Construction Environmental Management Plan

Transport for NSW
Package 3 – Portion 2 Early Works

Parramatta Light Rail – Stage 1
May 2020

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NSW GOVERNMENT

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Parramatta Light Rail – Stage 1

Portion 2 Early Works (Package 3) – Construction Environmental Management Plan (CEMP)

Document Control

Title	Parramatta Light Rail – Stage 1 Portion 2 Early Works (Package 3) Construction Environmental Management Plan
Prepared by	[redacted] Environmental Scientist [redacted] Environment & Hygiene Manager
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Dated	22/05/2020
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Endorsed by Environment Representative	[redacted] Environmental Representative
Signed	*Refer Annexure B*

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* A series of attachments are not triggered by Portion 2 Early Works, these are further detailed within the TfNSW Parramatta Light Rail – Stage 1 Staging Report (PLR-TFNSW-CBD-PE-RPT-000001) and Section 5 of the CEMP.

Glossary/Abbreviations

Abbreviation	Expanded text
AQMP	Air Quality Management Plan
ASS	Acid Sulfate Soils
CEMP	Construction Environmental Management Plan
CEMS	Contractor's Environmental Management System
CLM Act	*Contaminated Land Management Act 1997*
CLMP	Contaminated Land Management Plan
Compliance audit	Verification of how implementation is proceeding with respect to a Construction Environmental Management Plan (CEMP) (which incorporates the relevant approval conditions)
Containment Cell	The permanent stockpile that comprises the containment of waste materials excavated from site during Portion 1 and Portion 2 works
CoA	NSW Minister for Planning Conditions of Approval
CoPC	City of Parramatta Council
DoI	Department of Industry
DPIE	Department of Planning, Industry and Environment (formerly known as Department of Planning and Environment)
ECM	Environmental Control Maps
Ecologically sustainable development	Using, conserving and enhancing the community's resources so that the ecological processes on which life depends are maintained and the total quality of life now and in the future, can be increased (Council of Australian Governments, 1992)
EEC	Endangered Ecological Community
The EIS	*Parramatta Light Rail (Stage 1) – Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement, August 2017*
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

Abbreviation	Expanded text
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
Environmental Representative	A suitably qualified and experienced person independent of the Contractor and Proponent, and project design and construction personnel, employed for the duration of construction.
EMS	Environmental Management System
EPA	NSW Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979* (NSW)
EPBC-CoA	Federal Conditions of Approval under the EPBC Act
EPL	Environment Protection Licence
EPO	Environmental Performance Outcomes
ERG	Environmental Review Group – generally comprising representatives of Transport for NSW, the Environmental Representative, Project delivery team, regulatory authorities, key stakeholders from interfacing projects (e.g. UrbanGrowth and NSW Health) and Council (City of Parramatta Council). The ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role the ERG is to work collaboratively to manage the cumulative impacts of the Project and other interfacing projects.
ERMP	Emergency Response Management Plan
ESCP	Erosion and Sediment Control Plan
GTP	Groundwater Treatment Plant
HAMU	Heritage Archaeological Management Unit
LTEMP	Long Term Environmental Management Plan
Hold point	Is a verification point that prevents work from commencing prior to approval from Transport for NSW
Minister, the	Minister of the NSW Department of Planning and Environment (or delegate)
MSDS	Material Safety Data Sheet
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
OEH	Office of Environment and Heritage
PESCP	Progressive Erosion and Sediment Control Plan

Abbreviation	Expanded text
PIRMP	Pollution Incident Response Management Plan
Planning Approval	The Planning Approval includes the Conditions of Approval, the EIS and the Submissions and Preferred Infrastructure Report
PLR	Parramatta Light Rail
Principal, the	Transport for NSW
POEO Act	*Protection of the Environment Operations Act 1997* (NSW)
Project, the	Parramatta Light Rail – Stage 1 (Westmead to Carlingford)
RAP	Remediation Action Plan for 6-10 Grand Avenue, Camellia, NSW, November 2017)
RWVP	Remediation Works and Validation Plan
REMMM	Revised Environmental Mitigation and Management Measure, as outlined in the Project EIS documentation.
RMS	Roads and Maritime Services
ROL	Road occupancy licence
SaM Facility	Stabling and Maintenance Facility
SCO	Sydney Coordination Office
SDS	Safety Data Sheet
SEARs	Secretary's Environmental Assessment Requirements
SPIR	Submission and Preferred Infrastructure Report
SWMP	Soil and Water Management Plan
SW	Stormwater
TTAMP	Traffic, Transport and Access Management Plan
TWA	Trade Waste Agreement
TWTP	Temporary Water Treatment Plant
VMP	Voluntary Management Plan
WRMP	Waste and Resource Management Plan

1 Introduction

1.1 Background and project description

Parramatta Light Rail (PLR) is one of the NSW Government's major infrastructure projects being delivered to serve a growing Sydney population, particularly the population growth of the Parramatta Local Government Area (LGA).

PLR Stage 1 will connect Westmead to Carlingford via Parramatta Central Business District (CBD) and Camellia and is expected to be operational in 2023.

The PLR Stage 1 will link Parramatta's Central business district (CBD) and train station to a number of key locations, including the following:

- Westmead Precinct;
- Parramatta North Growth Centre;
- The new Western Sydney Stadium;
- The Camellia Town Centre;
- The new Powerhouse Museum;
- Riverside Theatre arts and cultural precinct;
- The private and social housing redevelopment at Telopea;
- The Rosehill Gardens Racecourse; and
- The three Western Sydney University campuses.

In summary, the key features of the project include:

- A new dual track light rail network of approximately 12 kilometres in length, (including approximately 7 kilometres within the existing road corridor and approximately 5 kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services);
- A total of 16 stops that are fully accessible and integrated into the urban environment including a terminus stop at each end of Westmead and Carlingford;
- High frequency 'turn-up-and-go' services operating seven days a week from 5am to 1am. Weekday services will operate approximately every 7.5 minutes in the peak period between 7 am and 7 pm;
- Modern and comfortable air-conditioned light rail vehicles, nominally 45 metres long and driver-operated, each carrying up to 300 passengers;
- Intermodal interchanges with existing public transport services at Westmead terminus, Parramatta CBD and the Carlingford terminus;
- Creation of two light rail and pedestrian zones (no general vehicle access) within the Parramatta CBD along Church Street (generally between Market Street and Macquarie Street) and along Macquarie Street (generally between Horwood Place and Smith Street);
- A Stabling and Maintenance (SaM) Facility located in Camellia for light rail vehicles to be stabled, cleaned and maintained;
- New bridge structures along the alignment including over James Ruse Drive and Clay Cliff Creek, Parramatta River (near the Cumberland Hospital), Kissing Point Road and Vineyard Creek, Rydalmere;

- Alterations to the existing road network including line marking, additional traffic lanes and turning lanes, new traffic signals, and changes to traffic flows;
- Relocation and protection of existing utilities;
- Public domain and urban design works along the corridor and at Stop precincts.
- Closure of the heavy rail line between Carlingford and Clyde;
- Active transport corridors and additional urban design features along sections of the alignment and within Stop precincts;
- Integration with the Opal Electronic Ticketing System (ETS); and

  Real time information in light rail vehicles and at Stops via visual displays and audio.

An overview of Parramatta Light Rail Stage 1 route is shown in Figure 1-1.

Figure 1-1: Parramatta Light Rail Stage 1 Route

1.1.1 Stabling and Maintenance Facility

As part of the development of the Project, the Transport for NSW (TfNSW) owned land located at 6-8 Grand Avenue Camellia was identified as the preferred site for the stabling and maintenance facility (SaM Facility). The SaM Facility is being constructed on the former industrial site adjacent to the Rosehill Gardens Racecourse within the Rosehill and Camellia precinct (refer to **Figure 1-1**).

The SaM Facility would provide for the storage of light rail vehicles, maintenance, repair, refurbishing, upgrading, stabling, cleaning of light rail vehicles and a base for infrastructure maintenance activities and will operate 24 hours a day and 7 days a week.

Administration and staff facilities as well as the operations control centre for the light rail network will be located within the maintenance building. Parking for staff and visitors will be provided on site, including maintenance vehicle parking. An electrical substation will be located at the rear of the site to power the facility and light rail.

To accommodate the development of the stabling and maintenance facility, and reduce the potential for interaction with contaminated material during construction, remediation activities will be undertaken as part of the *Package 3: Early Works in Portion 2* (this project and referred to hereafter as Portion 2 Early Works):

- Importation and placement of appropriate fill material across the site to raise the surface finish level by about two metres;
- Installation of an appropriate capillary break to eliminate subsurface contamination migration;
- Installation of an appropriate passive vapour collection system, comprised of a HDPE perforated pipe and ventilation network;
- Installation of an appropriate vapour barrier and structural surface capping layer;
- Establishment of plant, equipment and facilities on the Site to support the delivery of the Works;
- Establishment and management of utilities and other below-ground infrastructure on the Site to support the delivery of the Works;
- Construction of a Containment Cell for the retention and containment of waste materials on-site as per TfNSW Consistency Assessment signed and dated 28/11/19;
- Implementation of Ground Improvement Works where required;
- Implementation of the monitoring and validation program; and
- Preparation of Stage 2 Site Validation Report and a Long Term Environmental Management Plan (LTEMP) to the satisfaction of the Site Auditor.

As schedule of the indicative activities associated with the Portion 2 Early Works is included in **Table 1-1**.

Table 1-1: Indicative schedule of proposed project activities

Activity	Start	Finish
Preliminaries – Development, Submission, Review and approval of contract management and occupational health and safety plans	Q1 2019	Q2 2019
Remediation Works, Validation Plan and Sampling Analysis and Quality Plan	Q4 2018	Q2 2020
Portion 2 Early Works Design Package	Q4 2018	Q2 2020
Establishment of capping plant and equipment	Q3 2020	Q3 2020

Excavation activities for SaM facility design	Q3 2020	Q4 2020
Ground Improvement Works	Q3 2020	Q4 2020
Integrated Capping System	Q4 2020	Q1 2021
Final Site Cap	Q4 2020	Q1 2021
Construction of Containment Cell	Q3 2020	Q4 2020
Disestablishment	Q1 2021	Q1 2021
Deliverables – Supply As-built and QA documentation, LTEMP, Validation Report	Q1 2021	Q1 2021

1.2 Purpose and scope of this CEMP

This Construction Environmental Management Plan (CEMP or Plan) has been prepared to target specifically Portion 2 Early Works as part of the Enabling Stage of the Project. Refer to the *Parramatta Light Rail (Stage 1) Staging Report (Project Wide)* (TfNSW 2019) for further detail on other packages that make up Parramatta Light Rail Stage 1.

Package 3: Early Works Portion 2*: the remediation (capping) of the* TfNSW *owned site at 6-8 Grand Avenue, Rosehill. This is the allocated site for the SaM Facility.*

Ventia Pty Ltd (Ventia) has been appointed by Transport for NSW (TfNSW) as the head contractor for Package 3 works, responsible for delivering the remediation (capping) and containment of the TfNSW owned site at 6-8 Grand Avenue Rosehill.

This CEMP and sub plans have been prepared to address the environmental requirements, including the NSW Minister for Planning's Conditions of Approval (CoA) and the Revised Environmental Mitigation and Management Measures (REMMM) listed in the *Parramatta Light Rail (Stage 1) – Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement, August 2017* (the EIS) and the subsequent Submissions Report (incorporating Preferred Infrastructure Report) (TfNSW 2018) and all applicable legislation.

Additionally, this CEMP and sub plans outlines how the Contractor, will minimise the environmental risks and achieve environmental outcomes on the Project by providing a structured approach to ensure appropriate REMMM and controls are implemented during the construction of the Portion 2 Early Works (refer to Section 1.1.1) as part of PLR – Stage 1 (Westmead to Carlingford).

This CEMP collectively covers seven sub-plans;

- Traffic, Transport and Access Management Plan (TTAMP) required under CoA C3 – Appendix B1;

- Noise and Vibration Management Plan (NVMP) required under CoA C3 – Appendix B3;
- Soil and Water Management Plan (SWMP) required under REMMM GEN-1 – Appendix B4;
- Air Quality Management Plan (AQMP) (GEN-1) required under REMMM GEN-1 – Appendix B7;
- Waste and Resource Management Plan (WRMP) required under REMMM GEN-1 – Appendix B8; and
- Contaminated Land Management Plan (CLMP) required under REMMM CM-3 – Appendix B9.
- Emergency Response Management Plan (ERMP) required under REMMM GEN-3 – Appendix A7

The following sub-plans required by CoA C3 are not triggered by the Portion 2 Early Works and are incorporated within this CEMP. Their inclusion is to facilitate consultation with relevant project stakeholders of risks and associated controls and mitigations within these areas and inform the rationale as to why a standalone management plans are not warranted;

- Flora and Fauna / Biodiversity Management Plan required under CoA C3 – 4.7 of this CEMP
- Heritage Management Plan required under CoA C3 – 4.8 of this CEMP
- Flood Management Plan required under CoA C3 – 4.13 of this CEMP

A detailed description of the Project is provided in Section 6.10 of EIS.

The CEMP has been prepared in accordance with:

- The relevant legislative requirements;
- The Deed;
- The Planning Approval (including the CoA);
- NSW government Environmental Management Systems Guidelines (3rd Edition, August 2013 (Updated 16 September 2013));
- AS/NZS ISO 14001: 2004; and
- Environmental assessment documentation requirements (e.g. EIS, Technical Reports, modifications reports, Submissions Reports, etc.).
- The CEMP details the environmental management measures, controls, resources and responsibilities required during the project to comply with TfNSW standard requirements.
- The objectives of this CEMP are that:
- Environmental requirements contained in statutory approvals, licences, agreements, and other controls relevant to the project are clearly defined, and mechanisms for implementation specified;
- Identify the environmental obligations attached to the project and the hazards and risks associated with the works;
- Assist in the prevention of unauthorised environmental harm;
- Fulfil the Principal’s environmental requirements as defined by the Contractual documents;
- Minimise negative impacts on the community that relate to environmental impacts;

- Fulfil Contractor's EMS requirements, enabling continued certification to ISO 14001 and contribution to Contractors' overall business plans;
- Processes for resourcing and implementing this plan are set to provide certainty of delivery;
- Processes for auditing, monitoring and reporting on performance and effectiveness of the CEMP are defined; and
- Establish a continual improvement framework engaging with the Principal and our subcontractors.

Environmental objectives and targets have been developed and are described in Section 3.2.3 and are based on environmental aspects, impacts and risk as identified in a Risk Register in Appendix A2.

Legal requirements and AS/NZS ISO 14001 requirements are listed in Appendix A1, with a cross reference to where they are met in this CEMP. The agency consultation requirements for each sub plan are outlined in Appendix A5.

This CEMP is the overarching document in the Environmental Management System (EMS) for the Project that includes a number of management documents. It is applicable to all staff and Subcontractors associated with the construction of the Project. The implementation of the CEMP and associated sub-plans are aligned with Project level management plans including the Community and Stakeholder Engagement Plan and the Sustainability Plan as illustrated in Figure 1-2.

The review and document control process for this Plan are described further in Sections 3.11 & 3.12.

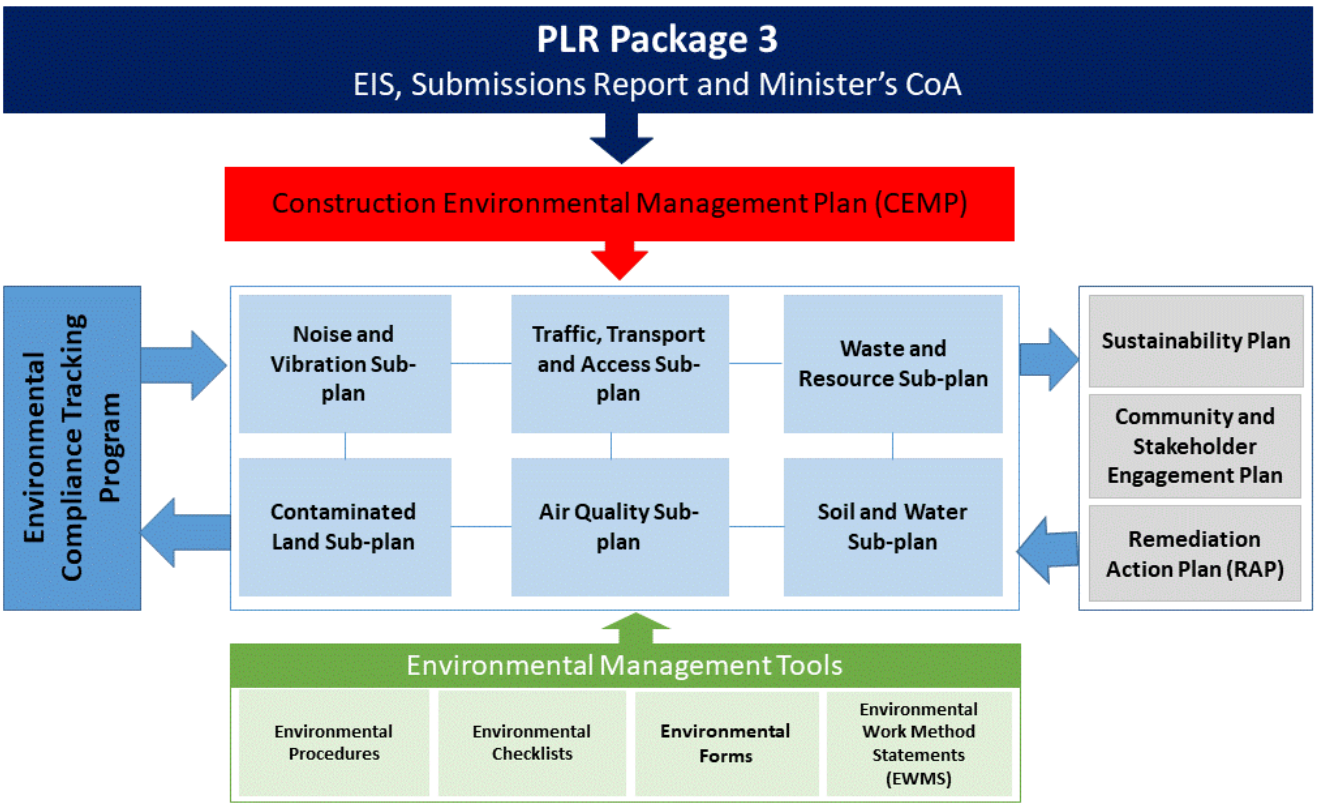

Figure 1-2: Portion 2 Early Works Environmental Management System and CEMP Context

1.3 Project Site

1.3.1 Site Location

The Site is located on the Camellia Peninsula and bounded by Grand Avenue to the north and Colquhoun Street to the west, with the Parramatta River approximately 250 metres to the north. The site comprises approximately 6.2 hectares and is zoned Heavy Industrial under the Parramatta Local Environmental Plan 2011. The Site is currently undergoing remediation activities, with the majority of above ground structures having been demolished to slab level and removed from the Site and the installation of a hydraulic barrier wall around the perimeter of the site. The site location is provided in Figure 1-3**:**

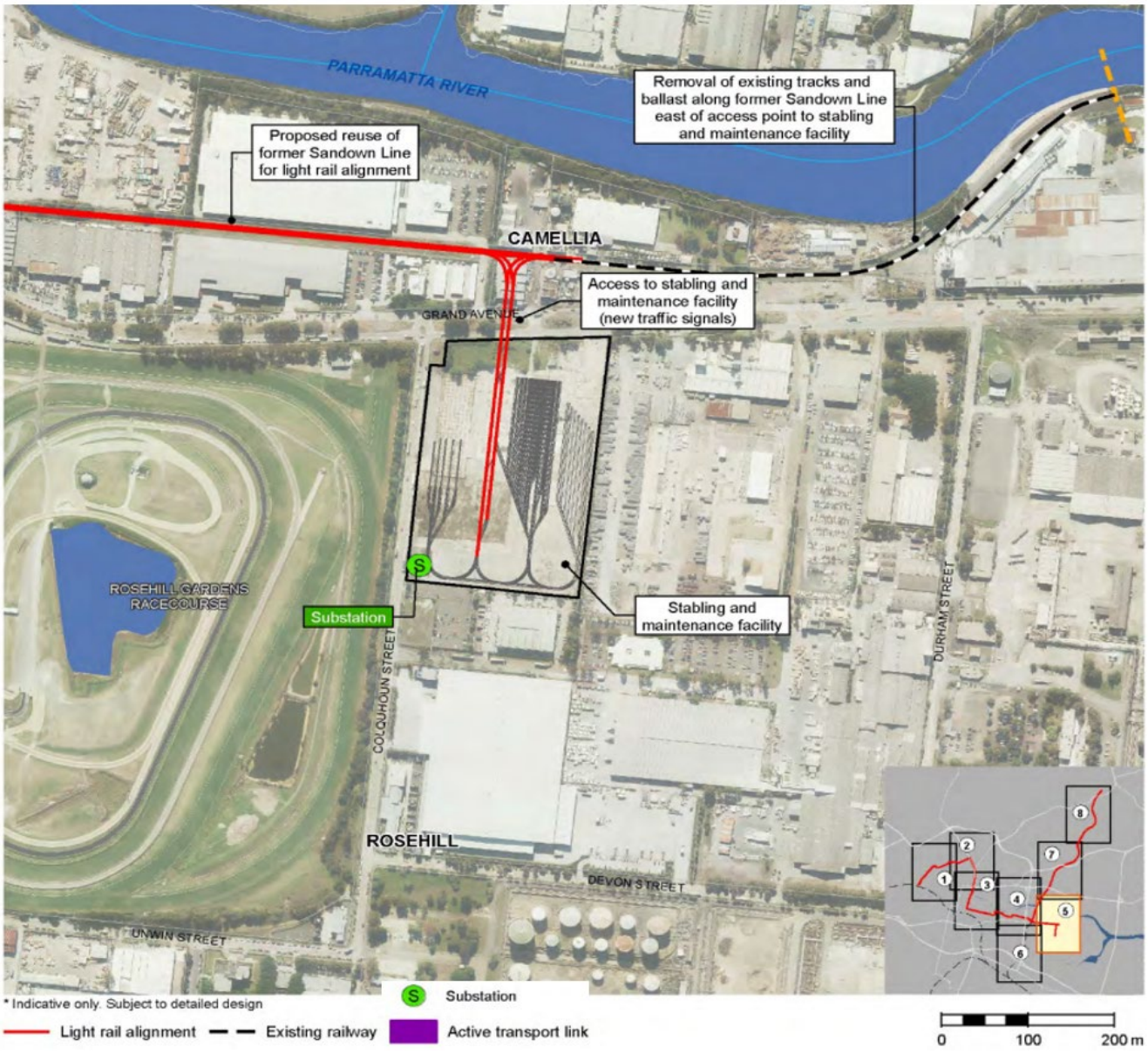

Figure 1-3: Location of SaM facility (source: EIS Figure 5.2E)

1.3.2 Site History

The Site was historically used for chemical manufacturing purposes, including chrome chemicals and chlorofluorocarbons (CFCs), which resulted in significant contamination of soils and groundwater. Buried asbestos and asbestos containment cells are also known to be present on the Site. Due to the Site's location, physical and environmental setting, and the nature of contaminants present, contamination conditions and associated risks are unusual and complex. The site has been subject to long term regulation by the NSW Environmental Protection Authority (EPA) under the *Contaminated Land Management Act 1997* (CLM Act).

Numerous environmental investigations and targeted remedial activities in selected areas have been undertaken at the Site. The investigations and assessments performed to date have identified the following contaminants of concern that drive the need for remediation of the Site:

(a) Hexavalent chromium (Cr(VI)); and

(b) Volatile chlorinated hydrocarbons (VCHs), including carbon tetrachloride, chloroform, tetrachloroethene and associated daughter products.

Other contaminants of concern are present on the Site, including asbestos.

1.4 Related environmental legislation, planning approval and other documents

1.4.1 Statutory Context

The Project is Critical State Significant Infrastructure (CSSI) pursuant to section 5.13 of the Environmental Planning and Assessment Act, 1979 (EP&A Act). The Minister for Planning is the approval authority for the Project.

In accordance with section 5.22(2) of the EP&A Act, the only environmental planning instruments that apply to the proposal are State Environmental Planning Policy (Infrastructure) 2007 (insofar as it relates to the declaration of development that does not require consent) and State Environmental Planning Policy (State and Regional Development) 2011 (as it pertains to the declaration of infrastructure as SSI). There are no other environmental planning instruments that substantially govern the carrying out of the project.

The Portion 2 Early Works site has been subject to long term regulation by the NSW Environmental Protection Authority (EPA) under the Contaminated Land Management Act 1997 (CLM Act). The remediation strategy for the Site is detailed within the Remediation Action Plan (RAP). The RAP has been reviewed and endorsed by a NSW EPA-accredited Site Auditor in accordance with the CLM Act.

Detailed environmental impact assessments have been carried out and approved by the Minister for Planning. The Planning Approval for the project is described below in Section 1.5.2.

1.4.2 Parramatta Light Rail Planning Approval

An Environmental Impact Statement (EIS) for the project was placed on public exhibition between 23 August and 23 October 2017. During this period, government agencies, interested stakeholders and the community were invited to make written submissions on the project to the Department of Planning and Environment. Following the conclusion of the public exhibition period, Transport for NSW prepared a Submissions Report and Preferred Infrastructure Report for the project to address the issues raised in community and stakeholder submissions, and to document a number of proposed design changes and additional investigations undertaken since exhibition of the EIS.

In May 2018, the Minister for Planning granted approval of the Project, under Section 115ZB of the EP&A Act. Following approval of the CSSI, a modification was assessed by the DPIE and

subsequently approved on the 21st December 2018 under section 115ZI of the EP&A Act (Modification 1). Modification 2 was requested from DPIE and approved on the 25th January 2019.

The planning approval (Infrastructure approval SSI 8285) and related environmental assessment documents are located at:

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8285

1.4.3 Legal and other requirements

All legislation relevant to this CEMP and sub-plans are included in the *Legal and Other Requirements Register*, which is attached as Appendix A1 of this CEMP. This register will be reviewed at regular intervals e.g. during management reviews (refer Section 3.12), and updated with any applicable changes. Changes made to the legal requirements register will be communicated to the wider team where necessary through toolbox talks, specific training and other methods detailed in Section 3.5.

The site has been subject to long term regulation by the NSW EPA under the CLM Act. Therefore activities of the Portion 2 Early Works has been reviewed and endorsed by NSW EPA-accredited site auditor in accordance with CLM Act, as part of review process of RAP prior to the commencement of Portion 2 Early Works.

The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the EIS as amended by the Submissions Report (incorporating Preferred Infrastructure Report) unless otherwise specified in the CSSI approval.

In the event of an inconsistency between the EIS and the Submissions Report (incorporating Preferred Infrastructure Report) or any other document required under the CSSI approval, the conditions of the approval prevail to the extent of the inconsistency.

1.5 Environmental Management System overview

Environmental Management System is an integrated set of tools and resources that define how we manage environmental risks at all levels of the business. Ventia operates an environmental system compliant with AS/NZS ISO 14001. All works carried out on the site will be in accordance with:

- Relevant legislation;
- EIS and CoA for the site;
- Contractors Safety, Health, Environment and Quality Standards and Processes;
- TfNSW's Environment & Sustainability Policy;
- Principal and Contractual Requirements;
- ISO 14001 Environmental Management System;
- TfNSW Environmental Guidelines;
- Ventia Environmental Policy (signed copy of policy Is attached in Appendix A3); and
- All other legal requirements

This plan will be implemented with compliance and performance monitored and reviewed through the broader context. A complete list of guidelines, legislations and other relevant documents can be found in Appendix A1, Legal and ISO Obligations Register.

2 Endorsement and approval

This CEMP (and sub-plans) will be approved by the Project Manager and Environment & Hygiene Manager and TfNSW prior to submission to DPIE. The CEMP (and sub-plans) must be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of construction of Portion 2 Early Works. The Environmental Representative Endorsement Letter is attached in Addendum B of this plan.

Management review and revisions of this document are outlined in Sections 3.12 & 3.13 of this document. CEMP sub-plans are required to be prepared in consultation with the relevant government agencies as listed in Condition of Approval C3. The sub-plans relevant to the Portion 2 Early Works and associated stakeholder consultation is listed below.

Table 2-1: Stakeholder consultation requirements

Required CEMP Sub-plan	Consultation
(a) Traffic, transport and access	Relevant Council(s), Roads and Maritime Services, Emergency Services
(b) Noise and vibration	Relevant Council(s), EPA, NSW Health
(c) Flood management	Relevant Council(s), OEH, Sydney Water
(d) Heritage	Relevant Council(s), OEH
(e) Flora and Fauna / Biodiversity	Relevant Council(s), OEH

Comments received on the CEMP sub-plan will be considered and incorporated in the respective sub-plan as an appendix.

Construction of Portion 2 Early Works will not commence until the CEMP and Sub-plans have been approved by the Secretary consistent with CoA C8. Additionally, the approved CEMP and sub-plans, including any amendments approved by the ER, will be implemented for the duration of construction.

3 Environmental Management Plan

3.1 Preparation and availability of the CEMP

The CEMP for this Project has been prepared in accordance with requirements of the CSSI 8285 approval CoA C1-C8. (refer to Section 1.2 for further details).

The CEMP shall be available to all workers, subcontractors, visitors or anyone working on the project throughout the duration of works under the CSSI.

3.2 Planning

3.2.1 Environmental Risk Assessment and Control

Project wide environmental aspects and impacts have been identified and assessed in Appendix A2 – Risk Register.

Significant environmental issues, with a risk ranking from High (12–16) or Medium (8-11), will be controlled to a degree which is commensurate with the level of risk and the level of influence which the contractor has over these issues. The control measures to address these issues are documented in the respective CEMP sub-plan.

Activities, aspects or impacts that represent a very high or extreme risk (>17) after control measures have been applied must be reviewed / redesigned or have approval of the Contractor Business Unit Manager of Environmental Services.

Key environmental risks, as defined in Appendix A2, will be reviewed periodically during the course of the contract, including when the following situations arise:

- Principals' recommendations for changes (particularly following initial review);
- Changes to the Contractor's environmental management system;
- Opportunities for improvement or deficiencies in the project system are identified; and
- Following an audit of the system or the occurrence of significant incidents and non-conformances.

Section 3.9.3 outlines the proposed audit schedule of the Environmental Management System and CEMP.

3.2.2 Regulatory requirements and compliance

Legislation

A register of legal and ISO requirements for the Project is contained in Appendix A1. This register is maintained as a checklist. This register will be reviewed at regular intervals, such as during management reviews, and 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 3.5 of this CEMP.

Approvals, permits and licences

The site has an existing interim GTP and TWTP. The GTP is designed to remove contaminants from groundwater pumped from the north-eastern boundary of the site. Based on available historical data, the volume of groundwater treated daily by the GTP is approximately 2 m^3/day. The TWTP has a max average discharge 220m^3 per day. Discharge of treated groundwater and surface water is licensed under Trade Waste Agreement (TWA) Number 15831.

The site is registered on the EPA Section 58 Contaminated Sites Register. Voluntary Remediation Proposals and Management Orders relevant to this site is summarised in **Table 3-1**.

Table 3-1: **Summary of Regulatory Notices, Declarations, Agreements and Approvals**

Item	Description*
Maintenance of Remediation Notice Number 28002	Dated 26 August 1998, issued under Section 28 of the *CLM Act 1997.* Subject: Maintenance of Remediation and prohibition of occupiers from causing disturbance of the land without the prior written approval of the EPA
Declaration of Remediation Site Number 21035	Dated 21 January 2003, issued under Section 21 of the *CLM Act 1997.* Subject: Declaration of Remediation Site
Voluntary Remediation Proposal (VRP) number 26051	Dated 29 October 2003, issued under Section 26 of the *CLM Act 1997.* Subject: Ongoing pumping, treatment and monitoring of groundwater to control potential offsite contaminant migration
Voluntary Remediation Proposal (VRP) number 26117	Dated 23 February 2009, issued under Section 26 of the *CLM Act 1997.* Subject: Remedial works at Area A
Voluntary Management Proposal (VMP) number 20101705	Dated 30 March 2010, issued under Section 17 of the *CLM Act 1997.* Subject: Remedial works at Area B and chrome liquor residual ponds (CLRP)
Voluntary Management Proposal (VMP) number 20181709	Dated 03 October 2018, issued under Section 17 of the *CLM Act 1997.* Subject: Remediation activities as outlined in *Remediation Action Plan for 6-10 Grand Avenue, Camellia (Golder Associates, 1775480-006-R-Rev0 RAP, 2 November 2017*
Voluntary Management Proposal (VMP) number 20191017	Dated 20 April 2020, issued under Section 17 of the *CLM Act 1997.* Subject: Remediation activities as outlined in *Remediation Action Plan for 6-10 Grand Avenue, Camellia (Golder Associates, 1775480-006-R-Rev0 RAP, 2 November 2017*

Compliance tracking

In accordance with CoA A30 - A32, a compliance tracking program must be developed and implemented during Portion 2 Early Works. The Compliance Tracking Program must be endorsed by the ER then submitted to the Secretary for information before the commencement of works. The Compliance Tracking Program will be used to monitor compliance with the terms of the Planning Approval, or any other Authority Approvals, and REMMM are contained in the compliance tracking program and provide a reference to where each requirement is addressed by this CEMP or other Project documentation.

CoA A30 - A37 outlines the required compliance tracking requirements and are found in Table 5-1**: Construction Environmental Management Plan Conditions of Approval** (Construction Environmental Management Plan Conditions of Approval).

The Environment & Hygiene Manager is responsible for managing compliance tracking schedules relating to CoA and REMMMs, which are based on registers provided by TfNSW as part of their Compliance Tracking Program.

The project shall report compliance six-monthly to the DPIE through Construction Compliance Report as per the requirement of CoA A37. Schedules are reviewed and updated quarterly as required for reporting and submitted to TfNSW at an agreed timeframe. Similarly, compliance with licences/permits is undertaken with compliance tracking schedules, to be prepared after licences/permits are issued. Relevant methods for tracking compliance include:

- Environmental Monitoring Inspections (outlined in Section 3.8.1 and 3.10)
- Environmental Representative monthly reports;
- Non-compliance reports;
- TfNSW-supplied CoA, REMMM compliance schedules; and

Audit reports (both internal and independent audits).

3.2.3 Environmental objectives and targets

As a means of assessing environmental performance during construction of the Project, environmental objectives and targets have been established. These objectives and targets have been developed with consideration of key performance outcomes for each key issue, as specified in the Project CoA, REMMM and Secretary's Environmental Assessment Requirements (SEARs). The objectives and targets are consistent with the Project environmental policy and will assist in monitoring whether the commitments of the policy are being met.

A signed copy of corporate environmental policy is attached in Appendix A3. The policy has been developed in accordance with requirements outlined in Section 5.2 of ISO 14001 and incorporates all requirements of the EIS documentation, all relevant licences, permits and approvals for the Project.

The environmental policy is displayed on the contractor's website, site office and communicated to staff and other interested parties via inductions and ongoing awareness programs.

The performance of the Project against the objectives and targets will be assessed through the inspections, monitoring and auditing regime outlined in Section 3.9 of this CEMP, as well as the management review process outlined in Section 3.12. Project performance monitoring will be documented in the Project construction compliance reports and at least on an annual basis as part of the management review.

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

Table 3-2: Environmental objectives and targets

Objective	Target	Measurement tool	Reference
Construct the Portion 2 Early works in accordance with project approval	• Full compliance with Statutory approvals	• Environmental Audits • Compliance Tracking Reports • Management Reviews	CoA A1 – A11
Compliance and construction of the Project in accordance with environmental approvals and Principal requirements.	• All conditions of approval and Principle requirements implemented throughout the project in accordance with requirements and within designated timeframes. • No non-conformances identified during self-regulation through the Compliance Tracking Program. • Close out the findings of ER inspections and reports within the timeframes determined based on risk assessment. • Full compliance with statutory approvals. • Weekly inspections are undertaken. • Audits are completed as per schedules.	• Compliance auditing and reporting • Compliance tracking program • Weekly Environmental inspections and reports • Monthly Environmental Reports • Management Review	CoA A30 - A37, A40
Compliance with all legal requirements.	• No regulatory infringements (PINs or prosecutions). • No formal regulatory warnings. • No Major environmental incidents.	• No formal regulatory warning. • Compliance auditing and reporting • Management view.	Appendix A1
Engage with the affected and broader community, minimise complaints and respond to any complaints within a suitable timeframe.	• Disseminate regular Project updates and other information through the Project website and other tools identified in the Community Engagement Strategy. • Record and response to complaints within the timeframe specified in the Community Engagement Strategy. • Respond to all environmental complaints as per Community Engagement Strategy within the designated timeframe. • Elude avoidable complaints.	• Review complaints register • Compliance auditing and reporting.	CoA B6 - B9

Objective	Target	Measurement tool	Reference
Continuously improve environmental performance.	• No breaches or environmental infringement notices • No major incidents • Develop and maintain a program of ongoing environmental training. • Capture lessons learnt from environmental incidents to minimise repeat issues. • Encourage and reward innovation and effort throughout the works force.	• Independent Environmental Audits • Compliance auditing and reporting • Management reviews.	CoA A1 – A11, A40 - A42
Minimise resource consumption and waste generation	• Achieve targets set in WRMP	• Audit Reports • Monthly Environmental Reports	CoA E127

3.2.4 Environmental Control Maps

Environmental control maps (ECMs) are documents prepared to assist in the planning and delivery of the Project. The ECM allows for a focused risk assessment of the environmental and community impacts of specific work areas and activities. In accordance with the requirements of the Guide to Environmental Control Map (3TP-SD-015/8.0), the ECMs will be prepared prior to the commencement of relevant construction activities and will incorporate relevant mitigation measures and controls, including those from relevant management sub plans. They also identify key procedures to be used concurrently with the ECMs. ECMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

ECMs will be prepared progressively in the lead up to and throughout construction in consultation with relevant members from the Project team, and concurrence provided by the TfNSW Environmental Manager.

ECMs for activities identified as having high environmental risk will undergo a period of consultation with stakeholders and authorities prior to approval.

Environmental control maps will also be prepared for high risk activities including those outlined in the EIS and those identified through the Project Risk Register.

The ECMs must meet the requirements of the Guide to Environmental Control Map (3TP-SD-015/8.0), to include details of:

- Where environmental controls are located and how they are used;
- Where and when environmental monitoring is to occur; and
- How environmental control measures are communicated to project personnel.

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

Regular monitoring, inspections and auditing of compliance with the ECMS will be undertaken by Project management and environmental personnel to ensure that all controls are being followed and that any non-conformances are recorded and corrective actions implemented. An example ECM is located in Appendix A6.

3.3 Resources, responsibilities and authority

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

Figure **3-1: Project Management Structure**.

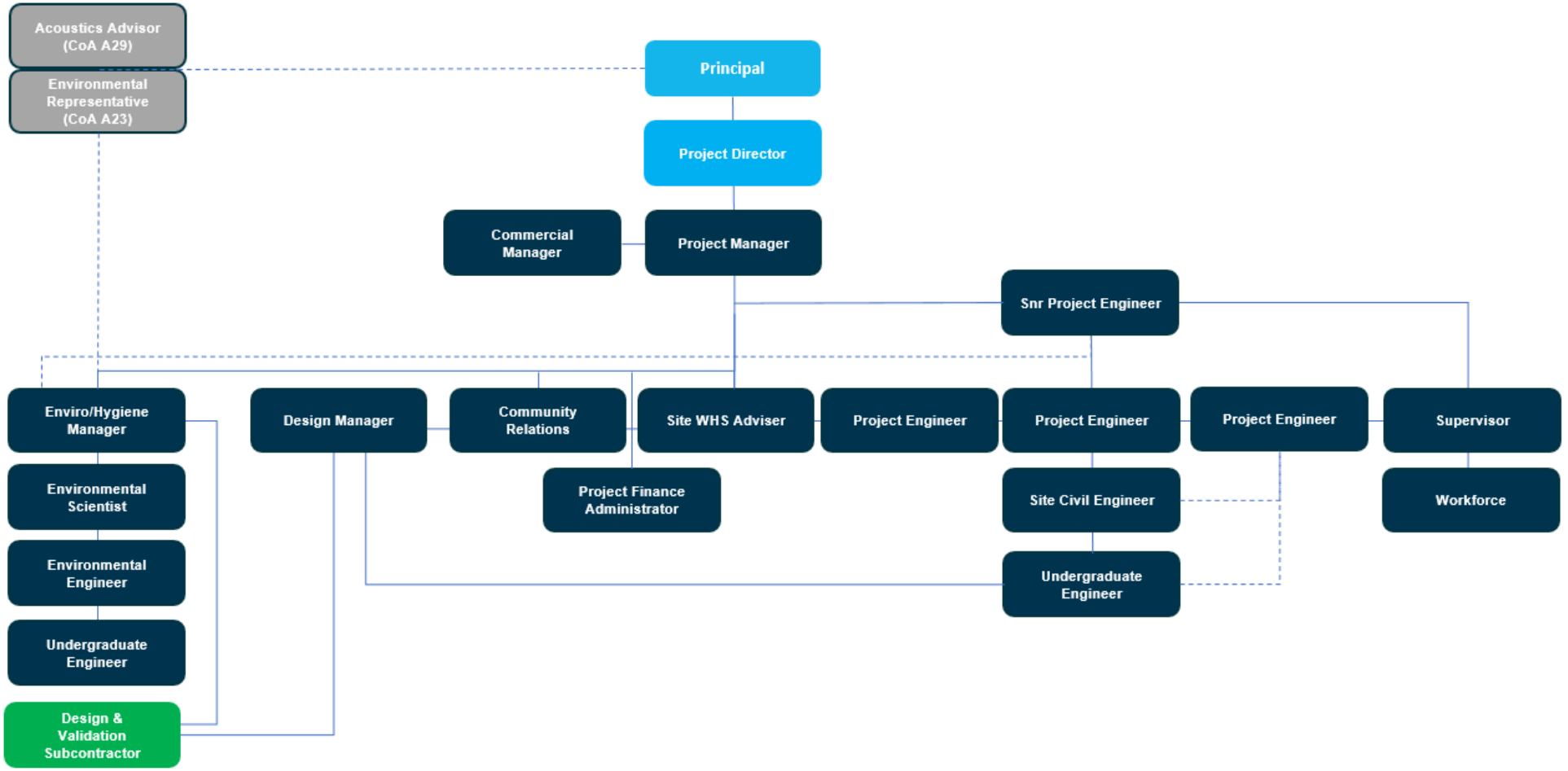

Figure 3-1: Project Management Structure

3.3.1 Roles and responsibilities

Environmental Representative

For the duration of the works until after the commencement of operation, or as agreed with the Secretary, the approved ER must:

- Receive and respond to communication from the Secretary in relation to the
- environmental performance of the CSSI;
- Consider and inform the Secretary on matters specified in the terms of this approval;
- 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;
- Review documents identified in Table 2 (of the CSSI Approval) and any other documents that are identified by the Secretary, for consistency, in the opinion of the ER, with requirements in or under this approval and if so:
    - i) make a written statement to this effect before submission of such documents to the Secretary (if those documents are required to be approved by the Secretary); or
    - ii) make a written statement to this effect before the implementation of such documents (if those documents are required to be submitted to the Secretary for information or are not required to be submitted to the Secretary);
- Regularly monitor the implementation of the documents listed in Table 2 (of the CSSI Approval) to ensure implementation is being carried out in accordance with the document and the terms of this approval;
- As may be requested by the 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 A41 of this approval;
- As may be requested by the Secretary, assist the Department in the resolution of community complaints;
- Assess and, if acceptable, approve the impacts of minor ancillary facilities comprising lunch sheds, office sheds and portable toilet facilities or other ancillary facilities determined by the ER to have minor environmental impact; and
- Prepare and submit to the Secretary and other relevant regulatory agencies, for information, an Environmental Representative Monthly Report providing the information set out in the Environmental Representative Protocol under the heading “Environmental Representative Monthly Reports.” The Environmental Representative Monthly Report must be submitted within seven days following the end of each month for the duration of the ER’s engagement for the CSSI.

Acoustics Advisor (AA)

A suitably qualified and experienced AA has been engaged by TfNSW and has been approved by the Secretary in accordance with CoA A26. The AA will fulfil the requirements of CoA A26 - A29. In addition to the requirements of these CoA the AA will also:

- Receive and respond to communication from the Secretary about the performance of the CSSI in relation to noise and vibration;
- Consider and inform the 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 work practices to avoid or minimise adverse noise and vibration impacts;

- Consider consultation outcomes with affected receivers to determine the adequacy of noise mitigation and management measures including work hours and respite periods;
- Review all noise and vibration documents required to be prepared under the terms of this approval and, should they be consistent with the terms of this approval, endorse them before submission to the Secretary (if required to be submitted to the Secretary) or before implementation (if not required to be submitted to the Secretary);
- 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;
- In conjunction with the ER, the AA must:
    - As may be requested by the Secretary, help plan, attend or undertake audits of noise and vibration management of the CSSI including briefings, and site visits;
    - If conflict arises between the Proponent and the community in relation to the noise and vibration performance during construction of the CSSI, follow the procedure in the Community Communication Strategy approved under Condition B3 of this approval to attempt to resolve the conflict, and if it cannot be resolved, notify the Secretary;
    - Consider relevant minor amendments made to the CEMP, relevant sub-plans and noise and vibration monitoring programs that require updating or are of an administrative nature, and are consistent with the terms of this approval and the management plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, endorse the amendment. This does not include any modifications to the terms of this approval;
    - Assess the noise impacts of minor construction ancillary facilities; and
- Prepare and submit to the Secretary and other relevant regulatory agencies, for information, a monthly Noise and Vibration Report detailing the AAs actions and decisions on matters for which the AA was responsible in the preceding month (or another timeframe agreed with the Secretary). The Noise and Vibration Report must be submitted within seven days following the end of each month for the duration of construction of the CSSI, or as otherwise agreed with the Secretary.

TfNSW Environmental Manager

- Review CEMP, sub-plans and related documents prepared for the Project;
- Review minor Project refinements that are consistent with the Project environmental assessment and approval documentation and provide with recommendations; and
- Monitor the environmental performance of the Project in relation to TfNSW requirements.

Contractor Project Manager

The Project Manager is ultimately responsible for implementation of the Portion 2 Early Works environmental obligations. The Environment and Hygiene Manager reporting directly to the Project Manager is responsible to ensure that Contractor delivers its environmental obligations. The environmental responsibilities of the Contractor Project Manager include (but are not limited to):

- Ensure all works comply with relevant regulatory and Project requirements;
- Ensure the requirements of this CEMP and sub-plans are fully implemented;
- Endorse and maintain the Project environmental policy (Appendix A3);
- Liaison with TfNSW, ER and other government authorities as required;
- Participate and guide regular management review of this CEMP, sub-plans and relevant documentation;

- Provide and authorise resources to ensure compliance with this CEMP and sub-plans are achieved;
- Ensure all staff are inducted according to of the environmental requirements;
- Ensure effective complaints investigation and effective resolution;
- Immediately stop work if an unacceptable impact on the environment is likely to occur; and
- Mandate and ensure that environmental protection remains an integral element of all project activities.

Contractor Environment & Hygiene Manager

The Environment & Hygiene Manager is responsible for leading the planning, approvals and environmental function and is responsible for the ongoing requirements associated with the management of traffic and access as follows:

- Coordinate and manage the preparation of this CEMP and associated documents / sub-plans / procedures;
- Identify resources required for implementation of this CEMP and sub-plans;
- Carefully select suppliers and subcontractors based upon their ability to meet stated requirements;
- Coordinate ongoing training in environmental awareness for all levels of site personnel (including sub-contractors) as required to implement this CEMP and sub-plans;
- Ensure that an appropriate environmental induction and training program is developed such that personnel are aware of their environmental responsibilities under relevant legislation and the contract;
- Program toolbox talks and daily pre-start meetings to include any environmental management requirements;
- Implement, maintain, monitor, report and advise the Contractor Site Manager on all environmental matters;
- The Environment and Hygiene Manager will be the primary contact for the ER and AA;
- Interface with the ER and AA to keep these roles abreast of upcoming works and documentation, and provide information as requested that is relevant to these roles under the approval;
- Responsible for consultation with external stakeholders, agencies, authorities on environmental requirements;
- Liaise with the TfNSW and Environmental Management Representative on environmental issues, including the written notification of non-conformances;
- Monitor the implementation of all environmental management requirements as detailed in this CEMP and sub-plans;
- Ensure Project sub-contractors comply with all relevant statutes, regulations, rules, procedures, standards and policies as detailed in this CEMP and sub-plans;
- Ensure the timely review and assessment of environmental monitoring, auditing and inspection outcomes to ensure identification and implementation of continual improvement with regards to environmental management; and
- Overall reporting of the environmental performance of the Project.

Contractor Project Engineer

Where required, the Project Engineer will liaise with the Environmental Manager for matters relevant to environmental performances. The Project Engineer is responsible for:

- Plan construction works in to avoid or minimises environmental impacts;
- Ensure the requirements of this CEMP and sub-plans are fully implemented;
- Ensure construction personnel manage construction works in accordance with statutory and approval requirements;
- Ensure environmental management procedures and protection measures are implemented;
- Ensure all Project personnel attend an induction prior to commencing works;
- Liaise with TfNSW, Environmental Representative and other government authorities as required; and
- Stop work immediately if an unacceptable impact on the environment is likely to occur.

Contractor Engineers

Contractor Engineers will liaise closely with the Environment Manager to:

- Ensure effective communications are maintained with the workforce;
- Ensure subcontractor legal obligations are identified and adhered to in respect of employees engaged on the project;
- Day to day management of subcontractors' performance;
- Review subcontractor's management procedures and arranges compliance audits where necessary;
- Follow up on corrective actions for non-conforming subcontractors;
- Ensure that instructions and information provided to subcontractors in relation to environmental risks on-site; and
- Ensure that the works are carried out in accordance with the requirements of the CEMP and supporting documentation, including the implementation of all environmental controls.

Contractor Site Supervisor

Contractor Site Supervisor directly reports to the Project Supervisor and liaise with Environment & Hygiene Manager. Site Supervisor has a direct role in compliant implementation of identified environmental procedures and controls. Site Supervisor will;

- Communicate with site personnel and sub-contractors regarding compliance with the CEMP, sub-plans and environmental issues;
- Ensure all workers participate in an environmental induction prior to the commencement of works;
- Co-ordinate the implementation of the CEMP, sub-plans and pollution control measures;
- Attend Environmental Inspections as required;
- Report any activity that could lead to an environmental incident immediately to the Environment & Hygiene Manager;
- Co-ordinate action in emergency situations and allocate required resources; and
- Stop activities where there is an immediate risk of harm to the environment and advise the Project Manager and Environment & Hygiene Manager.

Wider project team (including Subcontractors)

Wider Project team including Sub-contractors will liaise with the Environment & Hygiene Manager and their environmental responsibilities include (but are not limited to):

- Comply with the relevant requirements of the CEMP and sub-plans, or other environmental management guidance as instructed by a member of the Project's management;
- Participate in the mandatory Project induction program;
- Report any environmental incidents to the site supervisor immediately;
- Ensure environmental controls are maintained in good working order; and
- Stop activities where there is an actual or immediate risk to the environment and advise the Project Management.

3.3.2 Selection and management of Subcontractors

Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation. As part of the selection process, consideration will also to be given to their past environmental performance. Contractor will ensure that all subcontractors selected to work on Portion 2 Early Works understand and have the capability to comply with their environmental management responsibilities.

Subcontractors are responsible for:

- Environmental requirements and responsibilities are to be specified to sub-contractors in the contract documentation;
- Work in accordance with this CEMP & Sub-plans;
- Attend inductions, toolbox meeting and other meetings as required where the requirements and obligations of the CEMP & sub-plans are communicated;
- Reporting environmental incidents to their contact within the project (Site Supervisor or delegate) immediately and prior to leaving the site; and
- Participating in investigation and/or risk assessments where necessary.

A record of all sub-contractors inducted will be maintained as part of the Project induction and training register. Subcontractor environmental performance will be recorded during the environmental inspection and audit framework detailed within Section 3.9 of this CEMP.

3.4 Competence, training and awareness

To ensure that this CEMP is effectively implemented, each level of management is responsible for ensuring that all personnel reporting to them are aware of the requirements of this CEMP. The Environment and Hygiene Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

3.4.1 Environmental induction

All personnel (including Subcontractors) are required to attend a compulsory site induction that includes an environmental component prior to commencement on-site. This is done to ensure all personnel involved in the Project are aware of the requirements of the CEMP to ensure compliance with the Conditions of Approval and the implementation of REMMM.

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

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

The Environment and Hygiene Manager (or delegate) will conduct the environmental component of the site inductions.

The environmental component of the induction must cover all elements of the CEMP and would include as a minimum:

- Relevant details of the CEMP including purpose and objectives;
- Requirements of due diligence and duty of care;
- Conditions of environmental licences, permits and approvals;
- Potential environmental emergencies on Site and the emergency response procedures;
- Reporting and notification requirements for pollution and other environmental incidents;
- High risk activities and associated environmental safeguards;
- Working in or near environmentally sensitive areas; and
- The ECM(s), their purpose, scope and use.

Staff and sub-contractors who will be involved in works on site will also undertake aspect-specific environmental training to cover the following as required:

- Waste management and minimisation;
- Wash, refuel and maintenance of vehicles, plant and equipment;
- Efficient use of plant, equipment and materials;
- Minimise potential environmental impacts including noise, vibration, air and water quality and contamination;
- Site specific erosion and sediment controls, and use of spill kits to contain spills;
- Approved hours of works;
- Environmental emergency response plans, and incident reporting procedures for environmental incidents;
- Specific environmental management requirements and responsibilities;
- Mitigation measures for the control of environmental issues;
- Information relating to the location of environmental constraints; and
- Key environmental issues.

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

The Environmental Representative will review and approve the induction program (where required) and monitor implementation.

3.4.2 Toolbox talks, training and awareness

Toolbox talks will be one method of raising awareness and educating personnel on issues related to all aspects of construction including environmental issues. The toolbox talks are used to ensure environmental awareness continues throughout construction.

Toolbox talks will include details of ECMs and be tailored to specific environmental issues relevant to upcoming works.

Relevant environmental issues include (but are not limited to):

- Erosion and sediment control;
- Hazardous materials and contaminated land;
- Dewatering;
- Hours of work;
- Emergency and spill response;
- Dust control; and
- Management of emissions (greenhouse gases, etc.).

Toolbox talk attendance is mandatory and attendees of toolbox talks are required to sign an attendance form and the records maintained.

Targeted environmental awareness training will be provided to individuals or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact. Topics covered may include those detailed above, or others deemed necessary in the lead up to or during construction.

The Environment & Hygiene Manager will review and approve the training program (where required) and monitor implementation.

3.4.3 Daily Pre-Start Meetings

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

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

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

A copy of each pre-start meeting and a register of attendees will be recorded and maintained on-site.

3.5 Working hours

Works may be undertaken in the Camellia precinct (east of James Ruse Drive) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the Conditions of Approval, between 10.00pm and 7.00am.

Further detail for working hours, including the Out of Hours Works Protocol (OOHWP) where noise may be greater than 5 dBA above the rating background level is documented within the Construction Noise and Vibration Management Plan (CNVMP).

3.6 Communication

3.6.1 Internal Communication

Regular internal communications will be undertaken between project personnel throughout the project, including sub-contractors. The type of internal communication might include, but is not be limited to:

- Safety, Health, Environment and Quality (SHEQ) team meetings (face to face or via teleconference);
- Telephone calls;
- Regular meetings with TfNSW environmental staff and Environmental Representative;
- Employee induction, training and toolbox training sessions;
- Written correspondences (emails, letters, reports etc.) including:
  - Internal newsletters;
  - Management reports;
  - Audit reports; and
  - Incident reports;
- Environmental Reference Groups; and
- Briefings, notification and alerts.

3.6.2 Government authority consultation

Relevant government agencies were consulted as required in the development of the management plans and will be consulted throughout the project as required.

Evidence of consultation for relevant documents or monitoring programs identified within the CoA have been summarised in Table A-1 and Table A-2 within Addendum A - Consultation Evidence of this Plan.

An initial Stakeholder Consultation Workshop was held on 6th March to brief relevant government agencies, Site Auditor, Environmental Representative and Acoustics Advisor. Following the workshop, the CEMP and associated sub-plans were provided to all attendees and those agencies unable to attend.

A comprehensive package of engagement has been separately compiled and presented to DPIE for each document or program. This includes engagement processes, log of points or attempted engagement, issues raised and evidence of satisfactory close out or, where agreement cannot be reached, reasons for why they could not be adopted or closed out.

Consultation with stakeholders is facilitated by TfNSW via the TfNSW Interface Protocol. Unless the Contractor is expressly authorised by TfNSW, the Contractor is not authorised to contact the EPA. TfNSW will retain the responsibility for notification and other communications with the EPA.

A report will be prepared on each occasion the site is visited by EPA, and TfNSW will be immediately notified. The Report will be provided to TfNSW within one working day of the visit.

3.6.3 Community liaison and/or notification

Key stakeholders and the community will be consulted during the construction phase through their involvement for the project in accordance with the CoA and the regular meetings held with stakeholders and community. These meetings will discuss environmental performance, upcoming works, any planned high risk activities and will include inspections of the work sites as required. Where a specific requirement is not prescribed by the approval, the TfNSW's Community Consultation Strategy must be followed.
It is noted that all communications by the Contractor with DPIE are to be facilitated via TfNSW.

3.6.4 Complaints management

A Construction Complaints Management System has been developed for the project by TfNSW in line with CoA B6. A Complaints and Enquiries Procedure, consistent with AS 4269: Complaints Handling, will be developed for the Project. Complaints may be received directly by the members of the project team or indirectly via TfNSW Community Information Line, Postal Address and email

address. Senior members from the project team will be on call to receive complaints at all times and will manage all phone complaints outside of business hours. This responsibility will be managed and shared between project team members. Complaints will be managed in accordance with the TfNSW Construction Complaints Management System and TfNSW Community Communications Strategy. This includes resolving complaints to the satisfaction of all stakeholders or escalating complaints to the Community Complaints Commissioner.

Attempts will be made to resolve all complaints in accordance with the community engagement strategy. An initial response to complaints will be provided within 24 hours of a complaint being received. A further detailed response with a final report, including steps taken to resolve the issue(s) that lead to the complaint, will be provided within 5 working days. Final Report will also include proposed measures to prevent the reoccurrence. All complaints should be closed off in the stakeholder database. At all times the stakeholder will be kept informed of when they will receive a response.

Information on all complaints received, including the means by which they were addressed and whether resolution was reached and whether mediation was required or used will be included in a complaints register. The information contained within the register will be made available to the TfNSW representative on request.

The Contractor Environment and Hygiene 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 in the management of any environmental issues resulting in community complaints.

3.7 Emergency and Incident Planning

In the event of an environmental incident, the Emergency Response Management Plan (ERMP) will be implemented consistent with the TfNSW's Environmental Incident Classification and Reporting Procedure (9TP-PR-105). The full plan is provided in Appendix A7. Section 12 of the ERMP outlines management protocols in the form of Emergency Response Programs.

Where an incident involves a potential impact to an Aboriginal site, relevant the Office of Environment and Heritage, and Registered Aboriginal Parties will be notified and their input sought in closing out the incident.
Upon consultation with the TfNSW Environmental Manager and the Contractor Project Manager, each relevant authority will be notified immediately via the appropriate telephone number should a pollution incident occur that causes or threatens material harm to the environment.
The relevant authorities to be notified are:

- The EPA;
- NSW Health;
- WorkCover NSW;
- City of Parramatta Council; and
- Fire and Rescue NSW.

The Contractor will provide all records of the environmental incidents and regulatory action to TfNSW Project team.

All environmental incidents, reportable events, regulatory actions and non-compliance reporting will be provided using the In-Control Module of the TfNSW INX System and the Ventia INX System as outlined in the TfNSW's Environmental Incident Classification and Reporting Procedure. This system complies with the AS/NZS 4360:2004 Risk Management Standards and has the capability to record a risk review to establish the context, identification, analysis, evaluation and treatment of

risks. Reporting to TfNSW is in accordance with the *Guide to Environmental Incident and Non-compliance Reporting using the INX System* and *Environmental Incident Classification and Reportin*g.

DPIE notification requirements are outlined in CoA A44-A47 as tabulated below. Any incidents will be notified to the Secretary in accordance with these requirements.

Table 3-3: Requirements to incident notification to DPIE

CoA	Requirement
A44	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 location and nature of the incident.
A45	Within one week of notification of an incident under **Condition A44** of this approval, the Proponent must submit a report to the Department providing the time and date of the incident, details of the incident and must identify any consequent non-compliance with this approval.
A46	All written requirements of the Secretary, which may be given at any point in time, to address the cause or impact of an incident must be complied with, within any timeframe specified by the Secretary or relevant public authority.
A47	If an incident occurs or if statutory notification is given to the EPA as required under the Protection of the Environment Operations Act 1997 in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.

Refer to ERMP (Appendix A7 of CEMP) for further details regarding incident reporting.

3.8 Monitoring, inspections and auditing

In accordance with CoA A30 and A31, a compliance tracking program must be developed and implemented during construction works to monitor compliance with the terms of the project approval. In addition to reporting required under the Compliance Tracking Program, the Contractor Environment and Hygiene Manager will also supply relevant documentation on environmental matters for incorporation into monthly environmental report to TfNSW. The Environment & Hygiene Manager will prepare evidence to support a detailed compliance report on environmental performance, issued to the ER on a six-monthly basis.

The Report(s) will include details on:

- A results summary and analysis of environmental monitoring;
- Complaints received, including a summary of main areas of complaint, responses and proposed actions to prevent reoccurrence;
- Details of reviews and amendments to CEMP and/or sub-plans;
- A register of any reviews of consistency undertaken including outcome;
- Environmental audits conducted and actions taken as recommendations from audits;
- Actioning and reporting of all incidents in accordance with CoA A44 and A46; and
- Any other matter relating to compliance with terms of approval or as requested by the Secretary.

3.8.1 Environmental inspections

Environmental inspections

Environmental protection measures defined in this CEMP and sub-plans will be regularly monitored for its effectiveness throughout the project on weekly basis. Weekly environmental inspections will monitor following aspects:

- Compliance of relevant works approvals and permits;
- Review of REMMMs;
- Effectiveness of erosion and sediment controls;
- Drainage protection;
- Air quality, dust emissions and effectiveness of mitigating controls;
- Review of noise and vibration impacts and management;
- Hazardous materials and contaminated land; and
- Waste management and resource recovery.

An Environmental Officer will also undertake post rainfall inspections of the work sites to assess the effectiveness of environmental controls.

All inspection findings will be recorded in an inspection checklist form via the Ventia INX System. Copies of all environmental inspection reports prepared by Contractor Site Environmental Management will be kept with the project records and closed out within the agreed timeframes.

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are observed, they will be recorded on the checklist form. Records will also include details of any maintenance required, the nature of the deficiency, any actions agreed, an implementation priority and when the corrective action works have been addressed.

Environmental Representative, TfNSW and ERG inspections

TfNSW representatives and members of the ERG will undertake regular inspections of the project site. Inspections will also be carried out during higher risk activities and processes, and work in environmentally sensitive areas throughout the lifetime of the Project. Inspections by Environmental Representative for TfNSW would typically occur on a weekly basis. ERG inspections will typically be less frequent, periodically depending on the construction staging of the Project.

A member of the Project environment team will participate in all inspections and maintain records. Negative impacts and required actions will be prioritised and addressed at the completion of the inspection and timeframes for implementation of corrective actions agreed.

Actions identified during inspections will be tracked in the records of inspection, if the actions are identified as significant, this may include input into the TfNSW INX System and the Ventia INX System.

3.8.2 Environmental monitoring

Monitoring will be undertaken to validate the impacts predicted for Portion 2 Early Works, to measure the effectiveness of environmental controls and implementation of this CEMP, and to address approval requirements. The monitoring requirements for required aspects are included in the relevant environmental management sub plans and summarised in Table 3-4 below.

Table 3-4: Summary of construction phase environmental monitoring required by the Project approval and REMMMs

CoA / REMMM	Description	Relevant Sub-Plan or CEMP Chapter	Reporting Requirements
C9 (b)	The Noise and Vibration Construction Monitoring Program must be prepared in consultation with the relevant government agencies for each to compare actual performance of construction of the CSSI against performance predicted in the documents listed in Condition A1 or in the CEMP:	Appendix B3 - Noise and Vibration Management Plan	Quarterly compliance tracking program, Submitted to the Secretary and relevant regulatory authorities for information at a frequency as specified in the monitoring program
AQ-1	Install dust monitoring devices to quantify dust levels and determine whether control measures are adequate or whether further actions are required.	Appendix B7 - Air Quality Management Plan	Monthly dust deposition gauge analysis and environmental dashboard reporting, Quarterly compliance tracking program
GG-7	Regular monitoring, auditing and reporting on energy, resource use and associated greenhouse gas emissions would form part of the environmental reporting requirements specified within the CEMP and would be carried out.	Appendix B8 - Waste and Resource Management Plan	Monthly Environmental performance report, 6-monthly Sustainable Design Guideline (SDG) reporting

3.8.3 Auditing

Table 3-5 presents auditing requirements that are applicable to the Project.

3.8.3.1 Contractor internal audits

Internal auditing will be undertaken generally on a six monthly basis throughout the Project. The purpose of auditing is to verify compliance with:

- This CEMP and Sub Plans;
- Approval requirements (CoAs, REMMM); and
- Any relevant legal and other requirements (e.g. licenses, permits, regulations, TfNSW contract documentation).

An audit checklist will be developed and amended as necessary to reflect changes to this CEMP, subsequent approvals and changes to Acts, regulations or guidelines.

Independent audits

Auditing will also be undertaken in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing. This will be coordinated with TfNSW on an annual basis and is further detailed in Table 3-5 below.

Table 3-5: Contractor and Independent Audit requirements

No.	Audit	Requirement	Timing	Responsibility	Recipient
1	Independent Environmental Compliance Audit	Verify compliance with approval and legal requirements, TfNSW specifications, construction documentation and any other commitments	Annually	TfNSW Environmental Representative	Project Manager, TfNSW
2	Internal audit	Verify compliance with approval and legal requirements, TfNSW specifications and construction documentation	The first audit within three months of the commencement of construction and then at six monthly intervals thereafter. The final submitted within five working days of contract completion date.	Environment and Hygiene Manager	Project Manager, TfNSW
3	Audit on energy, resource use and associated greenhouse gas emissions	Verify compliance with approval and legal requirements, TfNSW specifications, construction documentation and any other commitments	Six monthly	TfNSW Sustainability Manager	Project Manager, TfNSW

No.	Audit	Requirement	Timing	Responsibility	Recipient
4	Site Audit Statement	Certify contaminated and disturbed areas have been remediated to a standard consistent with the intended land use.	At completion of remediation works	Independent Site Auditor	Project Manager, TfNSW

3.8.4 Construction Phase Compliance tracking

A Compliance Tracking Program has been developed for the Project. The requirements of the Compliance Tracking Program, as prescribed in the CoA A30 - A32 and A40 – A47, include:

- Provisions for the notification of the Minister of the commencement of works prior to the commencement of construction of the Project;
- Provisions for periodic review of Project compliance with the requirements of this approval, REMMM and documents listed under condition CoA A32;
- Provisions for periodic reporting of compliance status against the requirements of this approval, REMMM and documents listed under condition CoA A32 to the Minister including at least one month prior to the commencement of construction of the Project and at other intervals during the construction, as identified in the Program;
- A program for independent environmental auditing in accordance with ISO 19011:2014 - Guidelines for Quality and/ or Environmental Management Systems Auditing;
- Mechanisms for reporting and recording incidents and actions taken in response to those incidents;
- Provisions for reporting environmental incidents to the Minister during construction and operation; and,
- Procedures for rectifying any non-compliance identified during environmental auditing, review of compliance or incident management.

The Compliance Tracking Program describes how the requirements of CoA A30 will be met and sets out a program and frequency for compliance reporting and independent auditing. The compliance reporting required under the Compliance Tracking Program will record how the CoA and REMMM have been addressed. A summary of the required compliance reporting for the construction phase of the Project, as required by CoA A30, and as tracked and monitored in the Compliance Tracking Program is provided in Table 3-6.

Table 3-6: Compliance Reporting

No	Report	Requirement	Timing	Responsibility	Recipient
1	Pre-Construction Compliance Report (CoA A34)	Verify compliance with approval and legal requirements, TfNSW specifications, construction documentation and any other commitments	Prior to construction	Environment & Hygiene Manager	Project Manager, TfNSW & Secretary, DPIE
2	Compliance Tracking Program (CoA A30, A37)	Verify compliance with approval and legal requirements, TfNSW specifications, construction documentation and any other commitments	Ongoing, 6 monthly	TfNSW Environment & Hygiene Manager to assist	Project Manager, TfNSW & Secretary, DPIE

Pre-Construction and Construction Compliance Reporting required under the Compliance Tracking Program provides evidence of compliance with the relevant conditions of approval as stated above. The Pre-Construction Compliance Reporting details of how the CoA A35 addressed prior to the commencement of Construction have been complied with and the proposed commencement date for construction. Construction will not commence until the Pre-Construction Compliance Report has submitted to the Secretary.

The Construction Compliance Reports will include:

- a results summary and analysis of environmental monitoring;
- the number of complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints;
- details of any review of, and minor amendments made to, the CEMP as a result of construction carried out during the reporting period;
- a register of any reviews of consistency undertaken including outcome;
- results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit;
- a summary of all incidents notified in accordance with Conditions A44 and A46 of this approval; and
- any other matter relating to compliance with the terms of this approval or as requested by the Secretary.

3.8.5 Other reporting

Prior to, during and following construction, various reports will be prepared to fulfil TfNSW and other reporting needs, and requirements under the Project approval. Table 3-7 sets out the reporting requirements applicable to the Project, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s).

Additional reporting may be necessary as the works progress. In such a circumstance, Table 3-7 will be amended to reflect these changes.

Table 3-7: Other reporting requirements

No.	Report	Requirement	Timing	Responsibility	Recipient
1	Monthly Environmental Report (CoA A23)	For incorporation in project monthly reports including environmental statistics (i.e. incidents, regulatory actions, complaints, monitoring reports)	Monthly	ER	Project Manager, TfNSW
2	Project Risk Register	Verify key project environmental risks for the project, including potential emergency response management.	Prior to construction and ongoing during construction	Environment & Hygiene Manager	Project Manager, TfNSW
3	Incident Reports	Verify compliance with approval CoA A44	As required	Environment & Hygiene Manager	Project Manager, TfNSW

No.	Report	Requirement	Timing	Responsibility	Recipient
4	Unexpected Heritage Finds Report	Verify compliance CoA E62	As required	Environment & Hygiene Manager	Project Manager, TfNSW & ER
4	Unexpected Finds Report	Verify compliance CoA E125	As required	Environment & Hygiene Manager	Project Manager, TfNSW & ER
5	Environmental Monitoring Inspection Reports	Assess effectiveness of environmental controls as outlined in the CEMP.	Weekly, post significant rain fall events and during higher risk work	Environment & Hygiene Manager	Project Manager, TfNSW & ER

3.9 Environmental non-conformances

In relevance to CoA C2 (g), it is required to identify procedures for rectifying any non-compliance with the approval recognised during compliance auditing, incident management or at any time during construction.

A non-conformance is defined as failure or refusal to comply with the requirements of the EIS/SPIR, Conditions of Approval, this CEMP, sub-plans and/or supporting documentation. Any member of the project team, environmental representative, public authority or TfNSW may raise a non-conformance or improvement opportunity.

In the event of a non-conformance, the following procedures will be implemented:

- Details of the non-conformance will be investigated by the Environment and Hygiene Manager;
- Subject to the investigation, corrective or preventative action(s) shall be implemented, the timing of which will be determined by a risk-based approach, within no later than two (2) months, unless otherwise agreed with TfNSW, the Department or relevant public authority, or as otherwise required by a condition of approval (e.g. CoA A46 to comply with written requirements of the Secretary);
- Additional site inspections and monitoring may be undertaken;
- The effectiveness controls will be reviewed and identify the need for new/additional controls;
- Strategies will be identified to prevent reoccurrence;
- Effectiveness of awareness programs will be reviewed and identify the need for increased environmental awareness; and
- Environmental documentation and records will be reviewed and revised (outlined in 3.10.)

The Contractor will document and detail any non-conformances arising out of the monitoring, inspections and audits. TfNSW will be made aware of all non-conformances in a timely manner. Contractor will develop and implement corrective actions and preventative actions in order to rectify and prevent the re-occurrence of the non-conformance. Contractor will also maintain a register non-conformances, corrective actions and preventative actions.

Non-conforming activities shall be stopped, if necessary, by a member of Environmental Management team or Project / Site Engineer following consultation with the Project Manager. The works will not resume until a corrective / preventative action has been closed out. In such situations, a non-conformance report must be prepared in accordance with the Contractors Quality Plan.

As non-conformances are a failure of compliance against the Conditions of Approval, details of non-conformances and the procedures (as informed by the above in this Section) for rectifying any non-compliance, including those identified during environmental auditing, review of compliance or incident management shall also be documented and reported in the Compliance Tracking Report and (where required) other reporting documents (outlined in 3.8.4 & 3.8.5).

3.10 Records of environmental activities

3.10.1 Environmental records

The Environment and Hygiene Manager is responsible for maintaining all environmental management documents and records as current at the point of use. Types of documents and records include:

- All monitoring, inspection and compliance reports/records;
- Audit reports;
- Regulatory licences and permits;
- Correspondence with public authorities;
- Induction and training records;
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action;
- Community engagement information;
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken;
- CEMP and Sub Plans;
- ECMs; and
- Any relevant reports submitted to the regularity 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 licensing requirements.

Only the Environment and Hygiene Manager, or delegate, has the authority to change any of the environmental management documentation.

3.10.2 Document control

The Contractor, or TfNSW where relevant, will coordinate the preparation, review and distribution, as appropriate, of the environmental documents and records listed above. During the Project, the environmental documents and records will be stored at the main site compound.

The Contractor will implement a document control procedure to control the flow of documents within and between TfNSW, stakeholders and Subcontractors.

The procedure will also ensure that documentation is:

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

A register and distribution list will identify the current revision of particular documents, records or data. Where amendments are required to be made to the CEMP (or sub-plan) document, it will be withdrawn and reissued as a new revision. Superseded documents will be kept for contractual reasons, but will be clearly marked ‘superseded’. The Document Register for the CEMP and associated sub-plans is maintained in Appendix A5.

3.11 Management Review

Management reviews will be undertaken as part of the continual improvement process. The Contractor will ensure the formal review and improvement of the CEMP, sub-plans and other documents on a six monthly basis as a minimum from construction commencement. Meanwhile, a project risk register, incorporating environment will be maintained to ensure that key environmental risks are documented.

The purpose of the review is to verify compliance with the approval, the requirements of the standards, policies and objectives and, if not, to amend the CEMP to ensure compliance.

The review will include:

- A review of the aspects and impacts register, legal register and environmental induction;
- Analysis of the causes of non-conformances and deficiencies, including those identified in environmental inspections and audits
- Consideration of incidents and lessons learnt;
- Consideration of any new regulatory issues;
- A review of the effectiveness of environmental controls;
- Feedback from management reviews;
- Effectiveness of environmental management documentation implementation;
- Potential improvements to the environmental management documentation;
- Adequacy of resources;
- Findings of audits;
- Environmental performance;
- Compliance with legal and other requirements;
- Critical non-conformance or repeated non-conformances;
- Organisation changes; and
- Effectiveness of training and inductions.

The outcomes of the management review could include amendments to this CEMP and related documentation, revision to the Project’s environmental management system, risk assessment review, re-evaluation of the Project objectives and targets as well as feeding into other Project documents.

3.12 CEMP/Sub Plan revision and changes to the Project

3.12.1 CEMP Revision

CEMP and sub-plans will be reviewed at least six monthly and/or occur:

- Following reportable environmental incidents;
- Upon identification of new 'significant' risks, including risks identified during risk register updates;
- When non-compliances are identified;
- Following environmental audits that identify matters that require attention;
- In response to significant project change (including modifications to the CSSI);
- Within three months of any of the above occurrences;
- As part of a continuous improvement process; and
- The effect of changes in standards and legislation.

In response to Project change, including modifications within three months of any of the above occurrences, annually as part of a continuous improvement process. The processes / incidents described above may result in the need to update or revise this Plan.

Only the Environment Manager, or delegate, has the authority to change any of the environmental management documentation. These changes must be approved by the Environmental Representative (ER) or Department of Planning and Environment. The ER has the authority to approve minor amendments to plans (Condition C8). Only Department of Planning and Environment has the authority to approve major amendments to plans. A minor change (not material) is considered to be a change that is insignificant to the implementation of the approved document or plan, such as administrative changes or content that does not change the implementation of previously approved documents. Anything not considered a minor change would be considered as major.

A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the approved document control procedure, described in Section 3.10.2.

3.12.2 Changes to the Project

Refinements to the Project may result from detailed design refinements or changed circumstances throughout construction. TfNSW is required to seek formal approval from the Minister for any Project modifications and for documenting refinements that are inconsistent with the approved Project.

Any design changes or changes in scope of works must be communicated to Environment and Hygiene Manager. The Environment and Hygiene Manager will then undertake an additional environmental assessment and consistency assessment in consultation with the Environmental Representative for TfNSW to determine if a Project modification may be required.

Should the consistency assessment determine that a Project modification may be required, the Environmental Representative will be informed and modification application under Section 115ZI(2) of the EP&A Act 1979 prepared and lodged by Transport for NSW to the Secretary DPIE for determination.

All written requirements or directions received by DPIE shall be complied with at all times, including in relation to:

a) the environmental performance of the CSSI;

b) any document or correspondence in relation to the CSSI;

c) any notification given to the Secretary under the terms of this approval;

d) any audit of the construction or operation of the CSSI;

e) the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); and

f) the carrying out of any additional monitoring or mitigation measures.

4 Construction control

A number of environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impacts or aspects of the activities of Portion 2 Early Works. They address requirements of the CoA, REMMM and other measures and risks identified in the environment assessment documentation (Appendix A2).

Environmental strategies may also be developed as required throughout the Project. These will also guide environmental management of potential impacts on-site.

A list of construction sub-plans for the Project, and their approval pathway, are provided in Table 4-1 below. Based on an assessment of the planned Portion 2 Early Works and the scope of remediation activities previously conducted on the project, a separate sub-plan for heritage management, flood management and flora and fauna biodiversity management were incorporated into other sub-plans, as specified in Table 4-1 below.

During previous remediation activities, the only identified heritage structures on the site, the former air raid shelter, was heritage archival recorded by a heritage consultant. In addition, movable heritage from the shelter were cleaned and assessed in a separate movable heritage assessment. A heritage interpretation strategy has also been developed to represent the former air raid shelter in a future, publicly accessible location.

During early works remediation activities, all remaining trees on the site, identified by the arborist during the arboriculture impact assessment, were removed. Tree removal works was necessary to accommodate the construction of the hydraulic barrier wall, with large working platforms necessary for the stability of construction plant and equipment and as a staging area for the mixing of the soil-bentonite hydraulic barrier wall.

For flood management, the site is located within the Parramatta River floodplain and is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level. Therefore, Portion 2 Early Works site is not affected by flooding based on 1 in 100 year flood data and is not subject to local overland flows in the one percent AEP event. Further assessment conducted in the *Parramatta Light Rail - Flooding Technical Paper* (Arup, 2017), identified the site as a low potential for flooding due to its location within a low flood risk area and existing raised surfaces present from the residual building slabs. ERSED Controls and water management will be carried out in accordance with the Soil and Water Management Plan (PLR-VNT-SAM-PE-PLN-000019).

Table 4-1: Environmental management sub plans and strategies

Document name	Document number	Approval pathway
Construction Environmental Management Plan	PLR-VNT-SAM-PE-PLN-000018	Endorsed by the ER and submitted to the Secretary for approval no later than one month before commencement of construction
Traffic, Transport and Access Management Plan	PLR-VNT-SAM-TT-PLN-000001	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Noise and Vibration Management Plan	PLR-VNT-SAM-NV-PLN-000003	Endorsed by the ER and submitted to the Secretary for approval no later than one month before commencement of construction
Soil and Water Management Plan	PLR-VNT-SAM-PE-PLN-000019	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Air Quality Management Plan	PLR-VNT-SAM-AT-PLN-000001	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Waste and Resource Management Plan	PLR-VNT-SAM-WM-PLN-000002	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Contaminated Land Management Plan	PLR-VNT-SAM-CO-PLN-000001	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Flood Management Plan	Section 4.1 of the SWMP (PLR-VNT-SAM-PE-PLN-000019)	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Heritage Management Plan	Section 4.8 of the CEMP (PLR-VNT-SAM-PE-PLN-000018) – as per Appendix C of the Parramatta Light Rail – Stage 1: Project Wide Staging Report (PLR-TFNSW-CBD-PE-RPT-000001)	Endorsed by the ER and submitted to the Secretary for approval no later than one month before commencement of construction
Flora and Fauna Biodiversity Management Plan	Section 4.7 of the CEMP (PLR-VNT-SAM-PE-PLN-000018) as per Appendix C of the Parramatta Light Rail – Stage 1: Project Wide Staging Report (PLR-TFNSW-CBD-PE-RPT-000001)	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction
Emergency Response Management Plan	Appendix A7 of the CEMP (PLR-VNT-SAM-ER-PLN-000001) as per Appendix C of the Parramatta Light Rail – Stage 1: Project Wide Staging Report (PLR-TFNSW-CBD-PE-RPT-000001)	Endorsed by the ER and submitted to the Secretary for information no later than one month before commencement of construction

Where a separate sub-plan is not triggered as per the Staging report and thus not specified, information regarding environmental management, controls and mitigation is detailed in the below section and within the Environmental Compliance Matrix, located in Section 5. The intent is to provide details to facilitate transparent consultation with relevant stakeholders.

4.1 Soil and water quality management

A Soil and Water Management Plan has been developed to manage the soil and water risks on this Project. This document is developed in accordance with CoA C1 - C4 and located in Appendix B4.

4.1.1 Remediation Water Assessment Programs

The existing stormwater infrastructure has been progressively isolated with any temporary surface water bodies restricted to the premises negating potential impacts associated with runoff or sediment leaving the site and entering the stormwater network. Controls and mitigation measures in place around the perimeter of site include concrete curbs, haybales, bunding and sediment fencing prevent any potential to impact on receiving waters down-stream of the site.

The site is drained via combination of overland flow and an isolated in-ground piped stormwater system which is directed to the Temporary Water Treatment Plant (TWTP). Waters directed to the TWTP are subject to a comprehensive Water Treatment Process through the TWTP. Following filtration all treated water will enter the discharge tank prior to discharge to trade waste. All discharge water will be sent to the discharge tank will be monitored with a turbidity and pH probe. If during discharge the probes register an NTU above 0.5 or pH outside of the constraints of the discharge criteria the discharge pump will shut down and an error message will be sent to the TWTP Operator. Discharge pH and turbidity will be manually recorded twice daily. Notifications will be sent periodically throughout the day to the TWTP operator to monitor each probe and gauge throughout the system. Treated water is then discharged to sewer under Sydney Water Trade Waste Agreement (TWA)(Discharge License 15831).

Sampling events of treated water are conducted every 22 days, or otherwise the next day that trade wastewater is discharged, as per the TWA. Water quality parameters to be sampled as part of the TWA include; pH, Chromium Total, Manganese, Dissolved Solids (TDS) and Sulphates.

In addition to trade wastewater sampling, daily sampling and analysis of performance triggers (pH and Turbidity) shall be conducted as an indication of ongoing TWTP performance.

Following conclusion of the Portion 2 Early Works, the integrated capping system over the site will enable future contractors to construct a new stormwater system, without risk of the site contamination.

4.2 Contaminated land

A Contaminated Land Management Plan has been developed to manage contaminated land on this project. This document is developed in accordance with CoA C1 – C4 and located in Appendix B9.

4.3 Spill prevention and response

Appropriate fuel and chemical handling procedures shall be adopted which aim to avoid spills to land or water. In order to prevent a potential spill the following steps will be taken:

- All chemicals and fuels will be stored and kept as per MSDS;
- On-site storage of fuel shall be as minimal as practicable; and

- All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and Transport for NSW's Chemical Storage and Spill Response Guidelines (Transport for NSW, 2015g).

In the event of a spill, detailed emergency response procedure can be found in Appendix A7 – Emergency Response Management Plan. Summary of the steps to be taken includes:

- Raise the alarm;
- Cease work and evacuate work area IMMEDIATELY;
- If the spill can be contained or the source of the discharge stopped use the dedicated spill kit;
- Notify Project Manager IMMEDIATELY;
- Notify Relevant Authorities, Emergency Services and TfNSW when applicable;
- Refer to the MSDS for the most appropriate response;
- Isolate and barricade area for at least 20m from material;
- If persons have been splashed by chemicals, immediately wash down with clean water, do not remove clothes;
- If injured, treat injuries by qualified first aiders; and
- Review SDS, isolate and contain spill.

Once spill contained and clean-up carried out, the Warden shall make the area safe (i.e. barricade off area). Evacuated persons shall not re-enter the area/building until advised by the warden or Emergency Services. Notify SafeWork of the incident as soon as possible after contacting emergency services or within 48-hours of being overcome with the affected chemical. Ensure the area remains undisturbed with the exception of removing people if they are injured and it is safe to do so before emergency services arrive. The area must remain barricaded until the authorities have inspected the site or advised that they do not need to attend.

4.4 Air quality

An Air Quality Management Plan has been developed to manage the air quality risks on this Project. This document is developed in accordance with CoA C1 – C4 and located in Appendix B7.

4.5 Fire safety

The project site consists primarily of concrete hardstand with no permanent structures present on the site. Therefore, project fire risks are considered 'negligible', however the following fire-fighting equipment are kept on-site;

- Fire extinguishers;
- Water hoses and water carts;
- Dry powder; and
- Fire suppressants.

Fire extinguishers will be maintained, clearly labelled and distributed around site compound and vehicles. Awareness training of response and procedures in case of a fire will be incorporated into Environmental and Safety Induction. Adequate first aid supplies are stocked and first aiders are available on-site.

All personnel involved in welding, grinding, thermal or oxygen cutting, heating or other fire or spark-producing operations will be required to attain a hot works permit, approved by the Site Supervisor, prior to works. Each hot works permit will identify controls, such as removal of all flammable materials from within the works area, a standby spotter or other nominated controls prior to commencement of hot works activities.
Further information regarding fire emergencies are detailed in Emergency Response Management Plan (Appendix A7).

4.6 Noise and ground vibration control

A Noise and Vibration Management Plan has been developed to manage the risks on this Project. This document is developed in accordance with CoA C1 – C4 and located in Appendix B3.

4.7 Biodiversity

Prior to commencing early works remediation activities on the site, a desktop assessment was completed to determine potential impacts on flora and fauna at the site. The desktop assessment included a review of the following databases:

- Office of Environment and Heritage (OEH) NSW BioNet
- Department of the Environment (DoE) EPBC Act Protected Matters Search Tool
- Bureau of Meteorology (BoM) Groundwater Dependent Ecosystem Atlas.

A follow up site inspection was undertaken on 29 June 2017 to confirm the outcomes of the desktop assessment. The assessment determined that direct biodiversity impacts of the Proposal are predicted to be minimal due to the disturbed nature of vegetation in the site.

4.7.1 Flora

The site assessment identified that the site has been significantly disturbed and modified, as such no naturally occurring remnant vegetation was identified on the site or surrounding area. Lawns and ornamental shrubs and trees existed along the northern portion of the site facing Grand Avenue and within an unpaved area located in the south-western portion of the site. The remainder of the site was covered with concrete during the 1990s to minimise surface water infiltration which had the potential to mobilise chromium into the underlying natural soils. Thus, the remainder of the site has limited vegetation present with grasses and weeds dominating much of the site.

The vegetation within the site, did not align to any recognised NSW Plant Community Type. The floristic assemblage was predominately exotic (e.g. Jacaranda mimosifolia) with some planted non-endemic native species such as Lophostemon confertus. As such, this vegetation is representative of a “Miscellaneous ecosystem: Highly disturbed areas with no or limited native vegetation” (OEH, 2017).

No threatened flora species, populations or ecological communities occur within the site. The potential for threatened flora and/or fauna to occur is low due to the cleared and disturbed nature of the site. The threatened species identified in desktop searches are associated with the Lower Duck River Wetlands, Newington Wetlands and Bicentennial Park, which would not be impacted by the Proposal.

In 2018, prior to commencing remediation activities a tree register was prepared by a qualified arborist for any existing trees currently on-site. The majority of the site remained capped by existing concrete hardstand and as a result of the heavily modified and disturbed nature of the site some minor regrowth was evident on-site. This regrowth was assessed to have low or no biodiversity value. In addition, due to the contaminated legacy of the site the arborist determined that the trees were assessed as low or no habitat or ecological value and no offset was required.

4.7.2 Fauna

The site assessment identified that Fauna habitat within the site is of poor quality. No threatened fauna species or populations were identified as likely to occur within the site due to the lack of habitat features.

4.7.3 Groundwater Dependent Ecosystems

Groundwater dependant ecosystems (GDE) are communities of plants, animals and other organisms whose extent and life processes are dependent on groundwater (Department of Land and Water Conservation, 2002).

A search of the BoM Atlas of Groundwater Dependent Ecosystems identified no GDEs are present within the site. In addition, there are no GDEs reliant on the surface expression of groundwater present (wetland vegetation are fed by the Parramatta River and Duck River).

Based on the desktop and site assessment, potential impacts on GDEs are considered unlikely.

4.7.4 Management of noxious weeds

The following are controls will be implemented to manage noxious weeds:

- Appropriate equipment hygiene and decontamination procedures are implemented to prevent the spread of weeds and pathogens;
- Regular inspections of plant and equipment to ensure they are free from vegetative matter and other high-risk material prior to movement off-site;
- Waste bins emptied from work site regularly to prevent vermin and pest infestations; and
- Any noxious weed measures that are taken will be recorded in the Environmental Control Maps, specifically any declared noxious weed areas.

4.7.5 Tree Assessment and Management

It is noted due to the contaminated nature of the site, the previous remediation activities removing the trees from the site and remaining capping works to remove unpaved areas for geotechnical stability and the construction of the integrated capping, no tree retention is available. Landscaping activities will likely be required in future packages of work for the stabling and maintenance facility. However, in the event the scope of work is adjusted. The following controls shall be implemented:

- An independent assessment of the trees to be removed shall be made by a qualified and experienced Arborist with a minimum AQF Level 5 qualification in Arboriculture, who has been approved by DPIE before works commence;
- The trees shall be documented in a Tree Register with evidence provided to the DPIE before the removal, damage or pruning of the tree for the purposes of the CSSI;
- The Tree Register shall consider retention value, health of the tree, opportunities to reduce impact, georeferenced location, visual assessment outcomes, tree relocation and/or tree offset requirements and any further attributes identified in AS 4970-2009 for *Protection of trees on development sites*; and
- A tree offset package shall be prepared in consultation with the independent arborist in accordance with CoA E107 of the CSSI.

4.8 Heritage

Historical aerial photographs showed that the site remained undeveloped until after 1937. In 1937 the majority of the site was transferred to Australian Cream Tartar Company Ltd, which had already established a factory to the north of the site over Grand Avenue. The eastern 30 metres of the site, however, remained in Wunderlich's ownership until 1955, when it was transferred to Akzo

Chemicals, and 1 acre portion of the north-western section was transferred to Wesco (Australia) Pty Ltd in 1938, a paint manufacturing company which possibly used the area for storage.

In 1942 an air-raid shelter was built on the site for the Australian Cream Tartar Company, which would have serviced company staff at the site and over Grand Avenue to the factory to the north of the site. A tunnel was also built under Grand Avenue to connect to the air-raid shelter.

Archaeological assessment has been completed and the archaeological remains associated with Elizabeth Farm and the Wunderlich Tile Works are considered to have local significance for their historical, associative, social, research potential, technological, rarity and representative values. It is unlikely, however, that remains associated with Elizabeth Farm survived within the site.

All structures on the Site, except the 1942 air raid shelter, the 1943 substation and a groundwater treatment plant, were demolished in 2014. Geotechnical investigation for the PLR project and remediation works were undertaken within this Historical Archaeological Research Design. No archaeological remains were encountered during monitoring of this work.

During remediation works performed in 2018, works were carried out to conduct a detailed archival recording of the locally heritage significant air-raid shelter. The air-raid shelter was situated near the north-east corner of the site, approximately 40 metres south of Grand Avenue (South). The shelter was a single storey rendered brick and concrete structure built at ground level and recessed into the ground.

Demolition activities were then carried out, as the air-raid shelter was in the alignment for installation of the Hydraulic Barrier Wall, providing isolation of contaminated groundwater within the site boundary.

Archival recording, including scale drawings in plan, elevations and full photographic recording was conducted prior to demolition and backfill works of the structure. Movable heritage from within the air raid shelter were cleaned and documented with a movable heritage assessment prepared by the Heritage Consultant. The archival recording of heritage air raid shelter was made available to Parramatta City Council for inclusion within the library.

The likelihood of impacting significant archaeological remains was determined to be low, due to the past disturbance from industrial and remediation operations of the site. In the case of an unexpected heritage item discovery, the contractor will enact the Unexpected Heritage Finds Procedure (PLR-TFNSW-SAM-PE-PLN-000002), which has been prepared by a suitably qualified heritage consultant. Works shall be implemented under the direction of a Heritage Consultant if areas of potential heritage significance are uncovered. A summary of the unexpected heritage finds procedure is listed below:

- Step 1 – Stop Work
- Step 2 – Secure Area
- Step 3 – Notification
- Step 4 – Inspections
- Step 5 – Prepare Documentation
- Step 6 – Discovery Notifications
- Step 7 – Resume Work

4.9 Waste Management and Resource Recovery

A Waste and Resource Management Sub-Plan has been developed to manage the soil and water risks on this Project. This document is developed in accordance with CoA C1 – C4 or REMMM and located in Appendix B8.

4.10 Site Facilities

The project site amenities include:

- Site facilities – e.g. lunch sheds, office sheds, and portable toilet facilities;
- Site compounds –including site offices, sheds and storage;
- Storage containers – for the storage and maintenance of plant and equipment;
- Stockpile area – for the stockpile and storage of excavated material and spoil; and
- Material storage (laydown areas) – for the storage of materials delivered to site for construction.

Site facilities are already constructed on-site as a part of remediation works and the same facilities are proposed for Portion 2 Early Works. Location and map of site facilities can be found in **Figure 4-1**. Boundary fencing that incorporates screening are erected around the site facilities.

Figure 4-1: Location and map of site facilities

4.11 Visual Amenity

In accordance with CoA E80, E82, E83,E86 and TfNSW Consistency Assessment signed and dated 28/11/19 Portion 2 Early Works will ensure that visual amenity impacts are minimised during construction. Potential environmental impacts of visual amenity are;

- Light pollution from temporary lighting;
- Temporary screening negatively impacting the visual character of the local area;
- Construction of Containment Cell on the eastern boundary
- Graffiti on site boundary screening mesh; and
- Site facilities and works impacting visual amenity.

Site specific control measures will be developed to minimise visual amenity impacts are avoided or minimised as far as practicable. Site specific control measures include:

- Design and construct Portion 2 Early Works in a manner that reduces visual setting impacts;
- Ensure consolidation and rationalisation of kerbside infrastructure to avoid visual clutter;
- No element of Portion 2 Early Works will be used as advertising materials;
- Design and construct Portion 2 Early Works in a manner that reduces opportunities of graffiti;
- Vegetation of Containment Cell following completion;
- Prompt removal of graffiti;
- Locate elements (stockpiles, site facilities, plant and equipment) within Portion 2 Site in a way to minimise visual impacts as far as practicable;
- Lighting of the site will be oriented to minimise glare and light spill impact on adjacent receivers, where practical and safe to do so; and
- Only use TfNSW approved screening surrounding the site boundary to soften the visual impact.

4.12 Restoration of site

Following completion of remediation activities, a site audit statement will be prepared by the EPA accredited Site Auditor who will certify containment, contaminated and disturbed areas have been constructed/remediated to a standard consistent with the intended land use.

On completion of the works, the site will be maintained for handover to future contractor(s) carrying out the construction of the stabling and maintenance facility. The handover process will be conducted in consultation with TfNSW.

4.13 Flood management

Flood management has been incorporated into the Soil and Water Management Plan to manage the flood risks on this Project. This document is developed in accordance with CoA E113 and is located in Appendix B4.

4.14 Environmental Risk Analysis

A Project Risk Register, located in Appendix A2, has been prepared 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 project risks (effects and impacts) and a corresponding risk mitigation strategy and risk ranking.

5 Environmental Compliance Matrix

Specific measures and requirements to address contract specification, CoA, REMMMs and EPOs in relation to CEMP are outlined in Table 5-1**: Construction Environmental Management Plan Conditions of Approval**, Table 5-2**: Construction Environmental Management Plan Revised Environmental Mitigation Measures** & Table 5-3**: Construction Environmental Management Plan Environmental Performance Outcomes** respectively. It is noted that not all conditions are triggered by the Portion 2 Early Works package of work, this is further detailed in Appendix C of the Parramatta Light Rail – Stage 1: Project Wide Staging Report (PLR-TFNSW-CBD-PE-RPT-000001).

5.1 Minister's Conditions of Approval

Table 5-1: Construction Environmental Management Plan Conditions of Approval

ID	Measure/Requirement	Reference	How addressed
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 *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement* (dated August 2017) (the EIS) as amended by the *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report)* (February 2018) (the SPIR).	Section 1.4	The CSSI shall be performed in accordance with the CSSI for *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Environmental Impact Statement* (dated August 2017) (the EIS) as amended by the *Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report)* (February 2018) (the SPIR), unless otherwise specified in accordance with CoA A2 and A3.
A2	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the EIS as amended by the Submissions Report (incorporating Preferred Infrastructure Report) unless otherwise specified in, or required under, this approval.	Section 1.4.3	The CSSI must be carried out in accordance with all procedures, commitments, preventative actions, performance criteria and mitigation measures set out in the EIS as amended by the Submissions Report (incorporating Preferred Infrastructure Report) unless otherwise specified in the CSSI approval.
A3	In the event of an inconsistency between the EIS and the Submissions Report (incorporating Preferred Infrastructure Report) 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*	Section 1.4.3	In the event of an inconsistency between the EIS and the Submissions Report (incorporating Preferred Infrastructure Report) or any other document required under the SSI approval, the conditions of the approval prevail to the extent of the inconsistency.

ID	Measure/Requirement	Reference	How addressed
	and any document if it is not possible to comply with both the term and the document.		
A4	The Proponent must comply with all written requirements or directions of the Secretary, including in relation to: (a) the environmental performance of the CSSI; (b) any document or correspondence in relation to the CSSI; (c) any notification given to the Secretary under the terms of this approval; (d) any audit of the construction or operation of the CSSI; (e) the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); and (f) the carrying out of any additional monitoring or mitigation measures.	Section 3.12.2	All written requirements or directions received by DPIE shall be complied with at all times.
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 Secretary with the document or monitoring program or review. The evidence must include: (a) documentation of the engagement with the party(ies) identified in the relevant condition of approval before submitting the document for approval; (b) log of the points of engagement or attempted engagement with the identified party(ies) and a summary of the issues raised by the identified party(ies); (c) documentation of any follow-up with the identified	Section 3.6.2	Evidence of consultation for relevant documents or monitoring programs identified within the CoA will be compiled and presented to DPIE along with each document or program. This will include engagement processes, log of points or attempted engagement, issues raised and evidence of satisfactory close out or, where agreement cannot be reached, reasons for why they could not be adopted or closed out.

ID	Measure/Requirement	Reference	How addressed
	party(ies), where feedback has not been provided, to confirm that the identified party(ies) has none or has failed to provide feedback after repeated requests; (d) outline of the issues raised by the identified party(ies) and how they have been addressed, including evidence that the party(ies) is satisfied the issues have been addressed; and (e) where there are outstanding issues raised by the identified party(ies) that have not been adopted, the reasons why they have not been/could not be adopted must be provided, including evidence of consultation with the relevant party(ies).		
A6	This approval lapses five (5) years after the date on which it is granted, unless works for the purpose of the CSSI are physically commenced on or before that date.	Section 1.1.1	Project staging has Portion 2 Early Works scheduled to finish in early 2020
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, unless otherwise agreed with the Secretary.	Section 3.12	Changes to standards, guidelines, protocols, policies and legislation shall be noted and compliance shall be kept up-to-date unless otherwise agreed with DPIE.
A8	In the event that there are differing interpretations of the terms of this approval, including in relation to a condition of this approval, the Secretary's interpretation is final.	Section 3.12	In the event that there are differing interpretations of the terms of this approval, a determination by DPIE is final.
A11	Without limitation, all strategies, plans, programs, reviews, audits, report recommendations, protocols and the like required by the terms of this approval must be implemented by the Proponent in	Section 3.12.2	All written requirements or directions received by DPIE shall be complied with at all times.

ID	Measure/Requirement	Reference	How addressed
	accordance with all requirements issued by the Secretary from time to time in respect of them.		
A13	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 Secretary for approval. The **Staging Report** must be submitted to the 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).	Parramatta Light Rail – Stage 1: Portion 2 Early Works (Package 3) – Staging Report	
A14	The **Staging Report** must: (a) if staged construction is proposed, set out how the construction of the whole of the CSSI will be staged, including details of construction (as defined in this instrument) 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	Parramatta Light Rail – Stage 1: Portion 2 Early Works (Package 3) – Staging Report	

ID	Measure/Requirement	Reference	How addressed
	stage of the CSSI; and (d) set out mechanisms for managing any impacts arising from the proposed staging. *Note: nothing in this condition invalidates the timing requirements or triggers specified in other conditions of this approval.*		
A15	The CSSI must be staged in accordance with the **Staging Report,** as approved by the Secretary.	Parramatta Light Rail – Stage 1: Portion 2 Early Works (Package 3) – Staging Report	
A16	Where staging is proposed, the terms of this approval that apply or are relevant to construction to be carried out in a specific stage must be complied with at the relevant time identified in the Staging Report for that stage.	Parramatta Light Rail – Stage 1: Portion 2 Early Works (Package 3) – Staging Report	
A18	Duration of construction in any one location or zone, as defined to the Secretary's satisfaction, is such that any receiver is impacted by construction works for the minimum, reasonably practicable time. The Proponent must demonstrate the principles that would be adopted to minimise the duration of construction in zones as part of the **Staging Report** required by **Condition A13**	Parramatta Light Rail – Stage 1: Project Wide Staging Report (PLR-TFNSW-CBD-PE-RPT-000001)	
A30	A **Compliance Tracking Program** to monitor compliance with the terms of this approval must be prepared, taking into consideration any staging of the CSSI that is proposed in a **Staging Report** submitted in accordance with **Conditions A13** and **A14** of this approval.	Section 3.8.4 in CEMP	Compliance Tracking Program endorsed by ER and submit to Secretary one month prior to commencement of construction

ID	Measure/Requirement	Reference	How addressed
A31	The **Compliance Tracking Program** must be endorsed by the ER and then submitted to the Secretary for information at least one (1) month before the commencement of works.	Section 3.8.4 in CEMP	Compliance Tracking Program endorsed by ER and submit to Secretary one month prior to commencement of construction
A32	The **Compliance Tracking Program** in the form required under **Condition A30** of this approval must be implemented for the duration of works and for a minimum of one (1) year following commencement of operation, or for a longer period as determined by the Secretary based on the outcomes of independent environmental audits, **Environmental Representative Monthly Reports** and regular compliance reviews submitted through **Compliance Reports**. If staged operation is proposed, or operation is commenced of part of the CSSI, the **Compliance Tracking Program** must be implemented for the relevant period for each stage or part of the CSSI.	Section 3.8.4 in CEMP	Compliance Tracking Program endorsed by ER and submit to Secretary one month prior to commencement of construction
A34	A **Pre-Construction Compliance Report** must be prepared and submitted to the Secretary for information no later than one (1) month before the commencement of construction (or each stage of construction identified in the Staging Report).	Section 3.8.4 in CEMP	Prepare Pre-construction Compliance Report to meet these conditions. Submit Pre-construction Compliance Report to secretary for information 1 month prior to commencement of construction
A35	The **Pre-Construction Compliance Report** must include: (a) details of how the terms of this approval that must be addressed before the commencement of construction have been complied with; and	Section 3.8.4 in CEMP	

ID	Measure/Requirement	Reference	How addressed
	(b) the proposed commencement date for construction.		
A36	Construction must not commence until the **Pre-Construction Compliance Report** has been submitted to the Secretary.	Section 3.8.4 in CEMP	
A37	**Construction Compliance Reports** must be prepared and submitted to the Secretary for information every six (6) months from the date of the commencement of construction for the duration of construction. The **Construction Compliance Reports** must include: (a) a results summary and analysis of environmental monitoring; (b) the number of complaints received, including a summary of main areas of complaint, action taken, response given and proposed strategies for reducing the recurrence of such complaints; (c) details of any review of, and minor amendments made to, the **CEMP** as a result of construction carried out during the reporting period; (d) a register of any reviews of consistency undertaken including outcome; (e) results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit; (f) a summary of all incidents notified in accordance with **Conditions A44** and **A46** of this approval; and (g) any other matter relating to compliance with the terms of this approval or as requested by the Secretary.	Section 3.8.4 in CEMP	Prepare and submission of construction compliance reports every six months, incorporating requirements of CoA A37.
A40	An **Environmental Audit Program** for annual independent environmental auditing against the		

ID	Measure/Requirement	Reference	How addressed
	terms of this approval must be prepared in accordance with AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems and submitted to the Secretary for information no later than one month before the commencement of construction.	Section 3.8.3 in CEMP	Prepare and submit Environmental Audit Program at least one month prior to commencement of works. Environmental Audit Report to be documented by a qualified independent auditor to meet this condition
A41	The **Environmental Audit Program,** as submitted to the Secretary, must be implemented for the duration of construction and operation.		
A42	All independent environmental audits of the CSSI must be conducted by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts and be documented in an **Environmental Audit Report** which: (a) assesses the environmental performance of the CSSI, and its effects on the surrounding environment; (b) assesses whether the project is complying with the terms of this approval; and (c) recommends measures or actions to improve the environmental performance of the CSSI.		
A43	The Proponent must submit a copy of the **Environmental Audit Report** to the Secretary for information, with a response to any recommendations contained in the audit report within six (6) weeks of completing the audit.		
A44	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	Section 3.7 in CEMP Appendix A7: Emergency Response Management Plan	

ID	Measure/Requirement	Reference	How addressed
	application number and the name of the CSSI if it has one), and set out the location and nature of the incident.		
A45	Within one week of notification of an incident under **Condition A44** of this approval, the Proponent must submit a report to the Department providing the time and date of the incident, details of the incident and must identify any consequent non-compliance with this approval.		
A46	All written requirements of the Secretary, which may be given at any point in time, to address the cause or impact of an incident must be complied with, within any timeframe specified by the Secretary or relevant public authority.		
A47	If an incident occurs or if statutory notification is given to the EPA as required under the Protection of the Environment Operations Act 1997 in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.		
B2	The **Community Communication Strategy** must: (a) identify people and organisations to be consulted during the design and work phases; (b) set out procedures and mechanisms for the regular distribution of accessible information about or relevant to the CSSI including use of construction hoardings to provide information regarding the progress of construction. The information to be distributed must include information regarding current site construction activities, schedules and	Section 3.6.3 in CEMP	*Refer Staging Report (PLR-VNT-SAM-PE-RPT-000018)* The project boundary has branded screening on the perimeter facing boundaries installed from existing works performed on the project. An additional community noticeboard will be installed to provide information regarding current site construction activities, schedules and milestones

ID	Measure/Requirement	Reference	How addressed
	milestones at each construction site; (c) provide for the formation of issue or location-based community forums that focus on key environmental management issues of concern to the relevant communities; and (d) set out procedures and mechanisms: i. through which the community can discuss or provide feedback to the Proponent; ii. through which the Proponent will respond to enquiries or feedback from the community; and iii. to resolve any issues and mediate any disputes that may arise in relation to construction of the CSSI, including disputes regarding rectification or compensation.		
B8	The telephone number, postal address and email address required under **Condition B7** of this approval must be published in a newspaper circulating in the local area and on-site hoarding at each construction site before commencement of construction and published in the same way again before the commencement of operation. This information must also be provided on the website required under **Condition B11** of this approval.	Section 3.6.3 in CEMP	*Refer Staging Report (PLR-VNT-SAM-PE-RPT-000018)* The project boundary has branded screening on the perimeter facing boundaries installed from existing works performed on the project. An additional community noticeboard will be installed to provide information regarding current site construction activities, schedules and milestones
C1	A **Construction Environmental Management Plan** (CEMP) must be must be prepared to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in **Condition A1** will be implemented and achieved during construction.	This Plan	This plan has been prepared according to A1
C2	The **CEMP** must provide:	*Refer below:*	

ID	Measure/Requirement	Reference	How addressed
C2 (a)	a description of activities to be undertaken during construction (including the scheduling of construction)	Table 1-1 from Section 1.1	Table 1-1 explains planned activities and an indicative timeline of works.
C2 (b)	details of environmental policies, guidelines and principles to be followed in the construction of the CSSI	Appendix A1 – Legal and ISO obligations Appendix A3 – Environmental Policy	A register of legal and other requirements for the Project is contained in Appendix A1
C2 (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 before the commencement of construction of the CSSI	Appendix A2 – Project Risk Register	A Project Risk Register has been developed and contained in Appendix A2.
C2 (d)	details of how the activities described in subsection (a) of this condition will be carried out to: i. meet the performance outcomes stated in the documents identified in **Condition A1;** and ii. manage the risks identified in the risk analysis undertaken in subsection (c) of this condition;	Section 4 in CEMP Sub-plans	Each sub-plan describes how this project meets the performance outcomes and manage risks. Section 4 describes how this projects meets the performance outcomes and risk management for conditions which did not covered by a separate sub-plan.
C2 (e)	an inspection program detailing the activities to be inspected and frequency of inspections	Section 3.2.2, Section 3.8.1, Section	Implementation of Pre-compliance tracking program, compliance tracking program and environmental monitoring inspections to meet this condition.

ID	Measure/Requirement	Reference	How addressed
		3.8.4 in CEMP	
C2 (f)	a protocol for managing and reporting any: i. incidents; and ii. non-compliances with this approval and with statutory requirements.	(i) Section 3.7 in CEMP (ii) Section 3.9 in CEMP	(i) An Emergency Response Management Plan has been developed and contained in Appendix A7. (ii) A Compliance tracking program will track any non-conformances.
C2 (g)	procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction	Section 3.10 in CEMP	Any non-conformances will be tracked through Compliance tracking program as well as independent audits, internal audits and compliance tracking reports.
C2 (h)	a list of all the **CEMP Sub-plans** required in respect of construction, as set out in **Condition C3**. Where staged construction of the CSSI is proposed, the **CEMP** must also identify which **CEMP Sub-plan** applies to each of the proposed stages of construction	Section 1.2 in CEMP	Sub-plans required for this package of works is listed in Appendix A5 – Document Register of the CEMP
C2 (i)	a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER	Section 3.3.1 in CEMP	Description of roles and responsibilities are recorded in section 3.3.1 of this CEMP
C2 (j)	for training and induction for employees, including contractors and sub-contractors, in relation to environmental and compliance obligations under the terms of this approval	Section 3.4 in CEMP	Training and induction requirement is documented in section 3.5 of this CEMP
C2 (k)	for periodic review and update of the **CEMP** and all associated plans and programs	Section 3.11 & Section	Requirement for reviews and updates are documented in section 3.11 & section 3.12 of this CEMP

<table>
<tr><th>ID</th><th>Measure/Requirement</th><th>Reference</th><th>How addressed</th></tr>
<tr><td></td><td></td><td>3.12 in CEMP</td><td></td></tr>
<tr><td>C3</td><td>The following CEMP Sub-plans must be prepared in consultation with the relevant government agencies identified for each CEMP Sub-plan and be consistent with the CEMP referred to in Condition C1:
<table>
<tr><th>Required CEMP Sub-plan</th><th>Relevant government agencies to be consulted for each CEMP Sub-plan</th><th>Secretary Approval / Information</th></tr>
<tr><td>(a) Traffic, transport and access</td><td>Relevant Council(s), Roads and Maritime Services, Emergency Services</td><td>Information</td></tr>
<tr><td>(b) Noise and vibration</td><td>Relevant Council(s), EPA, NSW Health</td><td>Approval</td></tr>
<tr><td>(c) Flood Management</td><td>Relevant Council(s), OEH, Sydney Water</td><td>Information</td></tr>
<tr><td>(d) Heritage</td><td>Relevant Council(s), OEH</td><td>Approval</td></tr>
<tr><td>(e) Flora and Fauna / Biodiversity</td><td>Relevant Council(s), OEH</td><td>Information</td></tr>
</table></td><td>Section 3.6.2
Appendix B1 – Traffic, Transport and Access Management Plan
Appendix B3 - Noise and Vibration Management Plan
Appendix B4 – Soil and Water Management Plan</td><td>Evidence of consultation for relevant documents or monitoring programs identified within the CoA will be compiled and presented to DPIE along with each document or program. This will include engagement processes, log of points or attempted engagement, issues raised and evidence of satisfactory close out or, where agreement cannot be reached, reasons for why they could not be adopted or closed out.</td></tr>
</table>

ID	Measure/Requirement	Reference	How addressed
C4	The CEMP Sub-plans must state how: (a) the environmental performance outcomes identified in the documents listed in **Condition A1** will be achieved; (b) the mitigation measures identified in the documents listed in **Condition A1** will be implemented; (c) the relevant terms of this approval will be complied with; and (d) issues requiring management during construction, as identified through ongoing environmental risk analysis, will be managed.	CEMP associated sub-plans	Each CEMP Sub-plan will have a compliance matrix to demonstrate how relevant conditions of approval, REMMMs, EPOs and issues identified throughout the works will be appropriately addressed.
C5	The **CEMP Sub-plans** must be developed in consultation with relevant government agencies (including Relevant Council(s)). Details of all information requested by an agency to be included in a **CEMP Sub-plan** as a result of consultation, including all copies of correspondence from those agencies, must be provided to the Secretary with the relevant **CEMP Sub-plan.**	Section 3.6.2	Evidence of consultation for relevant documents or monitoring programs identified within the CoA will be compiled and presented to DPIE along with each document or program. This will include engagement processes, log of points or attempted engagement, issues raised and evidence of satisfactory close out or, where agreement cannot be reached, reasons for why they could not be adopted or closed out.
C6	Any of the **CEMP** Sub-plans may be submitted along with, or subsequent to, the submission of the **CEMP** but in any event, no later than one month before construction.	Section 2 in CEMP	CEMP and sub-plans shall be endorsed by the ER and then submitted to the Secretary for approval no later than one month before commencement of construction works.
C7	CEMP and sub-plans - Endorsement by ER and submission to Secretary no later than one month before construction	Section 2 in CEMP	CEMP and sub-plans shall be endorsed by the ER and then submitted to the Secretary for approval no later than one month before commencement of construction works.

ID	Measure/Requirement	Reference	How addressed
C8	Construction must not commence until the **CEMP** and any **CEMP Sub-plan** specified in **Condition C3** have been submitted to or approved by the Secretary. The **CEMP** and **CEMP Sub-plans**, as submitted to or approved by the Secretary, including any minor amendments approved by the ER, must be implemented for the duration of construction. Where construction of the CSSI is staged, construction of a stage must not commence until the **CEMP** and **Sub-plans** for that stage have been approved by the Secretary. *Note: the requirement to submit or have a CEMP or CEMP Sub-plan approved is specified in **Condition C3**.*	Section 2 in CEMP	Construction works, as defined by the CSSI, shall not commence until CEMP and sub-plans are submitted to, or approved by the Secretary.
C9(b)	The following Construction Monitoring Programs must be prepared in consultation with the relevant government agencies for each to compare actual performance of construction of the CSSI against performance predicted in the documents listed in Condition A1 or in the CEMP: **Required Construction Monitoring Programs - (b)** Noise and Vibration Monitoring **Relevant government agencies to be consulted -** Relevant Council(s), EPA, NSW Health (as relevant)	Section 10.3 and Appendix D of NVMP	Ensure preparation of Construction Monitoring Program for Noise and vibration and consultation has been carried out with City of Parramatta, EPA and NSW health through Consultation Workshop (held on 6th March 2019) and through emails. Evidence of responds will be included as an Appendix to NVMP.
C10	Each **Construction Monitoring Program** must provide: (a) details of baseline data available; (b) details of baseline data to be obtained and when; (c) details of all monitoring of the project to be	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	undertaken; (d) the parameters of the project to be monitored; (e) the frequency of monitoring to be undertaken; (f) the location of monitoring; (g) the reporting of monitoring results against relevant criteria; (h) procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory; and (i) any consultation to be undertaken in relation to the monitoring programs.		
C11	The noise and vibration monitoring data collected during monitoring required by **Condition C9** must be available to the Proponent, ER, AA, Relevant Council(s) and the community to inform construction scheduling, the level of impacts and whether additional mitigation is required. The Department must also be provided access to this data if specifically requested.	Appendix B3 - Noise and Vibration Management Plan	
C12	The **Construction Monitoring Programs** must be developed in consultation with relevant government agencies and Relevant Council(s) as identified in **Condition C9** of this approval and must include, information requested by an agency to be included in a **Construction Monitoring Programs** during such consultation. Details of all information requested by an agency, including copies of all correspondence from those agencies, must be provided with the relevant **Construction Monitoring Program**.	Appendix B3 - Noise and Vibration Management Plan	
C13	The **Construction Monitoring Programs** must be endorsed by the ER and submitted to the Secretary	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	for information at least one month before the commencement of construction.		
C14	Construction must not commence until the Secretary has received all of the required **Construction Monitoring Programs**, and all relevant baseline data for the specific construction activity has been collected.	Appendix B3 - Noise and Vibration Management Plan	
C15	The **Construction Monitoring Programs**, as submitted to the Secretary including any minor amendments approved by the ER must be implemented for the duration of construction and for any longer period set out in the monitoring program or specified by the Secretary, whichever is the greater.	Appendix B3 - Noise and Vibration Management Plan	
C16	The results of the **Construction Monitoring Programs** must be submitted to the Secretary, and relevant regulatory agencies, for information in the form of a **Construction Monitoring Report** at the frequency identified in the relevant **Construction Monitoring Program**.	Appendix B3 - Noise and Vibration Management Plan	
C17	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 Management Plan	
C19	Boundary fencing that incorporates screening must be erected around all construction ancillary facilities that are adjacent to sensitive receivers for the duration of site establishment and construction of the CSSI unless otherwise agreed with Relevant Council(s), affected residents, business operators	Section 4.11 of CEMP	Project specific branded screening has been installed as part of previous remediation activities on all external project boundary fencing and shall be maintained throughout the works.

ID	Measure/Requirement	Reference	How addressed
	and/or landowners and in accordance with **Condition B2(b).**		
C20	Boundary screening required under **Condition C19** of this approval must reduce visual, noise and air quality impacts on adjacent sensitive receivers.		
C21	All construction spoil haulage vehicles, and construction plant must be clearly marked as being for the CSSI in such a manner to enable immediate identification within at least 50 metres of the vehicles and plant.	Appendix B1 – Traffic, Transport and Access Management Plan	
E1	The CSSI must be designed, constructed and operated so that it does not adversely impact network connectivity, or the safety and efficiency of the transport system near the CSSI in a manner which is consistent with the impacts predicted in the documents referred to in **Condition A1**.	Appendix B1 – Traffic, Transport and Access Management Plan	
E5	**Construction Traffic and Access** Construction vehicles (including staff vehicles) associated with the CSSI must: (a) minimise parking or queuing on public roads and utilise the light rail corridor for construction vehicle and staff movements to the greatest extent practicable; (b) not idle or queue in local residential streets; (c) minimise use of routes on local roads that directly pass schools or childcare centres, or where no alternative route is available, restrict heavy vehicle movements between 8:00am and 9:30am and between 2:30pm and 4:00pm Monday to Friday, during the school term; (d) not use local roads (including residential streets)	Appendix B1 – Traffic, Transport and Access Management Plan	

ID	Measure/Requirement	Reference	How addressed
	to gain access to construction sites and compounds unless no alternatives are available. Construction sites must be accessed from arterial roads and the rail corridor used for transportation of construction materials and the like to work sites to the greatest extent practicable; and (e) adhere to the nominated haulage routes identified in the **Construction Traffic, Transport and Access Management Plan** required under **Condition C3**.		
E6	**Condition Reports** Current condition reports for all existing roads and all existing property and infrastructure in the road reserve where the physical condition is likely to be adversely affected during works must be prepared before commencement of such works. The report must state the current condition of the asset. A copy of the report must be provided to the asset owner no later than one month before the commencement of construction of the CSSI.	Completed within previous site works for remediation activities	
E7	If damage occurs to any item outlined in **Condition E6** resulting from the works, aside from that resulting from normal wear and tear, the Proponent must either (at the asset owner's discretion): (a) compensate the asset owner for the damage so caused. The amount of compensation may be agreed with the asset owner, but compensation must be paid even if no agreement is reached; or		

ID	Measure/Requirement	Reference	How addressed
	(b) rectify the damage so as to restore the item to at least the condition it was in pre-works. Any repairs must be completed before the commencement of CSSI operations.		
E20	**Land Use Survey** A detailed land use survey must be undertaken to confirm sensitive receivers (including critical working areas such as operating theatres, precision laboratories housing sensitive equipment and drama theatres) potentially exposed to construction noise and vibration, construction ground-borne noise and operational noise and vibration. The survey may be undertaken on a progressive basis but must be undertaken in any one area before 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 used to develop the **Noise and Vibration Management Sub-Plan** required by **Condition C3** and **Construction Noise and Vibration Impact Statements** required by **Condition E42.**	Appendix B3 - Noise and Vibration Management Plan	
E21	**Hours of Works** Works must be undertaken during the following hours: (a) 7:00am to 6:00pm Mondays to Fridays, inclusive; (b) 8:00am to 12:00pm Saturdays; and (c) at no time on Sundays or public holidays.	Appendix B3 - Noise and Vibration Management Plan	
E23	Notwithstanding **Condition E21**, works may be undertaken in the Camellia and Rosehill precincts (east of James Ruse Drive) and the Carlingford	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	precinct (from Parramatta River to Victoria Road) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009), between 10.00pm and 7.00am.		
E25	Works may be undertaken outside of the hours defined in **Conditions E21 to E22**, as applicable, but only if one or more of the following applies: (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 hours of works are permitted or required under an EPL in force in respect of the CSSI; or (d) works approved under an Out-of-Hours Work Protocol for works not subject to an EPL; or (e) construction that causes LAeq(15 minute) noise levels: i) no more than 5 dB(A) above the rating background level at any residence in accordance with the Interim Construction Noise Guideline (DECC, 2009), and ii) no more than the 'Noise affected' noise management levels specified in Table 3 of the Interim Construction Noise Guideline (DECC, 2009) at other sensitive land uses, and iii) no more than 15dBA above the night-time rating background level at any residence during the night time period, when measured using the LA1(1 minute) noise descriptor, and iv) continuous or impulsive vibration values,	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	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 v) 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).		
E26	On becoming aware of the need for emergency construction works, the Proponent must notify the ER of the need for those activities or works. The Proponent must also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.	Appendix B3 - Noise and Vibration Management Plan TfNSW Community Communication Strategy	
E27	**Highly Noise Intensive Works** Except as permitted by an EPL, or through the **Out-of-Hours Work Protocol**, Highly Noise Intensive Works that result in an exceedance of the applicable NML at the same receiver must only be undertaken: (a) between the hours of 8:00 am to 6:00 pm Monday to Friday; (b) between the hours of 8:00 am to 1:00 pm Saturday; and (c) in continuous blocks not exceeding three (3) hours each with a minimum respite from those activities and works of not less than one (1) hour between each block. For the purposes of this condition, 'continuous'	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	includes any period during which there is less than a one (1) hour respite between ceasing and recommencing any of the work that are the subject of this condition. *Note: A trial period of the Highly Noise Intensive Work undertaken with the approval of the Out of Hours Work Protocol may be established.*		
E28	**Out of Hours Works Protocol** 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 permitted hours defined in **Conditions E21 to E22**, where an EPL does not apply. The Protocol must be approved by the Secretary before commencement of out-of-hours works. The Protocol must be prepared and implemented in consultation with AA. The Protocol must: (a) provide a process for the consideration of out-of-hours works against the relevant noise and vibration criteria; (b) provide a process for the identification and implementation of mitigation and management measures for residual impacts, in consultation with the community at each affected location, consistent with the requirements of **Condition E39**; (c) identify an approval process that considers the risk level of activities (in accordance with	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	AS/NZS ISO 31000:2009 “Risk Management”), proposed mitigation, management, and coordination, including where: i) low and moderate risk activities can be approved by the ER in consultation with the AA, and ii) high risk activities that are approved by the Secretary; and (d) identify Department and community notification arrangements for approved out of hours works, which will be detailed in the Communication Strategy. *Note: This condition does not apply where work is required for an emergency (as defined in Condition E25 (b)).*		
E29	Out-of-hours works that may be regulated through an EPL or the **Out of Hours Work Protocol** as per **Condition E28** include, but are not limited to: (a) carrying out works that during standard hours would result in a high risk to construction personnel or public safety, based on a risk assessment carried out in accordance with AS/NZS ISO 31000:2009 “Risk Management”; or (b) the relevant road authority has advised the Proponent in writing that carrying out the works and activities during standard hours would result in a high risk to road network operational performance and a road occupancy licence will not be issued; or (c) the relevant utility service operator has advised the Proponent in writing that carrying out the works and activities during standard hours would result in		

ID	Measure/Requirement	Reference	How addressed
	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 E21 and Condition E22**; or (e) where Sydney Trains (or other rail authority) has advised the Proponent in writing that a Rail Possession is required.		
E30	**Construction Noise Mitigation Measures** Mitigation measures must be applied to construction activities that are predicted to result in the following residential ground-borne noise levels being exceeded as a result of the CSSI: (a) Evening (6.00pm to 10.00pm) – internal LAeq(15 minute): 40 dBA; and (b) Night (10.00pm to 7.00am) – internal LAeq(15 minute): 35 dBA. The mitigation measures must be outlined in the **Construction Noise and Vibration Management Sub-Plan** and the **Out of Hours Works Protocol.**	Appendix B3 - Noise and Vibration Management Plan	
E31	Noise generating works near places of worship, educational institutions and noise and vibration-sensitive businesses and critical working areas (such as theatres, laboratories, operating theatres, and mental health services and accommodation) must not be timetabled within sensitive periods, unless otherwise agreed with the affected institutions, and at no cost to the affected institution. This must be determined through	Appendix B3 - Noise and Vibration Management Plan TfNSW Community Communication Strategy	

ID	Measure/Requirement	Reference	How addressed
	ongoing consultation with the community during construction.		
E32	The Proponent must consult with proponents or applicants of other State Significant development and infrastructure works near the CSSI and take reasonable steps to coordinate works to minimise cumulative impacts of noise and vibration and maximise respite for affected sensitive receivers.	An ERG will be maintained for the duration of the Project and will meet regularly and undertake environmental inspections. The role the ERG is to work collaboratively to manage the cumulative impacts of the Project and other interfacing projects. Appendix B3 - Noise and Vibration Management Plan TfNSW Community Communication Strategy	
E33	Construction noise mitigation measures must be implemented in accordance with Tables 4, 5, 6 and 7 of TfNSW's *Construction Noise and Vibration Strategy* (2018), regardless of the number of sensitive receivers impacted.	Appendix B3 - Noise and Vibration Management Plan	
E34	Piling activities that affect sensitive receivers must be undertaken using quieter alternative methods than impact or percussion piling, such as bored piles or vibrated piles, where practicable.	Appendix B3 - Noise and Vibration Management Plan	
E36	Construction Noise Mitigation - Respite	Appendix B3 - Noise and Vibration Management Plan	
E37	Where works are undertaken outside hours specific in Condition E21 and E22 and construction noise levels exceed 65 dB(A) LAeq (15 mins) at the façade of the building of a residential receiver, the Proponent must only work 4 nights in any 7 day period. The 4 nights worked must be informed by community consultation referenced in Condition E39. Outcomes of the community consultation, the identified works and respite periods and the scheduling of the likely out-of-hour works must be	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	provided to the AA, ER and the Secretary for information. Relocation of work following 4 nights of works in any 7 day period must be sufficiently removed so as to provide clear respite of 3 days. Works in areas of respite must be subject to noise levels of no more than 5 dB(A) above the rating background level at any residence in accordance with the *Interim Construction Noise Guideline* (DECC, 2009). The requirements of this condition may be varied with the approval of the Secretary following the Secretary's review of community consultation outcomes, construction noise and vibration impacts and the implementation of noise management and mitigation measures.		
E38	All works undertaken for the delivery of the CSSI, including those undertaken by utility contractors, must be coordinated to ensure respite, including the respite required by **Condition E37**. The Proponent must: (a) schedule any works to provide respite to impacted noise sensitive receivers so that all respite periods are achieved; or (b) consider the provision of alternative mitigation, including the provision of at receiver treatments and alternative accommodation 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 Management Plan	

ID	Measure/Requirement	Reference	How addressed
E39	In order to undertake out-of-hours work described in **Condition E25(c) and (d)**, the Proponent must identify appropriate work and respite periods for the works in consultation with the community at each affected precinct at three monthly intervals. This consultation must be ongoing and include (but not be limited to) providing the community with: (a) a schedule of likely out-of-hours work for a period of no less than three (3) months for medium and high risk work (as defined in the **Out-of-Hours Work Protocol (Condition E28)**); (b) a schedule of likely out-of-hours work for a period of no less than seven (7) days for low risk work (as defined in the **Out-of-Hours Work Protocol**); (c) the potential works, location and duration; (d) the noise characteristics and likely noise levels of the works; and (e) likely mitigation and management measures. The Proponent shall consider and respond to the affected community's preference for alternative hours and/or durations. 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, ER and the Secretary.	Appendix B3 - Noise and Vibration Management Plan	
E40	The provision of respite periods does not preclude the application of other construction noise management measures, including the provision of	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	at receiver treatments and or alternate accommodation.		
E41	**Workplace Health and Safety for Nearby Workers** At no time can noise generated by construction exceed the National Standard for exposure to noise in the occupational environment of an eight-hour equivalent continuous A-weighted sound pressure level of LAeq,8h, of 85dB(A) for any employee working at a location near the CSSI.	Appendix B3 - Noise and Vibration Management Plan	
E42	**Construction Noise and Vibration Impact Statements** **Construction Noise and Vibration Impact Statements** must be prepared and implemented for each construction site before construction noise and vibration impacts commence and include specific mitigation measures identified through consultation with affected sensitive receivers. Each **Construction Noise and Vibration Impact Statement** will supplement the **Noise and Vibration Management Sub-Plan** and must specifically address each of the major construction sites and must include but not be limited to: (a) a description of the proposed activities; (b) predicted noise and vibration levels based on background noise levels; (c) examination of alternative methods of construction that would potentially reduce noise and vibration if the potential noise and vibration exceeds the relevant criteria; (d) description and commitment to work practices which limit noise and vibration;	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	(e) description of specific noise and vibration mitigation treatments and time restrictions, including respite periods, duration, and frequency; (f) justification for any activities to be undertaken outside the specified construction hours defined in **Conditions E21 and E22**; (g) internal noise audit systems including recording of daily hours of construction, progressive impact assessments as work proceeds, conducting informal checks by the AA, providing active and communication links to Council and surrounding residents and sensitive receivers; (h) assessment of potential noise from the proposed construction methods including noise from construction vehicles and noise impacts from required traffic diversions; (i) community consultation and notification; (j) all reasonable and feasible measures including adopting the least noisy available construction methods, systems and equipment; (k) additional noise and vibration mitigation measures as negotiated with affected residents and other sensitive receivers. *Note: Existing noise levels, pre-construction noise levels, or the like for the purposes of identifying rating background noise levels, noise management levels and construction noise impacts are noise levels that do not include any other construction related noise.*		
E43	**Vibration** The Proponent must conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
	to identify minimum working distances to prevent cosmetic damage. In the event that the vibration testing and monitoring shows that the preferred dose values for vibration are likely to be exceeded, the Proponent must review the construction methodology and, if necessary, implement additional mitigation measures.		
E45	**Building Condition Survey** Before commencement of any construction and with the agreement of the landowner, a structural engineer must undertake building condition surveys of all buildings identified in the documents listed in **Condition A1** as being at risk of damage. The results of the surveys must be documented in a **Building Condition Survey Report** for each building surveyed. Copies of **Building Condition Survey Reports** must be provided to the landowners of the buildings surveyed, and if agreed by the landowner, the relevant Council within three weeks of completing the surveys and no later than one month before the commencement of construction.	Completed within previous site works for remediation activities	
E46	After completion of construction and with the agreement of the landowner, **Building Condition Surveys** of all buildings for which building condition surveys were undertaken in accordance with **Condition E45** of this approval must be undertaken by a structural engineer. The results of the surveys must be documented in a **Building Condition Survey Report** for each building surveyed. Copies of **Building Condition Survey Reports** must be provided to the landowners of the buildings surveyed, and if agreed by the		

ID	Measure/Requirement	Reference	How addressed
	landowner, the relevant Council within three weeks of completing the surveys and no later than three (3) months following the completion of construction.		
E47	Any physical damage caused to a property as a result of the CSSI shall be rectified or the property owner compensated, within a timeframe agreed to by the property owner with the costs borne by the Proponent. This condition is not intended to limit any claims that the property owner may have against the Proponent.		
E60	The Proponent must not destroy, modify or otherwise physically affect heritage items (including Aboriginal objects), outside of the CSSI footprint.	Section 4.8 in CEMP Unexpected Heritage Finds Procedure	Heritage Items managed in previous remediation activities, no further Heritage Items envisaged to be encountered in Portion 2 Early Works. Heritage items encountered will be managed under the Unexpected Heritage Finds Procedure.
E61	Nothing in this approval permits the Proponent to harm, modify, or otherwise impact human remains uncovered during the construction and operation of the CSSI.	Section 4.8 in CEMP Unexpected Heritage Finds Procedure	Human remains encountered will be managed under the Unexpected Heritage Finds Procedure.
E62	An **Unexpected Heritage Finds Procedure** must be: (a) prepared to manage unexpected heritage finds in accordance with any guidelines and standards	Section 4.8 in CEMP	An Unexpected Heritage Finds procedure has been prepared by a qualified and experienced heritage consultant to ensure it is prepared in accordance with CoA E62

ID	Measure/Requirement	Reference	How addressed
	prepared by the Heritage Council of NSW or OEH; and (b) certified by a suitably qualified and experienced archaeologist or heritage specialist. The Procedure must be included in the **Heritage Management Sub-plan** required by **Condition C3.** *Note: Human remains that are found unexpectedly during works are under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.*	Unexpected Heritage Finds Procedure	
E63	The **Unexpected Heritage Finds Procedure**, as submitted to the Secretary, must be implemented for the duration of construction and during operational maintenance works.		
E72	**Historical Archaeology** Before works within Zones 1 and 2 Historical Archaeological Management Units (HAMUs), the Proponent must engage a suitably qualified archaeologist whose experience complies with the NSW Heritage Council's *Criteria for Assessment of Excavation Directors* (July, 2011) (referred to as the Excavation Director) to oversee and advise on matters associated with historical archaeology (i.e. non-Aboriginal) and to prepare a **Historical Archaeological Research Design and Excavation Methodology**. Where the unexpected heritage finds procedure required by **Condition E62** is triggered in a Zone 3	Section 4.8 in CEMP Unexpected Heritage Finds Procedure	The project is located exclusively within HAMU Zone 3. In the event Condition E62 is triggered, an Excavation Director will oversee its implementation.

ID	Measure/Requirement	Reference	How addressed
	location, the Excavation Director must oversee its implementation.		
E75	In the event that non-Aboriginal or post-contact archaeological relics are discovered, the Proponent must prepare an **Archaeological Excavation Report** containing the findings of any excavations, including artefact analysis and the identification of a final repository of any relics. The report must be submitted to the Secretary, for information, within 12 months of completing all archaeological investigations, unless otherwise agreed with the Secretary. The **Archaeological Excavation Report** must also be submitted to the NSW Heritage Council, the local library and the local Historical Society in the local government area. A copy of the **Archaeological Excavation Report** must be provided with the relics.	Section 4.8 in CEMP Unexpected Heritage Finds Procedure	The likelihood of discovering of non-Aboriginal or post-contact archaeological relics is envisaged to be low due to extensive past disturbance from industrial and remediation operations of the site. Compliance with CoA E75 will be enacted should archaeological relics be discovered.
E77	Where previously unidentified Aboriginal objects are discovered during construction of the CSSI, all work should stop in the affected area and a suitably qualified and experienced Aboriginal heritage expert should be contacted to provide specialist heritage advice. The measures to consider and manage this process must be specified in the **Heritage Management Sub-Plan** required by **Condition C3** and, where relevant, include registration in the OEH's Aboriginal Heritage Information Management System (AHIMS) register.	Section 4.8 in CEMP Unexpected Heritage Finds Procedure	The likelihood of discovering of non-Aboriginal or post-contact archaeological relics is envisaged to be low due to extensive past disturbance from industrial and remediation operations of the site. Compliance with CoA E77 will be enacted should aboriginal objects be discovered.
E79	Any Aboriginal objects discovered must be identified in the **Heritage Interpretation Strategy** required by **Condition E65** and, where relevant, include	Section 4.8 in CEMP	In the event that aboriginal objects are identified, a heritage interpretation strategy will be prepared in consultation with OEH and Heritage Council of NSW in accordance with Condition E64.

ID	Measure/Requirement	Reference	How addressed
	registration in the OEH's Aboriginal Heritage Information Management System (AHIMS) register.	Unexpected Heritage Finds Procedure	
E80	The Proponent must design and construct the CSSI in a manner that reduces visual and heritage setting impacts and ensures consolidation and rationalisation of kerbside infrastructure to avoid visual clutter.	Section 4.11 of CEMP	The design and construction of the Portion 2 Early Works will be carried out in a manner that reduces visual and heritage setting impacts and ensures consolidation and rationalisation of kerbside infrastructure to avoid visual clutter.
E82	Nothing in this approval permits advertising on any element of the CSSI.	Section 4.11 of CEMP	Ventia project management will ensure that no element of the CSSI is used for advertising.
E83	The Proponent must design and construct the CSSI in a manner that minimises opportunities for graffiti.	Section 4.11 of CEMP	TfNSW branded screening will be installed around the perimeter facing public areas. Environmental inspections will be carried out and graffiti will be removed or cleaned where identified.
E86	The CSSI must be constructed in a manner that minimises visual impacts resulting from construction sites, including protecting and retaining existing vegetation around the perimeter of compound sites, providing temporary landscaping and screening where appropriate to soften views of the construction sites and minimising light spill to adjacent residential areas.	Section 4.11 of CEMP	Portion 2 Early Works will be constructed in a manner that minimises visual impacts resulting from construction sites as per CoA E86. Provision of temporary landscaping and screening where appropriate will be installed to soften views of the construction sites. Note: this site is located within a heavy industrial area with no adjacent residents.
E111	**Water Quality** Before undertaking any works and during maintenance or construction activities, erosion and sediment controls must be implemented and maintained to prevent water pollution consistent with LandCom's Managing Urban Stormwater series (The Blue Book).	Appendix B4 – Soil and Water Management Plan	

ID	Measure/Requirement	Reference	How addressed
E112	The CSSI 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 this approval, and contribute towards achievement of the *NSW Water Quality Objectives* 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 *NSW Water Quality Objectives*, in which case those requirements must be complied with.		Enabling activities will be minor in scope and water shall be managed in compliance with Condition E111 and the TfNSW Water Reuse and Discharge Guideline. Further details in Appendix B4 – Soil and Water Management Plan
E113	**Flooding** A **Flood Management Design Report** must be prepared and implemented in respect of the flood prone land and overland flow paths for the waterways and catchments in the CSSI's vicinity. The Plan must be prepared during detailed design to identify the potential adverse impacts of the operation of the CSSI on existing flooding characteristics for a full range of flood events up to and including the probable maximum flood (PMF). The Plan must include but not be limited to: (a) the results of further modelling to identify the potential impacts of the CSSI on flood behaviour including consideration of increased rainfall intensity and sea level rise under climate change conditions, consistent with the requirements of the *Floodplain Development Manual* (2005) and *Practical Consideration of Climate Change* (2007); (b) the identification of design measures that would be implemented to manage the impacts of		Appendix B4 – Soil and Water Management Plan

ID	Measure/Requirement	Reference	How addressed
	flooding on the operation of the CSSI and not worsen the existing flood characteristics. Design of mitigation measures must consider the full range of design events up to the 1% AEP; (c) demonstration of constructability of proposed management measures; (d) sensitivity analyses to assess the risk that additional properties or infrastructure could be subject to changes in existing flood behaviour as a result of the CSSI (i.e. beyond those identified as being impacted in point a) above), for design events up to and including the 1% AEP flood event, namely: i) assessment of 100% blockage of pits for the pre-development (existing) and post-development (with the CSSI) scenarios; ii) assessment of the impact of local and regional coincident flood peaks; and iii) assessment of cumulative impacts of the CSSI and other state significant developments and/or infrastructure in the CBD being constructed or that have received approval (and for which sufficient design detail is available at the time). (e) the identification of measures to be implemented to minimise scour and dissipate energy at locations where flood velocities are predicted to increase as a result of the CSSI; (f) identification of stormwater drainage system		

ID	Measure/Requirement	Reference	How addressed
	upgrades including those upgrades considered as mitigation measures; and (g) identification of the timing and maintenance responsibility of any necessary works. Not worsen existing flooding characteristics within and in the vicinity of the CSSI means the following: (a) a material increase in the duration of inundation for all design events up to and including a 1% AEP flood event; (b) an increase in flood levels of more than 10 mm at properties for all design events up to and including the 1% AEP flood event; and (c) no increase in high hazard flooding as defined in Appendix L of the NSW Government's Floodplain Development Manual (2005). The **Flood Management Design Report** must be prepared by a suitably qualified and experienced person in consultation with directly affected landowners, Sydney Water, OEH, NSW State Emergency Services and the Relevant Council(s). The Plan must be independently peer reviewed by a suitably qualified and experienced hydrological engineer to confirm that the management of and response to flood events is appropriate. The Plan and results of the peer review must be submitted to the Secretary, for information, and Relevant Council(s) at each design stage		

ID	Measure/Requirement	Reference	How addressed
	associated with the CSSI where there is potential to cause adverse flooding impacts.		
E115	All relevant flooding information must be provided to the Relevant Council(s), DPE (Urban Renewal), OEH and the NSW State Emergency Service, to assist in the preparation of any new or necessary update(s) to the relevant plans and documents relating to flooding, to reflect changes in flooding levels, flows and characteristics as a result of the CSSI. The Council, OEH and SES must be notified in writing that the information is available no later than one month following the completion of construction. Information requested by the Council, OEH or the SES must be provided no later than six months following the completion of construction or within another timeframe agreed with the relevant Council, OEH and the SES.		As per Section 10.4 of the EIS, the site is located within the Parramatta River floodplain, and is, is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level and therefore, Portion 2 Early Works site is not affected by flooding based on 1 in 100 year flood data. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and poor condition of the drainage system. Further details in Appendix B4 – Soil and Water Management Plan
E118	Notification must be provided and, where relevant, approvals must be sought directly from the EPA before commencement of any works which will intersect or disturb the surface of sites which are regulated by the EPA under the *Contaminated Land Management Act 1997.*		Appendix B9 – Contaminated Land Management Plan
E119	Before commencement of any activities that would result in the disturbance of land and/or soil in Areas of Environmental Interest (AEI) identified as having a high risk of contamination, or identified as medium risk subject to further desktop assessment as specified in the documents listed in **Condition A1**, a **Site Contamination Report** must be prepared by a suitably qualified person(s) in accordance with the requirements of the *Contaminated Land*		Appendix B9 – Contaminated Land Management Plan

ID	Measure/Requirement	Reference	How addressed
	Management Act 1997 and associated guidelines. The Site Contamination Report must outline the potential contamination risks from the AEIs to human health and receiving waterways and detail, where relevant, whether the land is suitable (for the intended land use) or can be made suitable through remediation. For AEIs where there is insufficient information and data available to draw such conclusions, the **Site Contamination Report** must also detail the outcomes of Phase 2 site contamination investigations within those AEIs.		
E120	For those AEIs where a **Site Contamination Report** is to be prepared in accordance with **Condition E119**, where the investigations identify that the site is suitable for the intended operations and that there is no need for a specific remediation strategy, measures to identify, handle and manage potential contaminated soils, materials and groundwater must be identified in the **Site Contamination Report** and incorporated into the **CEMP** or relevant sub-plan.	Appendix B9 – Contaminated Land Management Plan	
E121	For those AEIs where a **Site Contamination Report** concludes the site can be made suitable for its intended land use subject to remediation, the **Site Contamination Report** must include a **Remediation Action Plan** to address disturbed areas, and how the environmental and human health risks will be managed during the disturbance, remediation and/or removal of contaminated soil or groundwater.	Appendix B9 – Contaminated Land Management Plan	
E122	For those AEIs where remediation is required, the **Site Contamination Report** and **Remediation Action Plan** must be accompanied by a **Site Audit**	Appendix B9 – Contaminated Land Management Plan	

ID	Measure/Requirement	Reference	How addressed
	Statement(s), prepared by a NSW EPA Accredited Site Auditor under the *Contaminated Land Management Act 1997*, verifying that the disturbed area has been or can be remediated to a standard consistent with the intended land use. Where land is remediated, a final **Site Audit Statement(s)** must be prepared by an accredited Site Auditor, certifying that the contaminated and disturbed areas have been remediated to a standard consistent with the intended land use. *Note: Terms used in Condition E121 and E122 have the same meaning as in the Contaminated Land Management Act 1997.*		
E123	For those AEIs where remediation is required, the land must not be used for the purpose approved under the terms of this approval until a **Site Audit Statement** determines that the land is suitable for that purpose and any conditions on the **Site Audit Statement** have been complied with.	Appendix B9 – Contaminated Land Management Plan	
E125	An **Unexpected Contaminated Land and Asbestos Finds Procedure** must be prepared and must be implemented should unexpected contaminated land or asbestos be excavated or otherwise discovered during construction. This can be provided as part of the **CEMP** or relevant sub-plan.	Unexpected Finds Procedure	An Unexpected Finds Procedure (US-059090-HS-PR-039) has been prepared for the project. Portion 2 Early works will require remediation activities and it is therefore expected that asbestos and contamination may be encountered. Personnel will be trained in Unexpected finds management as part of the site induction
E126	The **Unexpected Contaminated Land and Asbestos Finds Procedure** must be implemented throughout construction.	Unexpected Finds Procedure	An Unexpected Finds Procedure (US-059090-HS-PR-039) has been prepared for the project.

ID	Measure/Requirement	Reference	How addressed
			Portion 2 Early works will require remediation activities and it is therefore expected that asbestos and contamination may be encountered. Personnel will be trained in Unexpected finds management as part of the site induction
E127	Waste generated during construction and operation must be managed in accordance with the following priorities: (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.	As per Section 1.1.1 Construction of a Containment Cell for the retention and containment of waste materials on-site will be undertaken in accordance with TfNSW Consistency Assessment signed and dated 28/11/19. These works will avoid and reduce off-site disposal of waste generated in site remediation works. Appendix B8 – Waste and Resource Management Plan	
E128	The importation of and storage of Virgin Excavated Natural Material (VENM), and the treatment, processing, reprocessing or disposal of any other waste must comply with the *Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2014*, where orders or exemptions apply under the regulation.	Appendix B8 – Waste and Resource Management Plan	
E129	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the *Protection of the Environment Operations (Waste) Regulation 2014*, or to any other place that can lawfully accept such waste. Disposal of waste at these facilities must include GPS tracking of waste vehicles, audits of waste facility receipts and cross verification with the	Appendix B8 – Waste and Resource Management Plan	

ID	Measure/Requirement	Reference	How addressed
	facility. All asbestos waste over 10m^3 must be tracked through EPA's WasteLocate service.		
E130	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal dockets retained for audit purposes.	Appendix B8 – Waste and Resource Management Plan	
E131	Asbestos or asbestos-contaminated materials uncovered during demolition and construction activities of the CSSI must be strictly managed in accordance with the requirements under the *Protection of the Environment Operations (Waste) Regulation 2014* and any guidelines or requirements in force at the date of this approval and issued by the EPA in relation to those materials.	Appendix B8 – Waste and Resource Management Plan Appendix B9 – Contaminated Land Management Plan	
E135	**Infrastructure Property and Utilities** The Proponent must identify utilities, services and other infrastructure and property potentially affected by construction to determine requirements for access to, diversion, protection, and/or support. Consultation with the relevant owner and/or provider of services that are likely to be affected by the CSSI must be undertaken to make suitable arrangements for access to, diversion, protection, and/or support of the affected infrastructure as required. The Proponent must ensure that any disruption to any service is minimised and shall be responsible for advising impact to service recipients before any planned disruption of service. The cost of any such arrangements must be borne by the Proponent,	Section 5.2 in CEMP UT-1 to UT-6	Previous remediation and geotechnical design works have undertaken extensive site service location and investigations to inform utilities locations within and around the project site boundary. Prior to any excavation, dial before you dig searches will be conducted. When approaching known or possible services, non-destructive digging (such as pot-holing or hand-digging) will be carried out to determine exact locations. Any guidelines provided by relevant utility authorities will be followed.

ID	Measure/Requirement	Reference	How addressed
	unless otherwise agreed with the utility/service provider.		
E136	**Sustainability** A **Sustainability Strategy** must be prepared to achieve a minimum project score of 65 for 'Design' and 'As built' rating under the Infrastructure Sustainability Council of Australia infrastructure rating tool.	The project will utilise the TfNSW Sustainable Design Guidelines (SDGs) Further details in Appendix B8 – Waste and Resource Management Plan	
E137	The **Sustainability Strategy** must be submitted to the Secretary, for information, within six months of the date of this approval, or within another timeframe agreed with the Secretary, an must be implemented throughout the design, construction and operation of the CSSI.		
E138	Opportunities to reduce operational greenhouse gas emissions must be investigated during detailed design. The sustainability initiatives identified in the documents identified in **Condition A1** must be regularly reviewed, updated and implemented throughout the design development and construction, and annually during operation of the CSSI.	The project will utilise the TfNSW Sustainable Design Guidelines (SDGs). A Carbon Estimate and Reporting Tool (CERT) shall be conducted in accordance with the TfNSW Carbon Estimate and Reporting User Manual (7TP-ST-035) to establish a baseline footprint for the project and identify a reduction in construction related GHG emissions by 5% from project baseline as determined by the Carbon Estimate and Reporting Tool (CERT). Further details in Appendix B8 – Waste and Resource Management Plan	

5.2 Revised Environmental Mitigation Measures

Table 5-2: Construction Environmental Management Plan Revised Environmental Mitigation Measures

ID	Measure/Requirement	Reference	How addressed
AQ-1	An air quality and dust management plan would be developed and implemented as part of the CEMP. This plan would identify triggers and procedures for dealing with significant dust generating activities, with the aim of minimising impacts on surrounding sensitive receivers.	Appendix B7 – Air Quality Management Plan	
CM-1	During detailed design, a desktop risk assessment would be carried out for the following Areas of Environmental Interest (AEI) to confirm high or medium risk of contamination: • 435 Church Street, Parramatta (AEI 9). • 1A Barrack Lane, Parramatta (AEI 13). • 142-154 Macquarie Street, Parramatta (AEI 14). • 127 Alfred Street Parramatta (AEI 16). • Former James Hardie Property at 181 James Ruse Drive, Rosehill and 1 Grand Avenue, Rosehill (AEI 21 and AEI 22). • 6 Grand Avenue, Rosehill (former Akzo Nobel site) (AEI 27). This would involve a review of available data, collaboration with stakeholders and consideration of the extent of disturbance by the project in the vicinity of the AEI. Based on the results of this assessment: • Mitigation and management measure CM-2 would apply to AEIs classified as high risk Mitigation CM-4 would apply to AEIs classified as medium risk.	Appendix B9 – Contaminated Land Management Plan	The EIS initially classified Portion 2 Early Works site as a medium risk site. However, a Remediation Action Plan, endorsed by a NSW EPA Accredited Site Auditor has been prepared for management of the works. Therefore, REMMM CM-2 will be applied to this site.

ID	Measure/Requirement	Reference	How addressed
CM-2	Prior to the commencement of construction in the vicinity of these sites, site investigations would be carried out at the following high risk AEI: • Former gas works at Queens Wharf Reserve (AEI 15) • 13A Grand Avenue, Camellia (AEI 21). The results from the site investigations would be assessed against criteria contained within the National Environment Protection (Assessment of Site Contamination) Measure 1999 (2013) to determine any need for remediation. Remediation works would be performed in accordance with the hierarchy of preferred strategies in the Guidelines for the NSW Site Auditor Scheme (DECCW 2006). Where practical, remediation works would be integrated with excavation and development works performed during construction.	Appendix B9 – Contaminated Land Management Plan	The project site is noted to contain contamination present and is the subject of remediation activities to cap and contain contamination for future work activities. Sampling and monitoring will be carried out in accordance with a Remediation Works Validation Plan, endorsed by a NSW EPA Accredited Site Auditor. It should be noted that remediation activities under the RAP have already commenced during previous remediation activities for the site (Portion 1 works).
CM-6	An unexpected finds procedure would be developed and implemented as part of the project CCLMP, outlining a set of potential contamination issues which could be encountered, and detailing the corrective actions to be implemented.	Unexpected Finds Procedure	An Unexpected Finds Procedure (US-059090-HS-PR-039) has been prepared for the project. Portion 2 Early works will require remediation activities and site systems will be prepared to manage asbestos and contamination that may be encountered.
GEN-1	A CEMP would be prepared and approved by the Secretary for the construction phase of the project. It would provide a centralised mechanism through which all potential environmental impacts would be managed. The CEMP would document mechanisms for demonstrating compliance with the commitments made in the Environmental Impact Statement), the submissions report, as well as any other relevant statutory approvals (e.g. conditions of approval, licences and permits). The CEMP would outline a framework for the management of environmental impacts during construction.	Section 3.1 CEMP	This CEMP has been prepared in accordance with this REMMM. The CEMP and sub-plans shall be submitted at least one month prior to commencement of works in accordance with CoA C6 & C7.

ID	Measure/Requirement	Reference	How addressed
GEN -2	A construction compounds plan would be prepared for the project as part of the overall CEMP. This sub-plan would set out details for each of the approved construction compounds, including stockpile areas, laydown areas and other ancillary activities required to construct the project. The sub-plan would supplement, in greater detail, the information provided in the main body of the CEMP. The objectives and strategies of the construction compounds and ancillary facilities management sub-plan would include the following:	Section 3.2.4 in CEMP	Environmental control maps (ECMs) are documents prepared to assist in the planning and delivery of the Project and capture the requirements of the construction compounds plan. The ECM allows for a focused risk assessment of the environmental and community impacts of specific work areas and activities. ECMs will be prepared prior to the commencement of relevant construction activities and will incorporate relevant mitigation measures and controls, including those from relevant management sub plans. They also identify key procedures to be used concurrently with the ECMs. ECMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions. The ECM will capture the requirements of the construction compounds plan by providing details for approved construction compounds, including stockpile areas, laydown areas and other ancillary activities required to construct the project.
GEN -2 a)	a) Minimise the impact of construction compounds on surrounding land uses and sensitive receivers.	Section 3.2.4 in CEMP	The project site is situated within a heavy industrial zone, with impacts on sensitive land uses and receivers as low. The project construction has supported previous remediation activities performed on the site and will retain facilities for the next stage.

ID	Measure/Requirement	Reference	How addressed
GEN -2 b)	b) Locate construction compounds away from sensitive land uses and receivers, wherever practical and feasible, or configure internal compound layouts in a manner that considers noise and light sensitive receivers (e.g. use of buildings to shield noisy activities, minimising the requirement for reversing vehicles, or locating noise intensive activities to maximise the distance to noise sensitive receivers).	Section 3.11 in CEMP Appendix B3 - Noise and Vibration Management Plan	The project site is situated within a heavy industrial zone, with impacts on sensitive land uses and receivers being anticipated to be low due to existing barriers and screening. Noise assessment for the works has been conducted to ensure it can comply with the noise requirements of the site.
GEN -2 c)	c) Manage stockpile areas to minimise potential pollution of watercourses, groundwater and local air quality.	Appendix B4 – Soil and Water Management Plan Appendix B8 – Waste and Resource Management Plan	
GEN -2 d)	d) Minimise the clearing of vegetation (e.g. street trees and trees within public open spaces) to the minimum amount necessary to construct the project, particularly where construction compounds are proposed in public open spaces/parkland areas.	Section 4.7 in CEMP	Prior to commencing remediation works on the site, a desktop assessment was completed to determine potential impacts on flora and fauna at the site. A follow up site inspection was undertaken on 29 June 2017 to confirm the outcomes of the desktop assessment. The assessment determined that direct biodiversity impacts of the Proposal are predicted to be minimal due to the disturbed nature of vegetation in the site.
GEN -2 e)	e) Locate construction compounds away from (or able to be managed in such a way so as to not impact on) heritage items and high retention value trees.	Section 4.7 & 4.8 in CEMP	Biodiversity described above in GEN-2d) During previous remediation activities works were carried out to conduct a detailed archival recording by a Heritage Consultant of the locally heritage significant air-raid shelter. The project site has also been identified as within Archaeological Management Zone 3, as defined by the EIS, with 'nil-low archaeological resource present'

ID	Measure/Requirement	Reference	How addressed
GEN -2 f)	f) Locate construction compounds away from or implement management measures so as to not impact on waterways.	Appendix B4 – Soil and Water Management Plan	The EIS modelling and assessment for construction of the stabling and maintenance facility identified there is expected to be negligible obstruction of overland flow associated with site filling, and management of sediment/pollutant transport would be through on-site construction phase stormwater isolation, onsite water treatment and erosion controls. Refer to the SWMP for further environmental mitigation measures regarding impacts on waterways.
GEN -2 g)	g) Flood response measures for compounds that are located on land affected by the 20 year ARI flood level (e.g. bridge support construction compounds).	Appendix B4 – Soil and Water Management Plan	As per Section 10.4 of the EIS, the site is located within the Parramatta River floodplain, and is, is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level and therefore, Portion 2 Early Works site is not affected by flooding based on 1 in 100 year flood data. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and poor condition of the drainage system.
GEN -2 h)	h) Situate construction compounds and ancillary facilities on relatively level ground, and avoid excavation in construction compounds where risk of heritage impacts or disturbance of contaminated material.	Section 4.10 in CEMP	The project site was established for previous remediation activities that have been performed on the site. The establishment was conducted in accordance with an approved CEMP and associated sub-plans, prepared to meet the Determination Report and Review of Environmental Factors. Portion 2 Early Works will utilise existing construction compounds and site facilities, located completely within the site boundary. These will be detailed on the ECM.

ID	Measure/Requirement	Reference	How addressed
GEN -2 i)	i) Minimise the visual impact of construction compounds and ancillary facilities through either siting such facilities away from sensitive receivers (where practical and feasible) and/or providing screening.	Section 4.10 in CEMP	The project site was established for previous remediation activities that have been performed on the site. The establishment included the installation of TfNSW branded screening on all externally visible boundaries. Installation of geofabric as an additional screening will be provided for specific activities.
GEN -2 j)	j) Reinstatement of community spaces, infrastructure and services would occur as soon as possible after completion of construction.	Section 4.12 in CEMP	No works impacting community spaces, infrastructure and services are proposed for Portion 2 Early Works.
GEN -2 k)	k) Environmental management measures for construction compounds would be developed as part of the overall CEMP, with the construction compounds sub-plan identifying where such measures are documented within the CEMP.	Section 4.10 in CEMP	Portion 2 Early Works will utilise existing construction compounds and site facilities in accordance with the CEMP and associated sub-plans. These will be detailed on the ECM, including an outline of environmental management measures.
GEN -3	Incident management procedures would be developed as part of the CEMP. The procedures would clearly outline the process to be followed in the event of an environmental incident or noncompliance, including (but not limited to) the following: • Classification of the incident (e.g. minor, moderate, serious) based on the severity of the likely impact on the surrounding environment and community. • Emergency response procedures. • Notification requirements (e.g. Transport for NSW and/or other regulatory authorities, or owners/occupiers in the vicinity of the incident). • Mechanisms for improving environmental controls to reduce the likelihood of a similar incident occurring. • Incident reporting and tracking.	Appendix A7: Emergency Response Management Plan	Incident management procedures are detailed in Appendix A7: Prepare Emergency Response Management Plan in accordance with this REMMM. Incident and non-compliance tracking will be facilitated using the AS/NZS 4360:2004 compliant TfNSW and Ventia INX Systems, which will capture incident parameters outlined in REMMM GEN-3.
GG-3	Management of emissions would be incorporated into site inductions, training and pre-start talks.	Section 3.4.2 in CEMP	Management of emissions would be incorporated into site inductions, training and pre-start talks. Induction and toolbox talks will include details of emissions.

ID	Measure/Requirement	Reference	How addressed
GG-4	The CEMP would incorporate measures to minimise the emission of greenhouse gases during construction. Activities with the potential to cause substantial emissions (such as material delivery and loading and bulk earthworks) would be identified in the energy and greenhouse gas emissions strategy. Emissions management actions would be investigated and applied where reasonable and feasible. These would potentially include: • The use of biodiesel and other low carbon fuels in vehicles and equipment. • The use of fuel-efficient construction equipment. • The use of energy efficient construction practices. Use of energy efficient or solar powered lighting for temporary construction facilities.	Appendix B8 – Waste and Resource Management Plan	A CERT shall be conducted in accordance with the TfNSW Carbon Estimate and Reporting User Manual (7TP-ST-035) to establish a baseline footprint for the project and identify a reduction in construction related GHG emissions by 5% from project baseline as determined by the CERT. Construction methodologies will be appraised to identify reasonable and feasible measures to meet the project sustainability targets. The methodology appraisal will include consideration of energy and GHG emissions, waste volume generation and impacts to water. All mobile non-road diesel plant and equipment (with an engine greater than 19kW) to report engine conformity with relevant United States Environmental Protection Agency (US EPA), European Union (EU) or equivalent emissions standards and the fitting of any exhaust after-treatment devices.
GG-5	Local procurement of construction services and materials would be undertaken (where feasible and cost effective) to reduce fuel consumption for transport. Where practical and reasonable, construction planning would ensure that deliveries are managed in an efficient manner to minimise the number of trips required and therefore reduce the amount of emissions.	Appendix B8 – Waste and Resource Management Plan	The project's primary material is imported spoil, wherever practical, materials for the clean fill cap will be sourced from Sydney Metro 2 spoil.
GG-6	Energy efficient work practices, such as switching off construction plant, vehicles and equipment when not in use to minimise idling, would be implemented during construction.	Appendix B8 – Waste and Resource Management Plan	Energy efficient work practices will be implemented as far as practicable such as switching off energy using devices (including vehicles) when not in use.

ID	Measure/Requirement	Reference	How addressed
GG-7	Regular monitoring, auditing and reporting on energy, resource use and associated greenhouse gas emissions would form part of the environmental reporting requirements specified within the CEMP, and would be carried out.	Section 3.9.2 & Section 3.9.3 in CEMP Appendix B8 – Waste and Resource Management Plan	Regular monitoring, auditing and reporting on energy, resource and greenhouse gas emissions will be performed. Findings and reports shall be tracked and reported to TfNSW in accordance with the Sustainable Design Guidelines.
GW-1	The design of embankments would incorporate adequate drainage to reduce compaction and/or sealing of the underlying aquifer.	Appendix B4 – Soil and Water Management Plan	The project site primarily consists of existing hardstand. The Portion 2 Early Works will construct a clean fill cap, along with other remediation controls, to reduce infiltration into the underlying aquifer. During previous remediation works a hydraulic barrier wall will be completed to isolate contaminated groundwater within the site boundary. A Groundwater Treatment Plant (GTP) will provide a contingency for dewatering and maintaining hydraulic containment.

ID	Measure/Requirement	Reference	How addressed
GW-4	Hazardous material procedures (including procedures for managing spills and refuelling and maintaining construction vehicles/equipment) would be developed and implemented as part of the CEMP to minimise potential for groundwater quality impacts due to chemical spills.	Appendix A7 – Emergency Response Management Plan	An ERMP has been prepared as a part of CEMP and incorporates following: All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and Transport for NSW's Chemical Storage and Spill Response Guidelines (Transport for NSW, 2015g). Chemical spill kits would be readily available and accessible on-site with personnel trained in reporting spills as part of project induction. All hazardous materials spills and leaks would be reported to Site Supervisors and actions would be immediately taken to clean up spills and leaks. All personnel involved in refuelling and plant maintenance shall be trained in a Standard Operating Procedure for Plant Refuelling & Maintenance (US-059090-HS-PR-006) and assessed by a Level of Understanding Questionnaire (LOUQ).
GW-5	No new wells would be drilled to extract water for construction use.	Appendix B4 – Soil and Water Management Plan	Due to the contaminated groundwater underlying site, no wells for extraction of water for construction use are proposed.
HR-5	Environmental management measures relating to hazards and risk would be developed and implemented as part of the CEMP. These would include:		
HR-5 a)	a) Potential environmental hazards and risks associated with construction activities.	Appendix A2-Environmental Risk Register	Environmental risks associated with activities, products and services of the project will be identified and recorded in the Project Risk Register. Environmental hazards and risks shall be are considered during the development of task specific risk-assessments and daily authority to work permits.

ID	Measure/Requirement	Reference	How addressed
HR-5 b)	b) The storage of hazardous materials, and refuelling/maintenance of construction plant and equipment would be carried out in clearly marked and bunded areas within the construction site that are designed to contain spills and leaks in accordance with Australian Standards and DECCW guidelines.	Section 4.3 in CEMP Appendix B4 – Soil and Water Management Plan Appendix B8 – Waste and Resource Management Plan	All fuels, chemicals and hazardous liquids would be stored away from drainage lines, within an impervious bunded area in accordance with Australian Standards, EPA Guidelines and Transport for NSW's Chemical Storage and Spill Response Guidelines (Transport for NSW, 2015g). All personnel involved in refuelling and plant maintenance shall be trained in a Standard Operating Procedure for Plant Refuelling & Maintenance (US-059090-HS-PR-006) and assessed by a Level of Understanding Questionnaire (LOUQ).
HR-5 c)	c) Hazardous materials would not be stored < 10% AEP flood level.	Appendix B4 – Soil and Water Management Plan	As per Section 10.4 of the EIS, the site is located within the Parramatta River floodplain, and is, is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level and therefore, Portion 2 Early Works site is not affected by flooding based on 1 in 100 year flood data. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and poor condition of the drainage system.
HR-5 d)	d) Chemical spill kits would be readily available and accessible to construction workers. Kits would be kept at site compounds and on specific construction vehicles, and all hazardous materials spills and leaks would be reported to site managers and actions would be immediately taken to remedy spills and leaks.	Appendix A7 – Emergency Response Management Plan	Chemical spill kits would be readily available and accessible on-site with personnel trained in reporting spills as part of project induction. All hazardous materials spills and leaks would be reported to Site Supervisors and actions would be immediately taken to clean up spills and leaks.
HR-5 e)	e) Employees would be trained in the correct use of spill kits.	Appendix A7 – Emergency Response Management Plan	The Emergency Response Coordinator (ECO) shall coordinate spill response. Spill management and the use of spill kits will be communicated in site inductions and in toolbox and prestart talks.

ID	Measure/Requirement	Reference	How addressed
HR-6	A process for regularly reviewing work practices/procedures would be implemented throughout construction to identify, report and respond to any new environmental hazards/risks.	Section 3.9 in CEMP	Weekly inspections and compliance tracking shall be conducted by the site environmental team to monitor the project site and work practices. Project staff members will be required to perform task observations of site activities each month. Results and actions will be tracked in INX. All personnel will be trained in hazard awareness and reporting of all safety, health, environment and quality (SHEQ) hazards.
HY-5	The CEMP would include soil and water management measures to manage the risk of sedimentation, littering and chemical pollution of the Parramatta River, Clay Cliff Creek, Vineyard Creek and other nearby waterways within the study area during construction.	Appendix B4 – Soil and Water Management Plan	
HY-6	A soil and water management plan would be prepared as part of the CEMP. Specific measures would be identified in consultation with relevant government agencies and would be consistent with the principles and practices detailed in Landcom's (2004) Managing Urban Stormwater: Soils and Construction.	Appendix B4 – Soil and Water Management Plan	

ID	Measure/Requirement	Reference	How addressed
HY-7	During construction, any water collected from the worksites would be treated and discharged in accordance with current guidelines to avoid any potential contamination or local stormwater system impacts. These guidelines include: • The Blue Book - Managing Urban Stormwater: Soils and Construction (Landcom, 2004 and DEC 2008). • Transport for NSW Water Discharge and Reuse Guideline 7TP-SD-024. All water (including groundwater) requiring disposal during construction would be tested and treated in accordance with the Transport for NSW Water Discharge and Reuse Guideline 7TP-SD-024 and the Waste Classification Guidelines (OEH, 2016) prior to disposal. If required, water treatment would occur to ensure guidelines are met prior to water disposal. Treatments may include sediment basins and pH neutralisation.	Appendix B4 – Soil and Water Management Plan	
HY-8	Large areas of disturbance such as compound areas and stockpile sites would, where feasible and reasonable, be located away from any surface runoff flow paths and above the 10% AEP flood levels.	Appendix B4 – Soil and Water Management Plan	As per Section 10.4 of the EIS, the site is located within the Parramatta River floodplain, and is, is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level and therefore, Portion 2 Early Works site is not affected by flooding based on 1 in 100 year flood data. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and poor condition of the drainage system.

ID	Measure/Requirement	Reference	How addressed
HY-9	The design of stormwater outlets would consider the need for scour protection measures. Typical scour protection might include concrete energy dissipating structures or dumped stone rip rap.	Appendix B4 – Soil and Water Management Plan	The existing drainage systems have been progressively isolated. Site surface water is directed through to the Temporary Water Treatment Plant (TWTP). The TWTP actively removes sediment, contaminants of concern (COC) and corrects pH of site waters prior to discharge under the existing Sydney Water Trade Waste Agreement (TWA)(Discharge License 15831).
LU-1	The overall disturbance footprint would be refined during detailed design to identify areas where the footprint could be minimised to reduce impacts on existing land uses. Detailed staging of the project would also be determined during detailed design and would aim to minimise the time that affected land uses are impacted during construction.	Appendix B9 – Contaminated Land Management Plan	The site is located on an approximately 6 hectare site in an industrially zone area. Contaminated Site Investigation Investigations and the Remediation Action Plan (RAP) have identified the requirement to form an integrated capping system over the extent of the project site.
NV-1	A Construction Noise and Vibration Management Plan (CNVMP) would be developed in accordance with the requirements of Transport for NSW's Construction Noise Strategy and the Interim Construction Noise Guidelines (DECC 2009). It would document all necessary measures to manage and mitigate potential noise and vibration levels during standard working hours and for all out-of-hours construction activities (refer to section 17.2.3 of the EIS).	Appendix B3 - Noise and Vibration Management Plan	
NV-2	The CVNMP prepared for the project would include mitigation and management measures for the works with reference to the NSW Interim Construction Noise Guideline (ICNG) and Transport for NSW Construction Noise Strategy (CNS).	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
NV-3	In the event of predicted exceedances of the noise goals, particularly during out-of-hours works, additional noise mitigation and management measures to be considered in the CNVMPs as described in the CNS.	Appendix B3 - Noise and Vibration Management Plan	
NV-4	For sensitive receiver that operate outside standard construction hours, for example hospitals which operate on a 24-hour basis, feasible and reasonable noise mitigation options and measures would be developed in consultation with the sensitive receiver.	Appendix B3 - Noise and Vibration Management Plan	
NV-5	The use of noise intensive plant items would be scheduled for normal working hours. If the works cannot be carried out during the daytime, it has been recommended to complete them before 11 pm, where practicable. This would be particularly relevant for works impacting the following noise catchment areas (NCAs) where a number of activities have been predicted to result in high impacts on many residential receivers during the night-time.	Appendix B3 - Noise and Vibration Management Plan	
NV-6	Opportunities to reduce road traffic noise during construction would be investigated during construction planning, including restricting heavy vehicle movements to standard construction hours and/or to routes with fewer sensitive receivers.	Appendix B3 - Noise and Vibration Management Plan	
NV-7	Where vibration intensive construction activities are proposed within 100 metres of sensitive receivers, these works would be confined to the less sensitive daytime period where possible. The potential impacts from vibration are to be considered in the site-specific Construction Noise and Vibration Impact Statements (to be developed during detailed design).	Appendix B3 - Noise and Vibration Management Plan	

ID	Measure/Requirement	Reference	How addressed
PR-5	The design and placement of construction hoardings would consider opportunities to minimise privacy impacts on adjacent residents or other adjacent land uses sensitive to privacy concerns.	Section 4.11 in CEMP	Installation of TfNSW branded screening has been installed on all externally visible boundaries as part of previous remediation activities and will be maintained throughout the project. Additional geofabric screening has been used for specific activities to minimise impact to surrounding industrial land users.
RC-1	Coordination and consultation with the Sydney Coordination Office and the following stakeholders would occur as required to coordinate interfacing projects: » DP&E » Other TfNSW agencies (including Roads and Maritime Services; Sydney Trains and Sydney Buses) » Sydney Water » City of Parramatta Council » UrbanGrowth NSW Development Corporation » Western Sydney University » NSW Health (and its construction contractors) » Land and Housing Corporation » Emergency service providers » Utility providers » Construction contractors » Other stakeholders as required, as advised by TfNSW. Coordination and consultation with these stakeholders would include: » Current and upcoming development applications and precinct master plans. » Provision of regular updates to the detailed construction program, construction sites and haul routes. » Identification of key potential conflict points with other construction projects.	Section 3.6.2 in CEMP	Evidence of consultation for relevant documents or monitoring programs identified within the CoA will be compiled and presented to DPIE along with each document or program. This will include engagement processes, log of points or attempted engagement, issues raised and evidence of satisfactory close out or, where agreement cannot be reached, reasons for why they could not be adopted or closed out.

ID	Measure/Requirement	Reference	How addressed
	» Developing mitigation strategies in order to manage cumulative impacts of the Parramatta Light Rail and other interfacing projects. Depending on the nature of the conflict, this could involve: • Adjustments to the Parramatta Light Rail (Stage 1) construction program, work activities or haul routes; or adjustments to the program, activities or haul routes of other construction projects • Coordination of traffic management arrangements between projects. • Coordination of noise generating activities, such as out of hours works.		
SG-3	To manage potential impacts to geology and soils , the soil and water management plan prepared as part of the CEMP (refer HY-6 above)	Appendix B4 – Soil and Water Management Plan	
SU-1	Sustainability initiatives would be incorporated into the detailed design and construction of the project to support the achievement of the project sustainability objectives, as detailed in the Sustainability Plan.	Appendix B8 – Waste and Resource Management Plan	The Portion 2 Early Works shall be conducted in accordance with the TfNSW Sustainable Design Guidelines as the works are to prepare the site for handover to another contractor for the development of the SaM Facility. Sustainability innovations and initiatives shall be shared with TfNSW and other contractors throughout the works.
TT-24	Existing cycle routes would be maintained or diverted during construction.	Appendix B1 – Traffic, Transport and Access Management Plan	

ID	Measure/Requirement	Reference	How addressed
TT-25	To maintain safe motorist, pedestrian and cyclist access where construction works would occur, mitigation and management measures would be detailed in the Construction Traffic Management Plan and implemented during construction.	Appendix B1 – Traffic, Transport and Access Management Plan	
TT-28	Hours of when construction deliveries and spoil removal would be undertaken within the Parramatta CBD and Rosehill and Camellia precincts would be determined in consultation with the Sydney Coordination Office and Roads and Maritime Services.	Appendix B1 – Traffic, Transport and Access Management Plan	
UT-1	Dial before you dig (DBYD) searches and non-destructive digging (including pot-holing and/or hand-digging) would be carried out to identify the presence of underground utilities prior to commencement of construction in accordance with guidelines provided by the relevant utility authority.	Section 5.1 in CEMP CoA E135	Previous remediation and geotechnical design works have undertaken extensive site service location and investigations to inform utilities locations within and around the project site boundary. Prior to any excavation, dial before you dig searches will be conducted. When approaching known or possible services, non-destructive digging (such as pot-holing or hand-digging) will be carried out to determine exact locations. Any guidelines provided by relevant utility authorities will be followed.

ID	Measure/Requirement	Reference	How addressed
UT-2	Consultation with utility service providers would be carried out during detailed design to ensure that appropriate measures are taken regarding the potential integration of future utilities requirements along the project alignment, and to ensure that the project does not preclude the development or installation of these proposed utilities. A Basis of Design Manual would be developed for each utility owner which would: • Outline relocation or protection rules for each utility • Identify design approval process(es) and indicative timeframes • Identify construction requirements, including provisions for standby support • Indicate future proofing spares requirements • Identify interfacing projects to consider during project construction. Ongoing consultation would be carried out with high risk utility providers (including Caltex and Jemena) to identify appropriate construction methodologies which would apply to construction operations within the vicinity of the Hunter Pipeline and Jemena secondary gas mains.	Section 5.1 in CEMP CoA E135 Appendix B4 – Soil and Water Management Plan	Previous remediation and geotechnical design works have undertaken extensive site service location and investigations to inform utilities locations within and around the project site boundary. Prior to any excavation, dial before you dig searches will be conducted. When approaching known or possible services, non-destructive digging (such as pot-holing or hand-digging) will be carried out to determine exact locations. Any guidelines provided by relevant utility authorities will be followed. Consultation with utility owners affected by site works has been conducted through previous remediation activities and will continue to be taken to appropriately control works to ensure the project does not impact to utilities. Detailed design shall be undertaken in consultation with TfNSW and future contractors for the installation of site utilities.
UT-4	Risk assessments and hazard logs would be developed and specific management plans put in place if deemed necessary to mitigate the risk of personal safety incidents and asset integrity damage.	Risk assessments and hazard logs will be facilitated through Construction Hazard Assessment Implication Reviews (CHAIR), findings of which will inform the development of work plans and Safety Health Environment Work Method Statements.	
UT-5	The design of the project and construction activities would comply with the requirements of AS 2885 Pipelines – Gas and Liquid Petroleum, to ensure that existing utilities are protected.	The Portion 2 Early Works Detailed Design does not propose any changes to existing Pipelines - Gas and Liquid Petroleum Utilities. Detailed design will consider the previous site service location to determine any additional requirements to protect existing utilities.	

ID	Measure/Requirement	Reference	How addressed
UT-6	When working in the vicinity of utilities during construction, a review of the proposed works at these location(s) would be carried out by the Construction Contractor in consultation with the relevant service provider(s). The review would consider service provider and project requirements in terms of safety, network integrity and constructability. Safe working method statements and appropriate management plans must be implemented to minimise the risk of striking nearby utilities.	Previous remediation and geotechnical design works have undertaken extensive site service location and investigations to inform utilities locations within and around the project site boundary. Prior to any excavation, dial before you dig searches will be conducted. When approaching known or possible services, non-destructive digging (such as pot-holing or hand-digging) will be carried out to determine exact locations. Any guidelines provided by relevant utility authorities will be followed. Consultation with utility owners affected by site works has been conducted through previous remediation activities and will continue to be taken to appropriately control works to ensure the project does not impact to utilities.	
VL-1	Design of hoardings would feature graphics, artwork or project information wherever possible at appropriate locations to be determined in consultation with Transport for NSW. Guidelines for hoardings graphics, including location-specific guidelines, would be submitted by the contractor for approval by Transport for NSW prior to the commencement of works.	Section 4.11 in CEMP	Installation of TfNSW branded screening has been installed on all externally visible boundaries as part of previous remediation activities and will be maintained throughout the project.
VL-14	Visual mitigation and management measures identified below would be implemented as soon as feasible and reasonable, and remain for the duration of the construction activities in that area.	Section 4.11 in CEMP	Installation of TfNSW branded screening has been installed on all externally visible boundaries as part of previous remediation activities and will be maintained throughout the project.
VL-15	Hoardings including graphics, artwork or project information as identified during detailed design would be installed as early as feasible and reasonable in the construction process. Hoardings would be kept in good condition including the prompt removal of graffiti.	Section 4.11 in CEMP	Installation of TfNSW branded screening has been installed on all externally visible boundaries as part of previous remediation activities and will be maintained throughout the project. Weekly environmental inspections are conducted and if graffiti or vandalism is identified, screening will be cleaned or replaced.

ID	Measure/Requirement	Reference	How addressed
VL-16	Where feasible and reasonable, the elements within worksites and construction compounds would: • Be located to minimise visual impact, for example materials and machinery would be stored behind fencing/hoarding. • Include temporary lighting that would be orientated to minimise glare and light spill impact on adjacent receivers.	Section 4.7 in CEMP Section 4.11 in CEMP	The site is located in a heavy industrial zone. Installation of TfNSW branded screening has been installed on all externally visible boundaries as part of previous remediation activities and will be maintained throughout the project. Visual impacts on adjacent sensitive receivers are negligible. No vegetation clearing is proposed for Portion 2 Early Works. Biodiversity impacts were assessed in previous remediation works with no impacted flora identified. No construction compounds are proposed in public open spaces/parkland areas.
WM-1	During detailed design and detailed construction planning, resource and material minimisation initiatives would be explored, and if determined to be reasonable and feasible, implemented	Appendix B8 – Waste and Resource Management Plan	
WM-2	A waste and resource management plan would be prepared for the project as part of the overall CEMP. This plan would set out details for managing waste generation and resource consumption. The plan would be informed by the Parramatta Light Rail Sustainability Plan and the requirements of the Waste Avoidance and Resource Recovery Act 2001.	Appendix B8 – Waste and Resource Management Plan	

ID	Measure/Requirement	Reference	How addressed
WM-3	The project would achieve a diversion rate for construction waste from landfill of a minimum of 90 per cent of waste by volume, with a target of 95 per cent. The project would also reuse 100 per cent of paving and other reusable materials or facilitate reuse of such materials. Contaminated waste which cannot be diverted from landfill would be excluded from this calculation. Where targets cannot be achieved, the project must demonstrate all feasible measures have been taken to achieve as close to the targets as possible.	Appendix B8 – Waste and Resource Management Plan	
WM-4	Construction waste would be segregated and stockpiled on site, with materials such as bricks and tiles, timber, plastic, metals and existing track materials (such as rail and ballast materials) being separated where practicable and sent to a waste facility with recycling capabilities.	Appendix B8 – Waste and Resource Management Plan	
WM-5	The disturbance, movement and disposal of asbestos containing materials would be carried out in accordance with the Work Health and Safety Regulation 2011 and other relevant guidelines.	Appendix B8 – Waste and Resource Management Plan Unexpected Finds Procedure	Asbestos has been identified as a potential contaminant of concern on the site during previous site investigation and remediation works. Where asbestos is identified, the project Asbestos Removal Control Plan shall be implemented to ensure the removal is carried out in accordance with the Code of Practice for How to Safely Remove Asbestos (SafeWork NSW, 2016).
WM-6	Where possible and fit for purpose, spoil would be beneficially reused within the project before off-site reuse or disposal options are pursued.	Appendix B8 – Waste and Resource Management Plan	

5.3 Environmental Performance Outcomes

Table 5-3: Construction Environmental Management Plan Environmental Performance Outcomes

ID	Measure/Requirement	Reference	How addressed
EPO-TT-1	The project would implement measures to minimise impacts on the road network, including staging.	Appendix B1 – Traffic, Transport and Access Management Plan	Applicable: however only to the (minimal) extent of haulage vehicles entering and exiting the site"
EPO-TT-2	Pedestrian and cyclist safety would be maintained.	Appendix B1 – Traffic, Transport and Access Management Plan	Applicable: however only to the (minimal) extent of haulage vehicles entering and exiting the site"
EPO-TT-3	Effective coordination would be carried out to minimise cumulative network impacts.	Appendix B1 – Traffic, Transport and Access Management Plan	The location of the project is within an IN3 Heavy Industrial zone with direct connection to major arterial routes, including James Ruse Drive. A Traffic, Transport and Access Management sub-plan has been prepared to further outline network the mitigation measures to minimise management impacts.
EPO-NV-1	Noise levels would be minimised with the aim of achieving the noise management levels where feasible and reasonable.	Applicable: Superseded by E30 – E40	
EPO-HY-1	No aspect of the project would materially adversely affect existing flood behaviour in the vicinity of the project.	Appendix B4 – Soil and Water Management Plan	As per Section 10.4 of the EIS, the site is located within the Parramatta River floodplain, and is, is higher than 0.5 m above the 1% Annual Exceedance Probability (AEP) flood level and therefore, Portion 2 Early Works site is not affected by flooding

			based on 1 in 100 year flood data. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and poor condition of the drainage system.
EPO-HY-3	Where reasonably practicable, existing drainage directly impacted by the project would be replaced in a manner compliant with current laws and applicable standards.	Appendix B4 – Soil and Water Management Plan	A combination of overland flow and isolated stormwater infrastructure is used to direct surface water run off to Temporary Water Treatment Plant (TWTP). Surface water runoff is subject to a comprehensive water treatment process and testing regime culminating in discharge under Sydney Water Trade Waste Agreement (TWA)(Discharge License 15831).
EPO-BI-1	The project would minimise impacts on biodiversity through the implementation of relevant mitigation measures and the implementation of the Biodiversity Offset Strategy (BOS) for the project.	Applicable: Superseded by CoA C3	
EPO-UT-1	There would be no unplanned or unexpected disturbance of utilities.	Applicable: Superseded by CoA E135	
EPO-SG-1	Erosion and sediment controls during construction would be implemented in accordance with Managing Urban Stormwater: Soils and Construction Volume 1 (Landcom, 2004) and Managing Urban Stormwater: Soils	Applicable: Superseded by CoA E111	

	and Construction Volume 2 (Department of Environment and Climate Change, 2008a).		
EPO- SG-2	There would be no impacts on aquatic environments associated with the disturbance of ASS during construction.	Appendix B4 – Soil and Water Management Plan Section 5.1 of SWMP	The ASS mapping indicates that the project area contains “Disturbed Terrain” (fill material); therefore, overall risk of disturbing ASS which may subsequently impact aquatic environments is considered minimal. It is further noted that all excavation on the site is isolated within the hydraulic barrier wall (HBW), preventing groundwater leaving the site and constructed during previous remediation activities therefore, overall risk of disturbing ASS which may subsequently impact aquatic environments is considered minimal.
EPO-SG-3	Any contamination on project sites would be remediated to suit future land use.	Applicable: Superseded by CoA E118 - E126	
EPO-SU-1	The project would be carried out in accordance with the Parramatta Light Rail Sustainability Strategy.	Applicable: Superseded by CoA E136	
EPO-SU-2	The project would comply with the relevant requirements of the NSW Government Resource Efficiency Policy (GREP).	Appendix B8 – Waste and Resource Management Plan	Details on compliance with the PLR Sustainability Strategy are documented in the Waste and Resource Management Plan.

EPO-CC-1	Adaptation strategies would be implemented for high risks.	Appendix B8 – Waste and Resource Management Plan	Details on climate change adaption in accordance with the PLR Sustainability Strategy are documented in the Waste and Resource Management Plan.

Addendum A - Consultation Evidence

Table A-1: Log of consultation with Stakeholders as per CoA A5

In / Out	Date and time	Method of contact	Details of contact
Out	19/02/2019 17:23	E-mail	Invitation to PLR Consultation Workshop (RMS, Police - Parramatta, Fire & Rescue NSW, NSW Health, EPA, OEH, City of Parramatta Council (CoPC), DoI Water)
Out	20/02/2019 17:07	E-mail	Invitation to PLR Consultation Workshop (Site Auditor, SCO).
In	20/02/2019 07:59	E-mail	Police (Parramatta) – Project falls under Cumberland Police Area Command
Out	20/02/2019 10:54	E-mail	Invitation to PLR Consultation Workshop (Police – Cumberland).
In	21/02/2019 10:57	E-mail	OEH Biodiversity – no need to attend due to apparently limited biodiversity values on site.
In	26/02/2019 11:28	E-mail	OEH Flooding - As there is negligible flood issues for this portion my attendance is not required at this stage.
Out	06/03/2019 09:30	Workshop	PLR Consultation Workshop for Package 3: Portion 2 Early Works held – CEMP and associated sub-plans presented to attending stakeholders (Attendees include Police, Fire & Rescue NSW, CoPC, DoI Water, Site Auditor and ER).

In / Out	Date and time	Method of contact	Details of contact
Out	06/03/2019 14:37 - 15:23	E-mail	PLR Consultation Workshop for Package 3: Portion 2 Early Works held – CEMP, associated sub-plans and associated monitoring programs presented to non-attending stakeholders (EPA, DoI Water, SCO, NSW Health)
In	07/03/2019 08:22	E-mail	SCO comments (SCO-01 to SCO-06) received on TTAMP.
Out	07/03/2019 11:21	E-mail	PLR Consultation Workshop for Package 3: Portion 2 Early Works held – CEMP, associated sub-plans and associated monitoring programs presented to non-attending stakeholders (RMS)
In	07/03/2019 12:55	Teambinder	OEH Heritage comment (HER-01) received on Unexpected Heritage Finds Procedure, identified within CEMP. Comment noted did not require further update.
Out	07/03/2019 17:12	E-mail	Provided response to Council relating to a noise and vibration query (COP-01) raised at the PLR Consultation Workshop for Package 3: Portion 2 Early Works
Out	07/03/2019 17:16	E-mail	Provided evidence of previous consultation of remediation activities between TfNSW and DoI Water to DoI water.
In	18/03/2019 11:13	E-mail	Fire & Rescue NSW – no comments.
Out	18/03/2019 11:08 - 11:23	E-mail	Additional correspondence requesting comments to RMS, Police – Cumberland, Fire & Rescue NSW, EPA, Council, Site Auditor, DoI Water
Out	18/03/2019 11:55	E-mail	Response on SCO comments (SCO-01 to SCO-06) provided to SCO.

In / Out	Date and time	Method of contact	Details of contact
Out	18/03/2019 12:16	E-mail	PLR Consultation Workshop for Package 3: Portion 2 Early Works held – CEMP, associated sub-plans and associated monitoring programs presented to non-attending stakeholders (Sydney Water)
In	18/03/2019 13:16	E-mail	RMS is satisfied with SCO reviewing the traffic related management plans and don't raise any further comments raised in SCO's email dated 7th March.
In	20/03/2019 17:05	E-mail	Site Auditor comment (AUD-01) received on AQMP.
In	22/03/2019 18:40	E-mail	NSW Health comment (HEA-01) received on TTAMP. Comment noted did not require further update.
Out	25/03/2019 07:02	E-mail	Additional correspondence on flood management and groundwater treatment provided to Sydney Water
Out	25/03/2019 12:00	Briefing / Site Visit	NSW EPA Contaminated Site Team project briefing from TfNSW and site visit with Portion 2 Early Works Environment & Hygiene Manager and TfNSW
Out	26/03/2019 07:40 - 08:02	E-mail	Additional correspondence requesting comments to Police – Cumberland, EPA, Council, DoI Water
In	26/03/2019 08:01	E-mail	NSW NRAR DoI Water confirmed groundwater team are reviewing the management plans and expected to provide comments 'in the next week' on the SWMP
Out	26/03/2019 15:13	E-mail	Response on Site Auditor comment (AUD-01) to AQMP provided to Site Auditor.

In / Out	Date and time	Method of contact	Details of contact
In	27/03/2019 21:27	E-mail	City of Parramatta Council Environmental Health Compliance Team reviewed – CEMP, NVMP, SWMP, AQMP, WRMP and CLMP - no comments received.
In	27/03/2019 21:30	E-mail	City of Parramatta Council comments (COP-01 to COP-05) receive0d on SWMP.
Out	04/04/2019 10:33	E-mail	Response on City of Parramatta Council comments (COP-01 to COP-05) to SWMP provided to Council.
Out	04/04/2019 10:33	E-mail	Additional correspondence on flood management provided to Sydney Water
In	16/04/2019 06:56	E-mail	Sydney Water responses following review of the plans and provided information with '*No further comment on the information you have provided.*'
In	30/04/2019 09:57	Letter / E-mail	Letter received by NSW NRAR DoI Water. One (1) comment (DOI-01) received on SWMP. One comment on cross-references and hyperlinks raised, this had been resolved during the ER/TfNSW review process and was closed.
Out	02/05/2019 17:26	E-mail	Additional correspondence requesting comments to NSW EPA
Out	07/05/2019 09:54	Phone	Phone call to discuss NSW EPA regarding comments on CNVMP and SWMP.
Out	08/05/2019 15:19	Phone	Phone call to discuss NSW EPA regarding comments on CNVMP and SWMP (incorporating the water assessment program). Specific topics included the location of sampling, ERSED controls and nature of the site.

In / Out	Date and time	Method of contact	Details of contact
In	08/05/2019 16:22	E-mail	NSW EPA comments (EPA-01 to EPA 03) received on CNVMP. No formal comments received on SWMP or Water Quality Assessment Program.
Out	09/05/2019 12:04	E-mail	Response on NSW EPA comments (EPA-01 to EPA-03) to NVMP provided.
In	13/05/2019 11:23	E-mail	The EPA sent through '*does not have any further comments to make on the Portion 2 Early Works CEMP: Noise and Vibration Management Sub Plan-revision 4*'.

Table A-2: Log of issues raised by Stakeholders as per CoA A5

Reference	Comment	How addressed	Management plan reference location	Reference	Status
Site Auditor AUD-01	It would be worth clarifying the process to trigger asbestos in air monitoring – reference is provided to monitoring requirements in the Asbestos Removal Control Plan (ARCP), but consideration should also be given to monitoring requirements during exposure or handling of asbestos containing materials (not just removal works).	Section 7.3.6 of the AQMP now includes: '*Implement an exposure monitoring program for hexavalent chromium and asbestos during excavation, handling or segregation of impacted soils to determine the concentration of the contaminants of concern and verify the adequacy of controls. Samples should be collected at a minimum of monthly during contaminated works with results assessed by the Environment and Hygiene Manager to determine any additional monitoring frequency.*'	Section 7.3.6 of the AQMP	Annexure N of CEMP Stakeholder Consultation Evidence, dated 20/03/2019 17:05 (P105) .	Closed
City of Parramatta Council COP-01	Confirm that residential receptors to the north of the site, beyond the Parramatta River have been considered.	Residential receptors to the north, east and south of the project site are more than 1 km away and are shielded by the immediate industrial buildings. The noise attenuation afforded by the large intervening distances and shielding from the intervening industrial buildings, would ensure that residential receptors to the north, east and south are not likely to be adversely affected and are likely to	Section 5.1.1 of the NVMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 17:12 (P52)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
		comply with the NMLs. That said, as the project has been assessed to comply with the NMLs at the closer residential receptors (to the west), compliance will also be achieved at the residential receptors to the north, east and south as they are much further away from the project. Based on the above analysis, residences to the north, east and south are not considered to be potentially most affected receptors and have therefore, not been considered in our assessment.			
City of Parramatta Council COP-02	Reference should be labelled as (ii) but missing.	HY-5 and HR-5 ii) are incorporated within Section 3.3, Table 3-2 of the SWMP.	Section 3.3 of the SWMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 27/03/2019 21:30 (P48)	Closed
City of Parramatta Council COP-03	Show "Stormwater isolation gate" on Site Map. Was unable to find and presume may have been on Appendix A Erosion and Sediment Control Plan, however not supplied on USB	The Stormwater Isolation gate has been made redundant, and discharge of surface water to stormwater has been superseded by re-direction of all site surface water to TWTP for treatment. Subsequent discharge is then done in accordance with Sydney	Appendix A – Erosion and Sediment Control Plan of the SWMP and Appendix A6 – Environmental Control Map of the CEMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 27/03/2019 21:30 (P48)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
		Water Trade Waste Agreement (TWA)(Discharge License 15831). Details of ESCP and TWTP locations is shown on the Environmental Control Map, found in Appendix A6 of the CEMP and the Erosion and Sediment Control Plan, found in Appendix A of the SWMP.			
City of Parramatta Council COP-04	Measure refers to flood response measures for activities on land affected by 20yr ARI. Issues only addressed in the context of flood inundation by mainstream and does address any overland or impact from rainfall aerially given the site area.	Based on an assessment in the *Parramatta Light Rail - Flooding Technical Paper* (Arup, 2017), The site is considered to have low potential for flooding due to its location within a low flood risk area and raised surfaces present from the residual building slabs. The site is located outside the one per cent annual exceedance probability, but within the probable maximum flood extent which inundates the majority of the Camellia area. The site is currently not subject to local overland flows from areas external to the site. Localised ponding of surface water may occur on some parts of the site due to the variations in elevation, differential pavement condition and presence, and the	Section 4.7 of the SWMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 27/03/2019 21:30 (P48)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
		existing condition of the drainage system.			
City of Parramatta Council COP-05	Measure requires for Large areas e.g. compound areas and stockpile sites to be located away from any surface runoff flow paths and above the 10% AEP flood levels. CoPC notes this is addressed as “The EIS modelling and assessment for construction of the stabling and maintenance facility identified there is expected to be negligible obstruction of overland flow associated with site filling....". This statement appears incongruous given the section provided at the workshop on 6 March titled "Integrated remediation concept	Based on an assessment in the *Parramatta Light Rail - Flooding Technical Paper* (Arup, 2017), The site is considered to have low potential for flooding due to its location within a low flood risk area and existing raised surfaces present from the residual building slabs. The flood models indicates that the stabling and maintenance facility site is not subject to local overland flows from external areas to the site. Therefore, there is expected to be negligible obstruction of overland flow associated with site filling, and management of sediment/pollutant transport would be through on-site construction phase stormwater and ERSED controls. Site topography and drainage points may be altered as the works progress but will be maintained through ERSED Controls to prevent run-off. Where controls are altered a revision to the ERSED Control Maps will be issued.	Section 4.7 of the SWMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 27/03/2019 21:30 (P48)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
	design" identified a capping/filling resulting in an increase of ground levels across the entire site of approx. 1.5m, and hence significant obstruction of overland flow.	Ongoing development of the final layout of the stabling and maintenance facility will be conducted to refine the stormwater drainage design and re-assess flood impacts, to ensure an acceptable level of flood immunity for the facility and that negative impacts on flood behaviour are avoided or minimised and will form a separate package of works.			
City of Parramatta Council COP-06	"Outcome" and "How Addressed" requires review with regards to context and qualify. First issue (context) - The Performance Outcome notes "No aspect of the project would ...adversely affect...flood behaviour in vicinity of project" however is addressed only in reference to the compounds. The wording" No aspect of the project" taken literally suggests this capping.	See Comment COP-05	Section 4.7 of the SWMP	Annexure G of CEMP Stakeholder Consultation Evidence, dated 27/03/2019 21:30 (P48)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
	Second issue (qualify) - Whilst land is not affected by 20 year from mainstream, land is likely to the affected by overland or aerially (i.e. on the land itself)				
NSW Health / NSW Ambulance HEA-01	If road access is inhibited that traffic controllers give priority and right of way to Ambulances driving under lights and sirens and where possible on dual carriage way, if closures are occurring, 1 lane is left available for emergency access vehicles to use. By the report it does not appear that road closures are part of the scope of works so this should not be an issue.	No special arrangements for road or lane closures are proposed during this project.	Section 6.2 of the TTAMP	Annexure F of CEMP Stakeholder Consultation Evidence, dated 22/03/2019 18:40 (P41).	Closed
Office of Environment & Heritage	The Division raises no objection to TfNSW applying the approach of	In the case of an unexpected heritage item discovery, the contractor will enact the Unexpected Heritage Finds	Section 4.8 of the CEMP	Annexure K of CEMP Stakeholder Consultation	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
(OEH) - Heritage HER-01	managing the proposed Enabling works through its existing unexpected finds protocol rather than preparing a full CEMP and Archaeological Research Design at this location of the Parramatta Light Rail Stage 1 works.	Procedure and shall be implemented under the direction of a Heritage Consultant if areas of potential heritage significance are uncovered.		Evidence, dated 07/03/2019 12:55 (P83)	
Sydney Coordination Office SCO-01	Please confirm that RMS have also been provided a copy of the TTAMP for review. Noting that RMS will be the approver of this document.	A copy of the TTAMP, CEMP and other associated sub-plans has been issued to RMS for review.	Consultation Evidence of the CEMP and TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 08:22 (P8)	Closed
Sydney Coordination Office SCO-02	Future revisions of this document should be signed.	The final version will be signed and approved, prior to submission to the DPIE	Version Control of the TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 08:22 (P8)	Closed
Sydney Coordination Office SCO-03	Please add Sydney Coordination Office SCO to the list of abbreviations.	Sydney Coordination Office has been added to Glossary / Abbreviations	Glossary / Abbreviations of the TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
				07/03/2019 08:22(P8)	
Sydney Coordination Office SCO-04	James Ruse Dr and Parramatta Rd can be very congested during peak periods. SCO would encourage the contractor to schedule haulage and deliveries outside of AM and PM peaks Mon-Fri where practical.	Opportunities to reduce traffic movements during peak periods has been identified with several opportunities to reduce impacts, including use of materials in proximity to the project site.	Section 6.1.2 & Section 6.1.3 of the TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 08:22(P8)	Closed
Sydney Coordination Office SCO-05	Given the sites direct access to the arterial road network, without the need to drive through residential areas, SCO would encourage haulage operations at night.	Additional Opportunities to reduce traffic movement impacts by out of hours deliveries has been assessed in the NVMP.	Section 6.1.3 of the TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 08:22(P8)	Closed
Sydney Coordination Office SCO-06	Please check all turning paths into and out site to ensure driveway widths are appropriate, noting that parking adjacent to	The dimensions of the Grand Avenue access driveways and associated break in the median island are of adequate geometry to accommodate the majority of truck types proposed to service the remediation works, including single unit trucks (dump	Section 6.1.2 of the TTAMP	Annexure A of CEMP Stakeholder Consultation Evidence, dated 07/03/2019 08:22(P8)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
	driveways may need to be restricted.	trucks and water pump trucks) and articulated trucks (i.e. transport vehicles for the machineries proposed on-site). Should there be a need for longer vehicles to access the site, it is considered that the access driveway located at the south-western corner of the site onto Colquhoun Street (approximately 15 metres wide) will provide sufficient dimension to the site.			
NSW Environment Protection Authority EPA-01	Please consider changing: "As outlined in CoA - E27, except as permitted by an EPL, or through the Out-of-Hours Work Protocol…" TO "As outlined in CoA - E27, except as stated in an EPL, or through the Out-of-Hours Work Protocol…	Text updated as requested.	*Section 7.1* of the CNVMP	Annexure H of CEMP Stakeholder Consultation Evidence, dated 08/05/2019 16:22 (P60)	Closed
NSW Environment Protection Authority	"Notwithstanding CoA - E21 (hours of work), works may be undertaken in the Camellia precincts (east	Minor edits to improve readability as follows. This text is however largely based on the actual CoA. Edited text is: "As specified in CoA – E23 and notwithstanding CoA - E21, works	*Section 7.1* of the CNVMP	Annexure H of CEMP Stakeholder Consultation Evidence, dated	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
EPA-02	of James Ruse Drive) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the ICNG, between 10:00pm and 7:00am (CoA - E23)"	may be undertaken in the Camellia precinct (east of James Ruse Drive) 24 hours a day, seven days a week provided that sensitive receivers are not affected by noise levels of greater than 5 dBA above the rating background level at any residence in accordance with the ICNG, between 10.00pm and 7.00am."		08/05/2019 16:22 (P60)	
NSW Environment Protection Authority EPA-03	Emergency Construction - Emergencies should be defined if they haven't in the OOH Protocol and within the Management Plan's dictionary/definition sections. As a comment: Emergency Works should only be used for an actual emergency and not, for example, as a result of poor planning and/or improper scheduling.	Definition of 'emergency' included in glossary/abbreviations section of the CNVMP. Section 7.2b referenced in Section 7.4. The following text was added to Section 7.4 in the CNVMP - Emergency construction works would only be undertaken in the event of an 'emergency' commonly defined as a serious, unexpected, and often dangerous situation requiring immediate action. To avoid any misunderstanding, an emergency does not relate to general issues associated with sequencing or scheduling risks that do not represent an emergency as defined by this CNVMP.	*Glossary / Abbreviations and Section 7.4* of the CNVMP	Annexure H of CEMP Stakeholder Consultation Evidence, dated 08/05/2019 16:22 (P60)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
		These edits align with the definitions provided in the TfNSW OOH Protocol.			
NSW Department of Industry Water – National Resources Access Regulator DOI-01	The plan should be updated to correct the cross-references and hyperlinks in the document (e.g. references to Section 8 in table 3-1, which should be made to Section 6 and “Error! Reference source not found”) to enable checking compliance of the works with the plan as may be required.	Formatting of cross-references and hyperlinks were revised during the document review process and have been corrected.	Section 6 of the SWMP	Annexure L of CEMP Stakeholder Consultation Evidence, dated 30/04/2019 09:57 (P87)	Closed
Roads and Maritimes Services (RMS)	RMS stated they are satisfied with SCO reviewing the traffic related management plans and don’t raise any further comments raised in SCO’s email with comments (SCO-01 to SCO-06)			Annexure B of CEMP Stakeholder Consultation Evidence, dated 18/03/2019 13:16 (P16)	Closed
Fire & Rescue NSW	Fire & Rescue NSW response following review of the plans and provided information with no comments			Annexure E of CEMP Stakeholder Consultation Evidence, dated	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
				18/03/2019 11:13 (P35)	
Police – Parramatta PAC	Police (Parramatta PAC) confirmed that the Project falls under Cumberland Police Area Command			Annexure C of CEMP Stakeholder Consultation Evidence, dated 20/02/2019 07:59 (P23)	Closed
Police – Cumberland PAC	Nil comments received by NSW Police – Cumberland PAC throughout process. Consultation closed 14/04/2019			Annexure D of CEMP Stakeholder Consultation Evidence. (P28)	Closed
Office of Environment & Heritage (OEH) - Flooding	OEH – Flooding response following invitation to PLR Portion 2 Early Works Consultation Workshop for CEMP and sub-plans with '*As there is negligible flood issues for this portion my attendance is not required at this stage*.'			Annexure I of CEMP Stakeholder Consultation Evidence, dated 26/02/2019 11:28 (P73)	Closed
Office of Environment & Heritage (OEH) - Biodiversity	OEH – Biodiversity response following invitation to PLR Portion 2 Early Works Consultation Workshop for CEMP and sub-plans with '*I don't believe OEH need to attend this in regard to biodiversity impacts, given the apparently limited biodiversity values on site.'*			Annexure J of CEMP Stakeholder Consultation Evidence, dated 21/02/2019 10:57 (P 79)	Closed

Reference	Comment	How addressed	Management plan reference location	Reference	Status
Sydney Water	Sydney Water response following review of the plans and provided information with '*No further comment on the information you have provided.*'			Annexure M of CEMP Stakeholder Consultation Evidence, dated 16/04/2019 06:56 (P 100)	Closed

Addendum B – ER Endorsement

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[redacted]

27 May 2020

Transport for NSW
Attention to: [redacted]
A/Senior Manager Environment
[redacted]
[redacted]

Review of Parramatta Light Rail Stage 1 - Package 3
Portion 2 Remediation Works Ventia –Minor Amendment CEMP Rev 8

Pursuant to SSI-8285 Condition of Approval A23 (d) (i), as the approved Environmental Representative, I confirm that I have reviewed, provided comments and I approve the minor amendments of the following document pursuant to condition of approval C8:

- Construction Environmental Management Plan (CEMP) (PLR-VNT-SAM-PE-PLN-000018, Revision 08, 22 May 2020).

There was no major change on the plan only administrative minor amendments.

Yours sincerely,

[redacted]

[redacted]
Environmental Representative

[redacted]

[redacted]

For more information about the Parramatta Light Rail project, visit Parramattalightrail.nsw.gov.au

Call: 1800 139 389

Email: Parramattalightrail@transport.nsw.gov.au