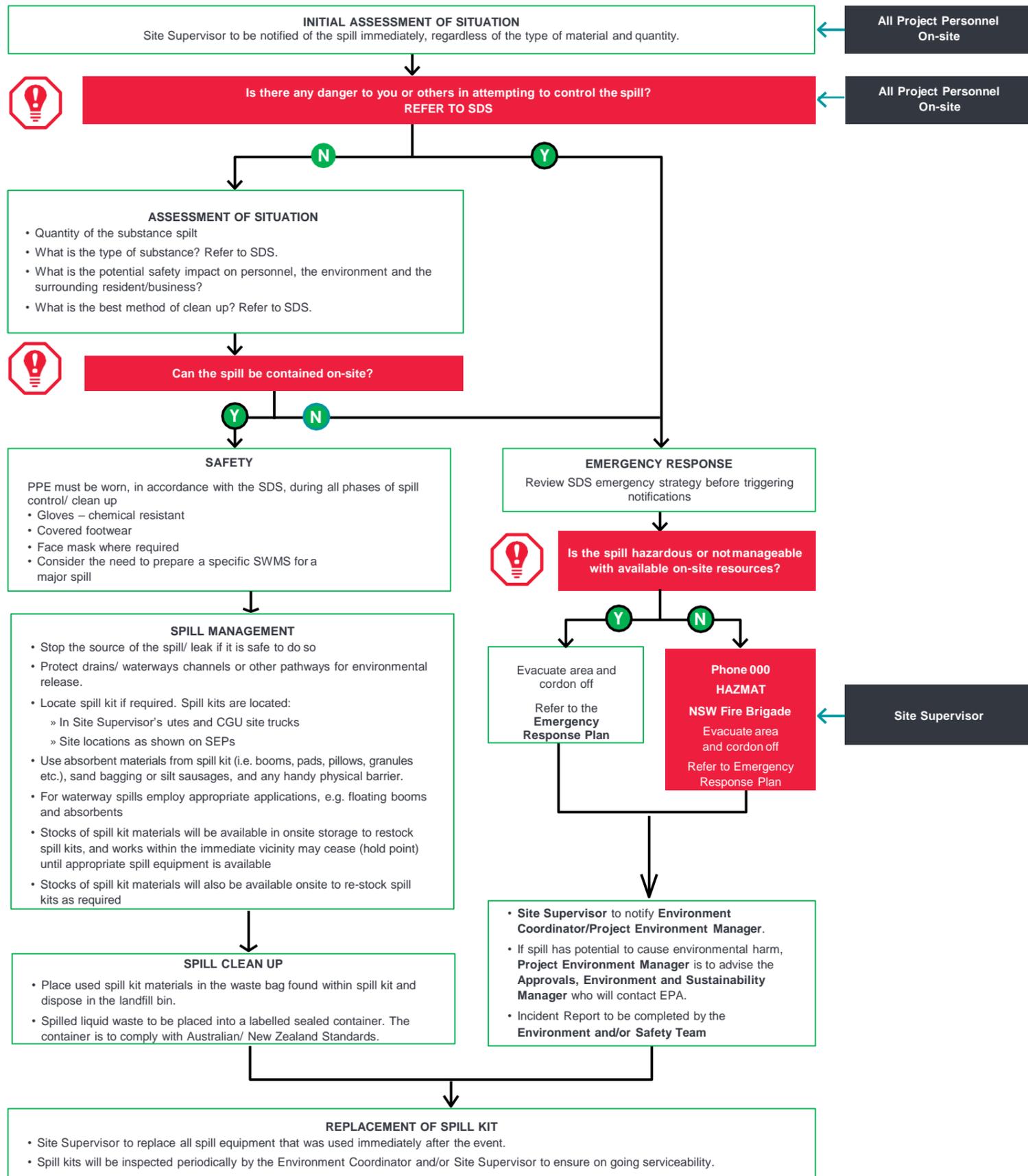
All of the above measures will be inspected weekly during the Environmental Inspection
Risk based inspections will also be undertaken during adverse weather conditions where safe to do so.
Actions will assigned a risk profile, recorded on the Environmental Inspection Checklist and closed out by responsible Supervisor and Engineer.
Ensure all erosion and sediment controls on site have been installed as per the Site Specific Erosion and Sediment Control Plan.

Rev: 01
Date: 14/09/2021
Reviewer: XXXXXXXXXX

Appendix D – Spill Management Procedure

SPILL MANAGEMENT PROCEDURE

MANAGEMENT AND RESPONSIBILITY



SPILL CLEAN UP/SPILL KIT APPLICATION

MATERIAL	APPLICATION
Booms	Deploy booms first to contain spill. Floating booms (hydrophobic) to be used for spills in waterways to minimise spreading. Consider the need to install floating booms before starting works if there is potential for contamination of waterways
Granules/ Particulate	If the booms alone cannot absorb the spill/ leak, then use absorbent granules to soak up spilled liquid. Absorbent granules are best for small spills/ leaks.
Pads and Pillows	Thin absorbent mats place over spills. Cushion shaped products containing absorbent fibres, used directly under a leak or drip.
Drain Covers	Covers placed over stormwater inlets to block drains and stop spills entering stormwater drains.
Sorbents	Sorbents are materials that soak up the spill. Once the absorbent material has been applied to the spill material, the mixture is recovered with the aid of nets, rakes, forks or pike poles.
Manual Recovery	Manual recovery is another common method especially for areas with a high concentration of oil.
Vacuum Truck	Used to remove liquid and sludge wastes.

Transport of dangerous goods and hazardous substances

Where Subcontractors and supplies are required to transport dangerous goods and hazard substances to the Project, they must do so in accordance with the National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail Code (Ed 7.7 2020), *Dangerous Goods (Road and Rail Transport) Regulation 2014* and *Dangerous Goods (Road and Rail Transport) Act 2008*.

EMERGENCY CONTACTS

- SUPERINTENDENT
- PROJECT ENVIRONMENT MANAGER
- ENVIRONMENT COORDINATORS
- LEAD SAFETY MANAGER
- SENIOR STAKEHOLDER AND COMMUNITY MANAGER



Oil Spill Boom



General Spill Kit



Chemical Lay Down Pad



Use granular absorbents

Appendix E – Groundwater Monitoring Procedure

GROUNDWATER MONITORING PROCEDURE

Map of Groundwater Monitoring Locations



Monitoring Procedure

Scope and Objectives

On a monthly basis:

- Measure standing water levels where applicable
- Determine presence of light non-aqueous phase liquids and measure thickness where present in monitoring well
- Purge groundwater in specified wells, monitor and record field parameters
- Collect and submit samples to NATA accredited laboratory for analytical testing
- Download groundwater data loggers recording standing water levels
- Review of analytical and field data
- Preparation of monitoring reports

Summary of Field Activities

Well Inspection

The general site condition is observed prior to commencement of field works for signs of any site activities that may have altered the groundwater contamination status or require modifications to the field or laboratory works program.

Each bore specified in the monitoring program is individually inspected for integrity and signs of damage or tampering.

Well Gauging

Standing water levels and total depths are measured using an oil/water interface probe prior to purging and sampling. This interface probe is decontaminated between each monitoring well, and rinsed with tap and deionised water. Standing water level is measured from a specified mark on top of the casing on each well, with the standing water levels presented as metres below top of casing.

Well Purging and Sampling

Field parameters and visual/olfactory observations are recorded prior to sampling at each location. Physico-chemical parameters including pH, electrical conductivity, redox potential, dissolved oxygen and temperature are measured using a calibrated water quality meter. Groundwater samples are collected once field parameters stabilize directly from the dedicated tubing used to purge the monitoring well. Groundwater samples are transferred to appropriately preserved sample containers provided by the laboratories. Samples are placed into a cooler containing ice and maintained at approximately 4°C whilst onsite and in transit to the laboratory.

Groundwater Analysis

Groundwater samples from each monitoring event are submitted under standard chain-of-custody procedures to a NATA-accredited laboratory for analysis.

Note: The Groundwater CEMP Sub-plan will be utilized for Stage 2 construction works monitoring.