

Construction Environmental Management Plan (CEMP)

**Transport for NSW
Supply, Operate, Maintain (SOM) Package 5**

Parramatta Light Rail
November 2023
PLR1SOM-GLR-ALL-PM-PLN-000014 Rev 7



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About this release

Title	Construction Environmental Management Plan Parramatta Light Rail – Stage 1 – Supply, Operate and Maintain (SOM) Package 5
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Version	Date	Prepared By	Approved By
A	10 April 2019	Advisian on behalf of GRCLR	
B	3 March 2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR	
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Construction Environmental Management Plan

Parramatta Light Rail – Stage 1, SOM Package 5

November 2023

PLR1SOM-GLR-ALL-PM-PLN-000014 Rev 7

Version control

Revision	Date	Description
A	10 April 2019	Advisian on behalf of GRCLR
B	3 March 2020	Mott MacDonald Australia Pty Ltd on behalf of GRCLR
C	06 April 2020	Updated to address TfNSW and ER comments
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Glossary / Abbreviations

Abbreviation	Expanded Text
AA	Acoustics Advisor
AHMP	Aboriginal Heritage Management Plan
Ancillary facility	A facility established for construction of the project which will be decommissioned at the end of construction, which may include an office and amenities compound, construction compound, material crushing and screening plant, materials storage compound, maintenance workshop, testing laboratory and material stockpile area
AQMP	Air Quality Management Plan
ASS	Acid sulphate soils
BOCC	Back Up Operations Centre
CAF	Construcciones y Auxiliar de Ferrocarriles
CAP	Construction Area Plan; the main document prepared during the construction planning for that work area. Includes construction methodology, risk assessment, constructability reviews and Work Pack listing
CBD	Central business district
CCS	TfNSW Project Community Communication Strategy
CEMP	Construction Environmental Management Plan
CLM Act	<i>Contaminated Lands Management Act 1997</i>
CLMP	Contaminated Land Management Plan
Compliance audit	Verification of how implementation is proceeding with respect to a CEMP, which incorporates the relevant approval conditions
CoA	Minister's Conditions of Approval
Construction Area	A separable portion of work that is identified early in construction planning to help drive early definition of construction methodology and alignment of design activities. Work Areas should be listed in the overall construction methodology. The planning document for a work area is called a CAP
CSR	Combined Services Route
CSSI	Critical State Significant Infrastructure
CTP	Compliance Tracking Program

Abbreviation	Expanded Text
D&C	Design and Construct
DPE	NSW Department of Planning and Environment
EA	Environmental Advisor
EES	Environment, Energy and Science Group (DPE)
EIS	Environmental Impact Statement
EMS	Environmental Management System
ECM	Environmental Control Map
Ecological 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).
Environmental aspect	Defined by AS/NZS ISO 14001:2004 as an element of an organisation's activities, products or services that can interact with the environment.
Environmental impact	Defined by AS/NZS ISO 14001:2004 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 causes, or has the potential to cause, harm to the environment and requires some action to minimise the impact or to restore the environment.
Environmental objective	Defined by AS/NZS ISO 14001:2004 as an overall environmental goal, consistent with the environmental policy, that an organisation sets itself to achieve.
Environmental policy	Statement by an organisation of its intention and principles for environmental performance.
Environmental target	Defined by AS/NZS ISO 14001:2004 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 project design and construction personnel employed for the duration of construction. The principal point of advice in relation to all questions and complaints concerning environmental performance.
EWMS	Environmental work method statements

Abbreviation	Expanded Text
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EPA	NSW Environment Protection Authority
EPL	Environment Protection Licence
EPO	Environmental performance outcomes
ER	Environmental Representative
ERA	Environmental risk assessment
ETS	Electronic ticketing system
ESCP	Erosion and Sediment Control Plan
EWMS	Environmental Work Method Statement, a component of the environmental management system that addresses environmental management issues relevant to a specific site and/or activity
FMP	Flood Management Plan
FFMP	Flora and Fauna Management Plan
GHG	Greenhouse gas
GRCLR	Great River City Light Rail (responsible for delivery of the SOM works)
HMP	Heritage Management Plan
IC	Independent Certifier
IMS	Information management system
LORAC	Laing O'Rourke Australia Contractors
LRV	Light rail vehicle
NVMP	Construction Noise and Vibration Management Plan
Non-compliance	Failure to comply with the requirements of the Project Approval or any applicable license, permit or legal requirements
non-compliance	An occurrence, set of circumstances or development that is a breach of the planning approval but is not an environmental incident.
NOW	NSW Office of Water
O&M	Operate and Maintain

Abbreviation	Expanded Text
PLR	Parramatta Light Rail
Project	Construction of the PLR light rail systems, high-voltage power supply and stops above slab level, and the stabling and maintenance facility
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
REMMM	Revised Environmental Mitigation and Management Measure (from the Submissions Report incorporating the Preferred Infrastructure Report)
RMS	NSW Roads and Maritime Services (merged with TfNSW)
SaMF	Stabling and maintenance facility
SOM	Supply, Operate and Maintain Contract (Package 5)
Secretary	Secretary of the NSW Department of Planning and Environment (or delegate)
SPIR	Submissions and Preferred Infrastructure Report
SWMP	Soil and Water Management Plan
T&C	Testing and Commissioning
TPS	Traction power substation
TfNSW	Transport for New South Wales (PLR proponent)
TTAMP	Traffic, Transport and Access Management Plan
Ventia	Remediation Contractor – Responsible for the remedial works at the Stabling and Maintenance Facility Site at Rosehill
WRMP	Waste and Resource Use Management Plan

Documents Referenced in this Plan

Document Name	Relationship to this Plan
Traffic, Transport and Access Management Plan	Sub plan under CoA C3
Flora and Fauna Management Plan	Sub plan under CoA C3
Noise and Vibration Management Plan	Sub plan under CoA C3
Soil and Water Quality Management Plan	Sub plan under REMMM
Heritage Management Plan	Sub plan under CoA C3
Aboriginal Heritage Management Plan	Sub plan under REMMMs
Air Quality Management Plan	Sub plan under REMMMs
Construction Waste and Resource Management Plan	Sub plan under REMMMs
Site Establishment Management Plan	Standalone plan under CoA C18
Flood Management Plan	Sub plan under CoA C3
Landscape and Temporary Works Plan	Sub plan under REMMM
Sustainability Strategy	Overarching strategy
Sustainability Management Plan	Standalone plan
GRCLR Staging Report	Standalone report
Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia EIS	Standalone report
Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report)	Standalone report
GRCLR Environmental and Sustainability Policy	Standalone document
Environmental Control Maps	Standalone documents
Communication and Engagement Plan	Standalone plan

Status of this Plan

The Parramatta Light Rail – Stage 1, Westmead to Carlingford (SSI 8285) was approved by the Minister for Planning on 29 May 2018, and subsequently been modified under Section 5.25 of the *EP&A Act*, with approvals issued on 21 December 2018 and 25 January 2019 respectively.

This CEMP has been prepared to meet the requirements of the CoAs and REMMMs as allocated by the PLR Staging Report, Package 5 Activity A and B for the entirety of the SOM scope of works.

This CEMP was prepared in stages to reflect the construction program which is reliant on the completion of works by the Remediation and Infrastructure Works contractors. It also allowed time for consistency assessments to be undertaken for changes relating to some of the TPS sites and the BOCC without delaying commencement of construction at the SaMF site.

The CEMP was most recently reviewed to ensure that it adequately addresses the proposed Testing and Commissioning (T&C) scope which is considered under the Infrastructure Approval definition as 'construction'.

The GRCLR CEMP was staged as follows:

- First Issue includes: Activity A: Construction at the SaMF site – approved by DPE on 21 October 2020
- Second Issue includes Activity A&B: SaMF site and construction of the remainder of the SOM works for the alignment, including Traction Power Stations (TPS), Back-up Operations and Control Centre (BOCC), and other sites (i.e. full SOM scope or construction works)
- Third issue (revision 6): As per the second issue, revised to reference the obtained EPL
- Fourth issue (revision 7): Revised to ensure the Plan remains relevant during the T&C phase of the project.

1 Introduction

1.1 Background

1.1.1 Parramatta Light Rail Description

Parramatta Light Rail (PLR) is one of the NSW Government's major infrastructure projects being delivered to serve a growing Sydney.

PLR will connect Westmead to Carlingford via Parramatta Central Business District (CBD) and Camellia. PLR is expected to be operational in 2024.

PLR will create new communities, connect great places and help both local residents and visitors move around and explore what the region has to offer. The route will link Parramatta's CBD and train station to a number of key locations, including the Westmead Precinct, the Parramatta North Growth Centre, the new Western Sydney Stadium, the Camellia Town Centre, the new Powerhouse Museum and 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 PLR include:

- A new dual track light rail network of approximately twelve kilometres in length, including approximately seven kilometres within the existing road corridor and approximately five kilometres within the existing Carlingford Line and Sandown Line, replacing current heavy rail services
- Sixteen 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
- 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 facility (SaMF) located in Camellia for light rail vehicles to be stabled, cleaned and maintained
- New and modified 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)
- Real time information in light rail vehicles and at Stops via visual displays and audio.

An overview of the PLR route is shown in Figure 1-1.

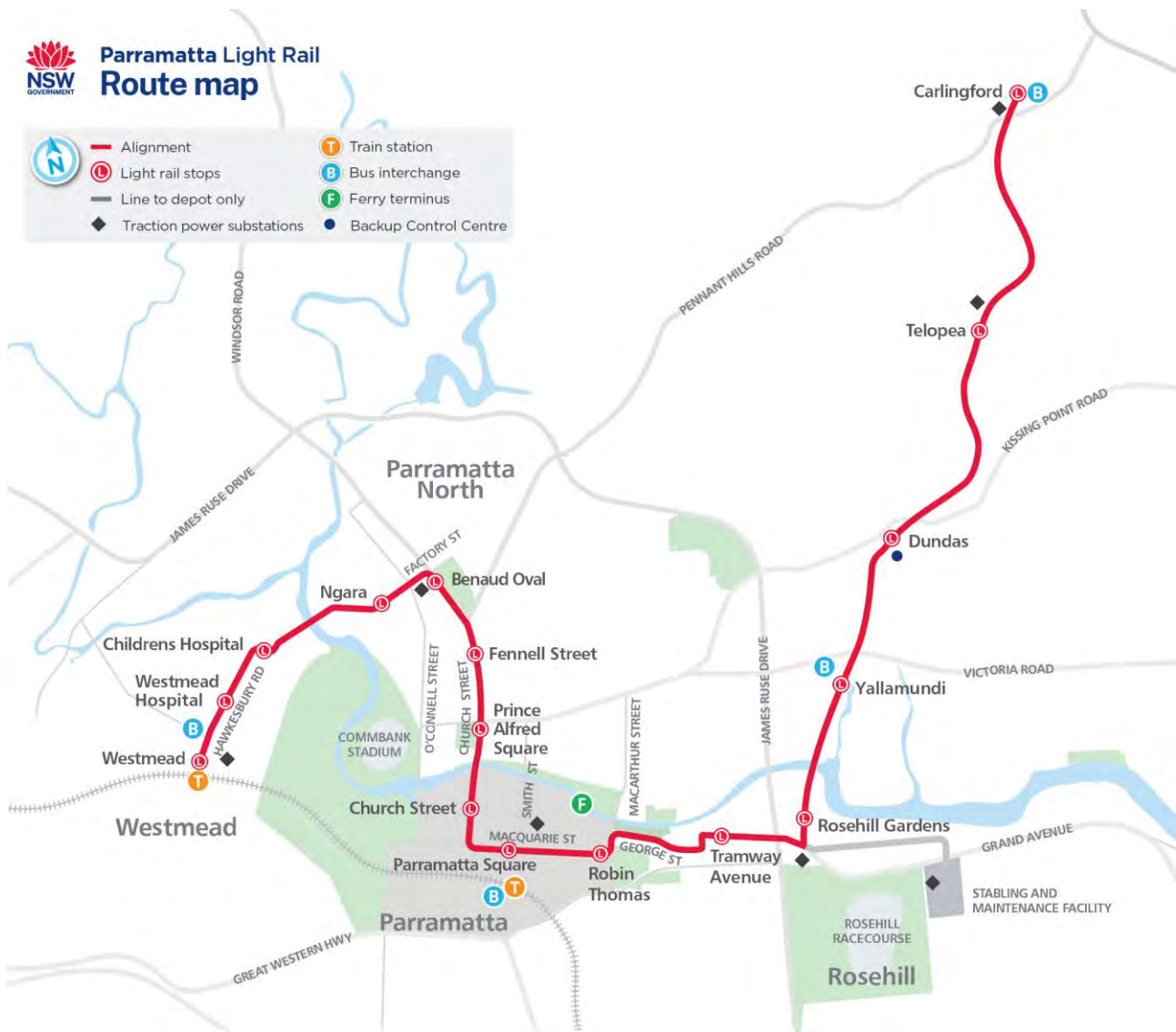


Figure 1-1: Parramatta Light Rail Route

1.1.2 PLR Delivery Strategy

The PLR comprises approximately 12km alignment from Westmead to Carlingford via Camellia and Parramatta CBD and consists of a mix of on-street and dedicated corridor.

PLR is being delivered under five delivery packages as detailed in the Staging Report:

- Enabling Works (**Package 1**) – Local road network improvements including O’Connell Street and George Street (off-alignment)
- Westmead Precinct Works (**Package 2**) – Hawkesbury Road widening and demolition at Cumberland Hospital (east and west Campus)
- Early Works (**Package 3**) – Remediation of the Stabling and Maintenance Facility (SaMF)

- Infrastructure Works (**Package 4**) – Design and construction of civil works, public domain and light rail infrastructure up to road level/top of rail and to the top of the concrete slab at stops, including provision of utility services (excluding high-voltage power supply and cabling for rail systems), and decommissioning of the T6 Carlingford Line
- Supply Operate and Maintain Works (**Package 5**) – The Project (**subject of this Plan**) Design and construction of the light rail systems, high-voltage power supply and stops above slab level, the supply of light rail vehicles, and the design and construction of the SaMF, including all light rail operations, customer service and asset management.

Each package of work is to be delivered under separate contracts on behalf of the proponent Transport for NSW (TfNSW). While the packages will commence at different times under separate construction approvals, there will be periods during which the works packages will overlap. The interactions between the packages are shown in Figure 1-2.

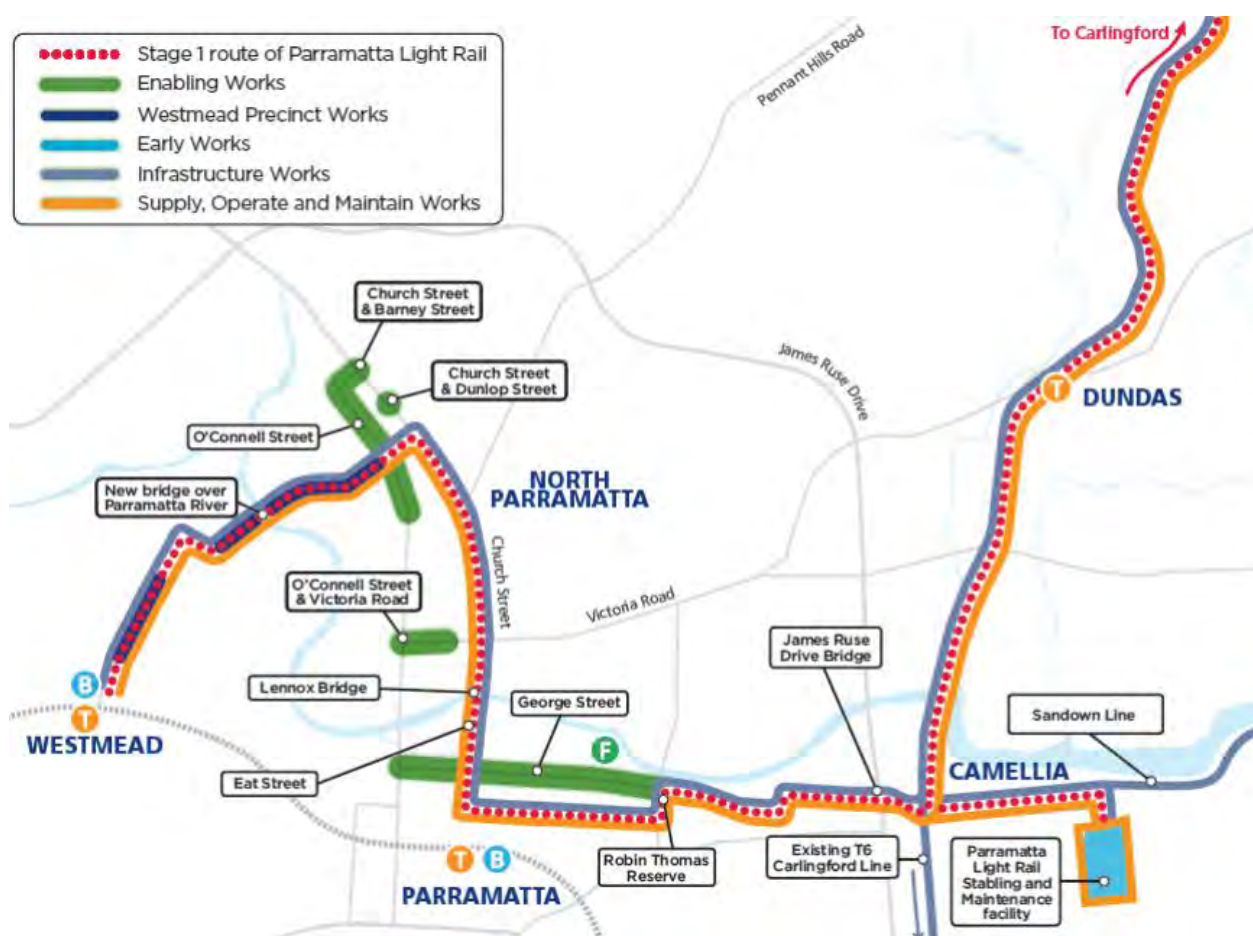


Figure 1-2: Parramatta Light Rail Delivery Strategy

1.1.3 Supply, Operate and Maintain Contract (Package 5) overview

As System Integrator for PLR, the SOM Contractor's activities include:

- Delivery activities
- Light rail vehicle procurement
- Operation and maintenance.

The delivery activities include all investigation, selection, specification, design, approvals, construction, manufacture, installation, testing and commissioning, operational readiness and activities to transition from the delivery phase to the operations phase.

In summary the SOM package includes the following. Figure 1-3 further details these activities.

- All works above and additional to the platform concrete foundation slab at all stops
- Stabling and maintenance facility
- Central control system
- Light rail signalling system
- Elements of the road intersection signalling system
- Communications and passenger information systems
- Power Supply system
- Procurement of light rail vehicles (LRV)
- Maintenance plant and machinery for the LRVs
- Earthing and bonding, electrolysis and electromagnetic compatibility.

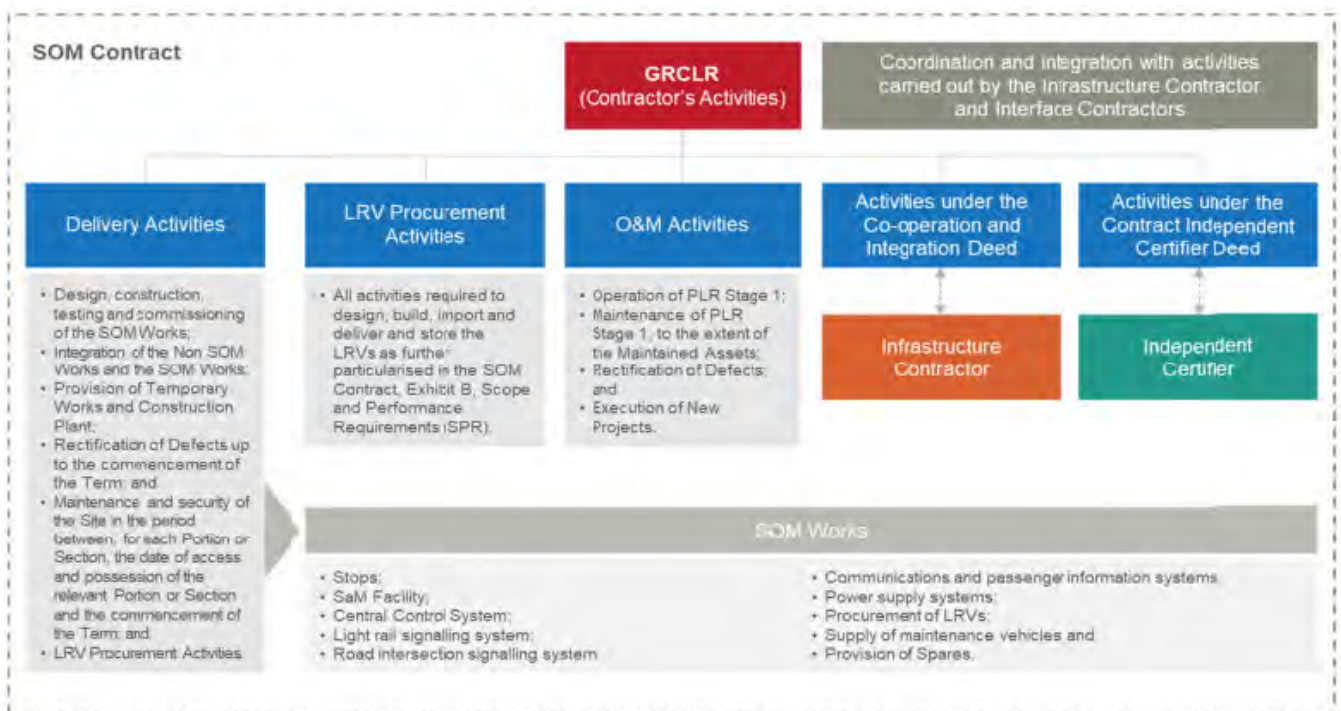


Figure 1-3: SOM Contract Activities for PLR

Great River City Light Rail (GRCLR) is responsible for the delivery of the SOM works for PLR. GRCLR has sub-contracted the supply component of these works to Construcciones y Auxiliar de Ferrocarriles (CAF) who has engaged Thales, General Electric and Laing O'Rourke Australia (LORAC) to undertake the design and construction responsibilities associated with the supply component of the works, which includes the design and construction related activities including testing and commissioning, and excludes all operational and maintenance activities.

GRCLR is the owner of this Construction Environmental Management Plan (CEMP) and is responsible for ensuring implementation of and compliance with this CEMP by all subcontractors during construction works of Package 5, which include the construction of the light rail systems, high-voltage power supply and stops above slab level, the stabling and maintenance facility (the

Project) as well as Testing and Commissioning (T&C) of the Light Rail Vehicles (LRVs) and infrastructure. Further detail on the Project is provided in Section 2.

1.1.4 Relationship with other Packages

Infrastructure Works (Package 4)

The Infrastructure Works (Package 4) is closely aligned to the SOM Works (Package 5). A graphical representation of the split in scope between the two packages is depicted in Figure 1-4. The reason for dividing this work into two packages is to ensure that suitably qualified and experienced sub-contractors are in place for each specialised component; civil infrastructure, and operational systems. The Infrastructure Works will deliver the civil infrastructure components of PLR and will not trigger the operational conditions, except for those that relate to detailed design.

An interface between the two packages has been established to monitor cumulative impacts and the coordination of environmental complaints management, site management controls, and the delineation of incident reporting and non-compliance management.

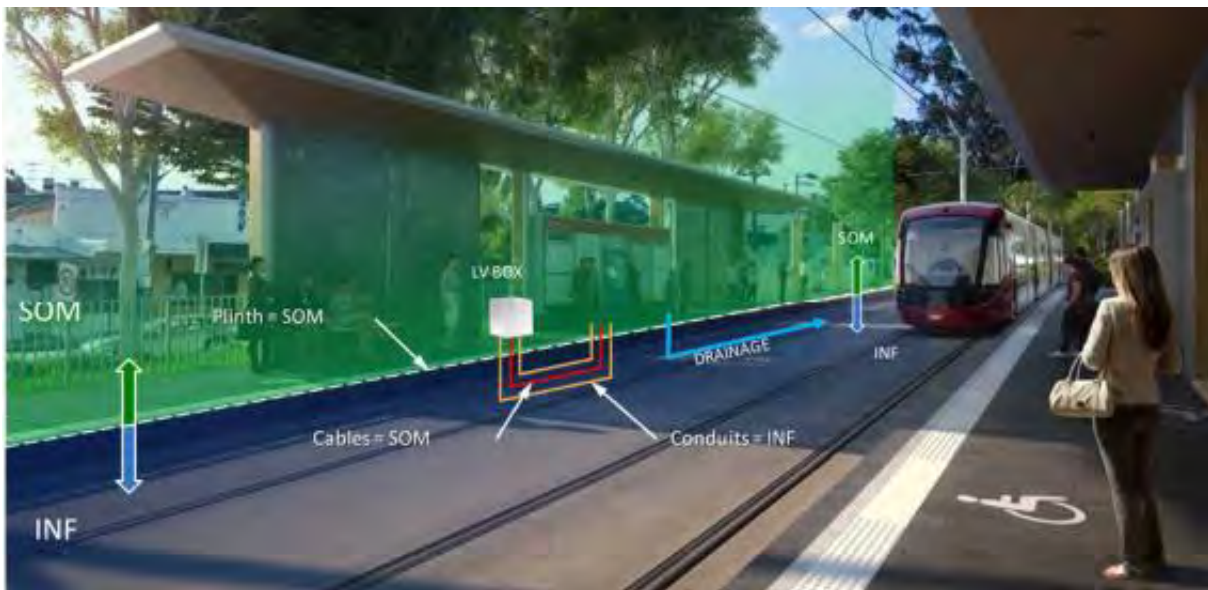


Figure 1-4: Relationship between infrastructure works and SOM works.

The SOM contract is dependent on the completion of the remediation works at the stabling and maintenance facility (SaMF) site, by the remediation contractor.

The SaMF site is subject to historical contamination and is a listed contaminated site by the Environment Protection Authority (EPA). The works have been split to ensure that appropriately qualified contractor, experienced in remediating heavily contaminated sites, is managing the remediation of the site. The remediation contractor will complete their works and provide GRCLR a remediated site, complete with a site audit statement, and supporting management documentation, fit for purpose for site establishment, construction and operational activities associated with PLR.

The remediation works will deliver the remediated site, including any details of any ongoing management requirements, and will not trigger the construction and operational conditions, except for those that relate to detailed design. The Remediation Contractor will provide GRCLR with a Long Term Environmental Management Plan (LTEMP) for the SaMF, the LTEMP will include all operation, management, maintenance and monitoring requirements for the SaMF. GRCLR will implement the requirements relevant to the construction of the SaMF.

Ongoing management for the remedial works on the SaMF site will be implemented through a Long Term Environmental Management Plan (LTEMP) which will be approved by the Site Auditor,

as part of the issuing of the Site Audit Statement (SAS) for the site. The LTEMP will be a stand-alone document, and all monitoring and reporting will be managed through the processes and procedures in the LTEMP, and not through the SOM CEMP.

An interface between the two packages has been established to ensure the remediated site meets the design requirements for the construction, operation and maintenance of the site.

1.1.5 Statutory Context

PLR has been subject to environmental impact assessment under the *Environmental Planning and Assessment Act 1979* (EP&A Act). It is classified as Critical State Significant Infrastructure (CSSI).

Detailed environmental impact assessments have been carried out and approved by the Minister for Planning and Public Spaces. The Planning Approval for PLR is described in Section 1.1.6.

1.1.6 Parramatta Light Rail Planning Approval

The Parramatta Light Rail was approved by the Minister for Planning on 29 May 2018, under Section 5.19 of the *Environmental Planning and Assessment Act (EP&A Act) 1979*. An environmental impact statement (EIS) was prepared as part of infrastructure application (SSI-8285) as was a submissions and preferred infrastructure report (SPIR) following EIS public exhibition.

The Infrastructure Approval has subsequently been modified under Section 5.25 of the *EP&A Act*, with approvals issued on 21 December 2018 and 25 January 2019 respectively. The modifications related to changes to conditions of approval (CoA) not the physical description of PLR.

The Infrastructure Approval, modifications and related environmental assessment documents can be found at: http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8285.

1.1.7 Environment Protection Licence

The Project is carried out in accordance with Environment Protection Licence (EPL) 21606, which was granted in December 2021, authorising the Scheduled Activity of *Railway activities – railway infrastructure construction*.

A copy of the EPL can be found at: <https://www.parramattalightrail.nsw.gov.au/node/360>. The premise to which the EPL relates is defined by the most recent premise maps held on EPA Electronic File SF19/117693 and approved in writing by the EPA.

1.2 CEMP and Sub-plans

This CEMP and Sub-plans have been prepared to outline and describe how GRCLR will comply with the requirements of the following during the construction of the Project.

- Minister's Conditions of Approval (CoA) SSI-8285
- Revised Environmental Mitigation and Management Measures (REMMMs)
- Environmental Performance Outcomes (EPO's)
- AS/NZ ISO 14001
- All applicable legislation
- Project Deed.

It outlines how GRCLR will minimise the environmental risks and achieve environmental outcomes on the Project by providing a structured approach to ensure appropriate environmental mitigation measures are implemented.

This CEMP is the overarching document of the environmental management system for the Project. It is applicable to all staff and subcontractors associated with the construction of the Project.

In summary, the main purpose of this CEMP is to:

- Describe the Project including all relevant activities to be undertaken on the site during construction and associated timing of the various stages of the Project
- Comply with the relevant environmental requirements of the Project
- Identify the environmental hazards, risks and mitigation measures associated with GRCLR's construction activities
- Assist in the prevention of unauthorised environmental harm
- Minimise negative impacts on the community that relate to the environmental impacts of the construction activities
- Identify and outline implementation for feasible opportunities to reduce the environmental impact of GRCLR's construction activities that are beyond compliance requirements
- Meet the requirements of AS/NZ ISO 14001 including the need for continual improvement.

1.2.1 Internal Review

Draft documents are internally reviewed by the author and GRCLR representatives prior to issue to TfNSW, the ER and the Independent Certifier (IC) for review. Upon receipt of any comments, GRCLR will either amend the document to reflect the comments or document the justification as to why no change is required; evidence of consultation will be retained.

1.2.2 Certification and Approval

The final CEMP is endorsed by the GRCLR Environment and Sustainability Manager and approved by the GRCLR Project Director. The final CEMP is submitted for endorsement by the Environmental Representative (ER), and approval by the Secretary of Department of Planning and Environment (DPE) no later than one month prior to the commencement of construction, as required by the infrastructure approval. Sub-plans to the CEMP are also be required to be submitted to the Secretary of DPE prior to commencement of construction for either information or approval at least one month prior to commencement of construction, as shown in **Table 1-1**.

Table 1-1: Secretary approval requirements

Required CEMP Sub-plan	Secretary Approval/ Information
CEMP	Approval
Traffic, transport and access	Information
Noise and vibration	Approval
Flood management	Information
Heritage	Approval
Flora and fauna	Information

1.2.3 Consultation

The CEMP and Sub-plans have been developed in consultation with relevant stakeholders as identified in **Table 1-2**. The outcomes of the consultation are addressed and documented where relevant in a separate consultation report, submitted to DPE together with the relevant plans.

Table 1-2: Consultation requirements

Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan
Traffic, transport and access	Relevant council(s), TfNSW, Emergency Services
Noise and vibration	Relevant council(s), EPA, NSW Health
Flood management	Relevant council(s), Environment, Energy and Science Group (DPE), OEH (Department of Premier and Cabinet), Sydney Water
Heritage	Relevant council(s), OEH (Department of Premier and Cabinet)
Flora and fauna	Relevant council(s), OEH (Department of Premier and Cabinet)
Site establishment management plan	Relevant council(s) and relevant government authorities

Where the terms of the CoA 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 will be submitted to the Secretary with the document or monitoring program for review, in accordance with CoA A5. The evidence is to include:

- Documentation of the engagement with the party(ies) identified in the relevant condition of approval before submitting the document for approval
- 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)
- Documentation of any follow-up with the identified 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
- 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
- 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).

In accordance with CoA C5 the evidence of consultation for each management Sub-plan will be provided in a stand-alone report submitted together with each of the relevant management sub plans and programs.

1.2.4 CEMP Availability and Distribution

This CEMP will be made available to the public on the PLR website (<https://www.parramattalightrail.nsw.gov.au/library/environmental-management>). Confidential

information, which may include the location of threatened species and personnel contact details, are to be removed from all documents prior to them being made publicly available.

This CEMP will be made available to all personnel and subcontractors via the Project Integrated Management System (IMS).

The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documents would be maintained by the GRCLR Environment and Sustainability Manager at the Project office, with copies distributed to:

- Project Director
- Environmental Representative (ER)
- Acoustic Advisor (AA)
- Design and Construct (D&C) Environment Manager
- Stakeholder & Community Relations Manager
- TfNSW representative
- Independent Certifier.

1.3 CEMP Compliance

This CEMP and Sub-plans have been prepared to describe how GRCLR, will comply with the environmental requirements during the construction of the Project. Requirements that are applicable to the management Sub-plans are listed and addressed in the relevant plans.

The CoA relevant to this Plan are listed in **Table 1-3**. A cross reference is also included to indicate where the condition is addressed in this Plan.

Table 1-3 lists the CoA that are relevant to the CEMP only, together with where and how each is addressed. Similarly, **Table 1-4** lists the relevant REMMMs from the SPIR and **Table 1-5** provides the relevant EPO from the EIS.

1.3.1 Minister's Conditions of Approval

The CoA relevant to this Plan are listed in Table 1-3. A cross reference is also included to indicate where the condition is addressed in this Plan.

Table 1-3: CoA relevant to the CEMP

CoA No.	Requirement	Reference	How Addressed
A1	<p>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</p> <p>(a) the Parramatta Light Rail (Stage 1) Westmead to Carlingford via Parramatta CBD and Camellia Submissions Report (incorporating Preferred Infrastructure Report) (February 2018) (the SPIR).</p> <p>(b) SSI 8285 Administrative modification (November 2018) (MOD 1); and</p> <p>(c) SSI 8285 Correction to Administrative modification (January 2019) (MOD 2).</p>	<p>Section 1.1.5</p> <p>Section 1.1.6</p> <p>Table 1-1</p> <p>Table 1-2</p>	<p>This CEMP and associated Sub-plans demonstrate how the construction of the Project will be carried out in accordance with the CoA, EIS (August 2017) and SPIR (February 2018).</p> <p>All relevant commitments are listed in each Sub-plan with a reference of where and how it is addressed.</p>

CoA No.	Requirement	Reference	How Addressed
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.	This Plan	<p>This CEMP is the overarching document in the environmental management system for the Project and includes a number of management documents, including sub-plans and procedures. It is applicable to all staff and Subcontractors associated with the construction of the Project.</p> <p>The CEMP provides a framework for ensuring compliance with the requirements of the CoA (including approved Modifications 1 and 2), REMMMs, relevant legislative requirements and the Deed.</p>
A3	<p>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.</p> <p>Note: For the purpose of this condition, there will be an inconsistency between a term of this approval and any document if it is not possible to comply with both the term and the document.</p>	<p>This Plan</p> <p>Section 3.8</p> <p>Section 8.4</p> <p>Appendix A1</p>	<p>Condition noted.</p> <p>In the event that an inconsistency is identify, clarification will be sought from the ER or the DPE, if required.</p>
A4	The Proponent must comply with all written requirements or directions of the Secretary, including in relation to:	<p>Section 6.1, 8.3, 8.4, 8.6</p> <p>Appendix A1</p>	Condition noted

CoA No.	Requirement	Reference	How Addressed
(a)	the environmental performance of the CSSI;	Section 6.1, 8.3, 8.4, 8.6 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.
(b)	any document or correspondence in relation to the CSSI;	Section 6.1, 8.3, 8.4, 8.6 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.
(c)	any notification given to the Secretary under the terms of this approval;	Section 6.1, 8.3, 8.4, 8.6 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.
(d)	any audit of the construction or operation of the CSSI;	Section 6.1, 8.3, 8.4, 8.6 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.

CoA No.	Requirement	Reference	How Addressed
(e)	the terms of this approval and compliance with the terms of this approval (including anything required to be done under this approval); and	Section 6.1, 8.3, 8.4, 8.6 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.
(f)	the carrying out of any additional monitoring or mitigation measures.	Chapter 8 Appendix A1	Condition noted In the event that a written requirement or direction is received from the Planning Secretary, relevant information and/or records will be provided to TfNSW for submission.
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:	Section 1.2.3, 6.1, 7.2, 8.3, 8.5	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .

CoA No.	Requirement	Reference	How Addressed
(a)	documentation of the engagement with the party(ies) identified in the relevant condition of approval before submitting the document for approval;	Section 1.2.3, 6.1, 7.2, 8.3, 8.5	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .
(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);	Section 1.2.3, 6.1, 7.2, 8.3, 8.5	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .
(c)	documentation of any follow-up with the identified 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;	Section 1.2.3, 6.1, 7.2, 8.3, 8.5	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .

CoA No.	Requirement	Reference	How Addressed
(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	Section 1.2.	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .
(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).	Section 1.2.3	Each document or monitoring program that is to be prepared or a review to be undertaken in consultation with identified parties will be issued to the relevant party and the records included in the relevant sub plan appendices. Stand-alone Consultation Reports. For CEMP PLR1SOM-GLR-ALL-EN-RPT-001002 .
A29 (g) iii	consider relevant minor amendments made to the CEMP, relevant sub-plans and noise and vibration monitoring programs that require updating or are of an administrative nature, and are consistent with the terms of this approval and the management plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, endorse the amendment. This does not include any modifications to the terms of this approval;	Section 9.2	Minor amendments made to the CEMP, relevant sub-plans and noise and vibration monitoring programs may be approved by the Environmental Representative in consultation with the AA. More significant changes would require the approval of DPE.

CoA No.	Requirement	Reference	How Addressed
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 8.4	A Project wide Compliance Tracking Program (CTP) will be maintained by TfNSW. The CTP will contain all the CoA and satisfy the requirements of CoA A30 to A34. The CTP will be maintained for the duration of the Project.
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 8.4	The CTP will be endorsed by the ER and submitted to the Secretary for information at least one month before the commencement of works
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 8.4	The CTP will be maintained for the duration of the Project and reviewed quarterly. Table 8-4 sets out the compliance reporting schedule.
A33	The Proponent must make each compliance report publicly available and notify the Department in writing when this has been done.	Section 8.4	Each compliance report will be available via the PLR project website: www.parramattalightrail.nsw.gov.au

CoA No.	Requirement	Reference	How Addressed
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 8.4	The pre-construction compliance report will be prepared by TfNSW and GRCLR and submitted to the Secretary prior to the commencement of construction of this package.
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:	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(a)	a results summary and analysis of environmental monitoring;	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(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;	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(c)	details of any review of, and minor amendments made to, the CEMP as a result of construction carried out during the reporting period;	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.

CoA No.	Requirement	Reference	How Addressed
(d)	a register of any reviews of consistency undertaken including outcome;	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(e)	results of any independent environmental audits and details of any actions taken in response to the recommendations of an audit;	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(f)	a summary of all incidents notified in accordance with Conditions A44 and A46 of this approval; and	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.
(g)	any other matter relating to compliance with the terms of this approval or as requested by the Secretary.	Chapter 8	The construction compliance reports will be prepared by TfNSW with input from the GRCLR and submitted to the Secretary for information every six months. The content of the reports is stated in chapter 8 of this CEMP.

CoA No.	Requirement	Reference	How Addressed
A40	An Environmental Audit Program for annual independent environmental auditing against the terms of this approval must be prepared in accordance with <i>AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems</i> and submitted to the Secretary for information no later than one month before the commencement of construction.	Section 8.3	Internal and external environmental audits would be undertaken in accordance with <i>AS/NZS ISO 19011:2014 Guidelines for Auditing Management Systems</i> and follow the environmental audit program submitted to the Secretary for information no later than one month before commencement of construction. An indicative audit schedule is provided in Table 8-3 .
A41	The Environmental Audit Program, as submitted to the Secretary, must be implemented for the duration of construction and operation.	Section 8.3	Environmental audits would be conducted at regular intervals, on a risk-based approach, during construction of the Project to assess environmental performance and ensure compliance.
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:	Section 8.3	<p>The independent environmental audits will be undertaken by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts.</p> <p>The independent environmental audit report will assess the performance and compliance of the Project, identifying measures and actions to improve performance.</p>

CoA No.	Requirement	Reference	How Addressed
(a)	assesses the environmental performance of the CSSI, and its effects on the surrounding environment;	Section 8.3	<p>The independent environmental audits will be undertaken by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts.</p> <p>The independent environmental audit report will assess the performance and compliance of the Project, identifying measures and actions to improve performance.</p>
(b)	assesses whether the project is complying with the terms of this approval; and	Section 8.3	<p>The independent environmental audits will be undertaken by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts.</p> <p>The independent environmental audit report will assess the performance and compliance of the Project, identifying measures and actions to improve performance.</p>
(c)	recommends measures or actions to improve the environmental performance of the CSSI.	Section 8.3	<p>The independent environmental audits will be undertaken by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts.</p> <p>The independent environmental audit report will assess the performance and compliance of the Project, identifying measures and actions to improve performance.</p>

CoA No.	Requirement	Reference	How Addressed
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.	Section 8.3	Independent audit recommendations would be implemented within six weeks of receiving the independent audit report.
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.	Section 7.2	TfNSW hold the primary responsibility for fulfilling the obligations detailed in CoA A44 to A47 with respect to incident notification and reporting to DPE. GRCLR will assist and cooperate with TfNSW to fulfil these obligations.
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.	Section 7.2	TfNSW will submit a report to the Department providing the time and date of the incident, details of the incident and identification of any consequent non-compliance with this approval. The GRCLR will assist and cooperate with TfNSW to fulfil this obligation.
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.	Section 7.2	TfNSW and GRCLR will implement all written requirements of the Secretary, which may be given at any point in time, to address the cause or impact of an incident within any timeframe specified by the Secretary or relevant public authority.

CoA No.	Requirement	Reference	How Addressed
A47	If an incident occurs or if statutory notification is given to the EPA as required under the <i>Protection of the Environment Operations Act 1997</i> in relation to the CSSI, such notification must also be provided to the Secretary within 24 hours after the notification was given to the EPA.	Section 7.2	If an incident requires EPA notification under the POEO Act, TfNSW will notify the Secretary within 24 hours after the notification was given to the EPA
C1	A Construction Environmental Management Plan (CEMP) 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 CEMP	This CEMP demonstrates how the performance outcomes, commitments and mitigation measures specified in the documents listed in CoA A1 will be implemented and achieved during construction. It has been prepared for Stage 3 Activity A & B under the PLR Staging Report.
C2	The CEMP must provide:		
(a)	A description of activities to be undertaken during construction (including the scheduling of construction)	Chapter 2	The project includes the construction of the light rail systems, high-voltage power supply and stops above slab level, and the stabling and maintenance facility. Also T&C activities. Section 2 provides an overview of the features of the project, general construction activities, T&C and the indicative construction schedule.

CoA No.	Requirement	Reference	How Addressed
(b)	Details of environmental policies, guidelines and principles to be followed in the construction of the CSSI;	Section 3.1, 3.2, 3.3	This CEMP, including sub plans, incorporates applicable environmental legislation, codes of practice, Australian Standards and other guidelines for the Project. GRCLR workers (including sub-contractors) will comply with relevant environmental and WHS legislation, codes of practice, industry standards and regulatory approvals as applicable to their work activities.
(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;	Section 3.5	An Environmental Risk Assessment (ERA) was prepared for the project. The ERA will be reviewed every six months.
(d)	<p>Details of how the activities described in subsection (a) of this condition will be carried out to:</p> <p>i) meet the performance outcomes stated in the documents identified in Condition A1; and</p> <p>ii) manage the risks identified in the risk analysis undertaken in subsection (c) of this condition;</p>	Chapter 8	<p>Mitigation measures identified in the ERA to manage the risks and achieve compliance with the performance outcomes of the documents identified in A1 will be incorporated into the CEMP sub plans.</p> <p>Compliance with the performance outcomes will be checked by the implementation of a comprehensive monitoring/inspection/auditing programme (Section 8).</p>

CoA No.	Requirement	Reference	How Addressed
(e)	An inspection program detailing the activities to be inspected and frequency of inspections;	Section 8.1	<p>The D&C Environment Manager and/or delegate will undertake pre-work inspections, weekly and pre and post-rainfall inspections of the work sites to evaluate the effectiveness of environmental controls.</p> <p>An environmental inspection checklist will be used to ensure that all environmental aspects are reviewed during inspection.</p> <p>The ER, AA, IA, TfNSW and Independent Certifier will also undertake inspections</p>
(f)	A protocol for managing and reporting any: <ul style="list-style-type: none"> i) incidents; and ii) non-compliances with this approval and with statutory requirements. 	Chapter 7 Section 8.6	<p>In the event of an environmental incident, the protocol in Section 7 will be implemented.</p> <p>Section 8.6 sets out the protocol for managing and reporting non-compliances.</p>
(g)	Procedures for rectifying any non-compliance with this approval identified during compliance auditing, incident management or at any time during construction;	Section 8.6	Non-compliance shall be recorded in a corrective action report. The corrective action report will document the agreed actions and timeframes for addressing the environmental non-compliance.
(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 4.4.2	A list of construction sub-plans for this Project, and their approval requirements, are provided in Section 4.4.2.

CoA No.	Requirement	Reference	How Addressed
(i)	a description of the roles and environmental responsibilities for relevant employees and their relationship with the ER;	Section 4.2	The key environmental management roles and responsibilities for the construction phase of the Project are described in Section 4.2. The GRCLR Environment and Sustainability Manager is the primary contact with the ER for this Project
(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;	Chapter 5	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 Project environmental and compliance obligations. This will be achieved through the Project induction or dedicated training.
(k)	for periodic review and update of the CEMP and all associated plans and programs.	Section 9.2	Continual improvement is achieved through constant measurement and evaluation, audit and review of the effectiveness of the CEMP, and its adjustment and improvement. Monthly reviews undertaken by the ER and quarterly management reviews offer specific opportunities to identify improvements in the CEMP.

CoA No.	Requirement	Reference	How Addressed																								
C3	<p>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:</p> <table border="1"> <thead> <tr> <th></th> <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> </thead> <tbody> <tr> <td>(a)</td> <td>Traffic, transport and access</td> <td>Relevant Council(s), Roads and Maritime Services, Emergency Services</td> <td>Information</td> </tr> <tr> <td>(b)</td> <td>Noise and vibration</td> <td>Relevant Council(s), EPA, NSW Health</td> <td>Approval</td> </tr> <tr> <td>(c)</td> <td>Flood Management</td> <td>Relevant Council(s), OEH (Department of Premier and Cabinet), Sydney Water</td> <td>Information</td> </tr> <tr> <td>(d)</td> <td>Heritage</td> <td>Relevant Council(s), OEH (Department of Premier and Cabinet)</td> <td>Approval</td> </tr> <tr> <td>(e)</td> <td>Flora and Fauna Biodiversity</td> <td>Relevant Council(s), OEH (Department of Premier and Cabinet)</td> <td>Information</td> </tr> </tbody> </table>		Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan	Secretary Approval/ Information	(a)	Traffic, transport and access	Relevant Council(s), Roads and Maritime Services, Emergency Services	Information	(b)	Noise and vibration	Relevant Council(s), EPA, NSW Health	Approval	(c)	Flood Management	Relevant Council(s), OEH (Department of Premier and Cabinet), Sydney Water	Information	(d)	Heritage	Relevant Council(s), OEH (Department of Premier and Cabinet)	Approval	(e)	Flora and Fauna Biodiversity	Relevant Council(s), OEH (Department of Premier and Cabinet)	Information	<p>Section 1.2.2, 1.2.3</p> <p>Section 4.4.2</p>	<p>The CEMP Sub-plans listed in CoA C3 will be prepared in consultation with the relevant government agencies. The records of consultation will be provided in the appendices of each Sub-plan.</p>
	Required CEMP Sub-plan	Relevant government agencies to be consulted for each CEMP Sub-plan	Secretary Approval/ Information																								
(a)	Traffic, transport and access	Relevant Council(s), Roads and Maritime Services, Emergency Services	Information																								
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(e)	Flora and Fauna Biodiversity	Relevant Council(s), OEH (Department of Premier and Cabinet)	Information																								

CoA No.	Requirement	Reference	How Addressed
C4	The CEMP Sub-plans must state how:	Sub-Plans (see C3 for list)	Mitigation measures identified in the ERA and documents listed in A1 to manage the risks and achieve compliance with the performance outcomes of the documents identified in A1 will be incorporated into the CEMP Sub-plans.
(a)	the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;	Sub-Plans (see C3 for list)	The relevant environmental performance outcomes are outlined in the Sub-plans. These targets were derived from the EIS to be measurable during the Project's inspections and monitoring.
(b)	the mitigation measures identified in the documents listed in Condition A1 will be implemented;	Sub-Plans (see C3 for list)	Compliance with the performance outcomes will be checked by the implementation of a comprehensive monitoring/inspection/auditing programme (Section 8).
(c)	the relevant terms of this approval will be complied with; and	Sub-Plans (see C3 for list)	Compliance with the performance outcomes will be checked by the implementation of a comprehensive monitoring/inspection/auditing programme (Section 8).
(d)	issues requiring management during construction as identified through ongoing environmental risk analysis, will be managed.	Sub-Plans (see C3 for list)	Specific management issues during construction are outlined in the Environmental Aspects and Impacts Section of each Sub-plan.

CoA No.	Requirement	Reference	How 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. (including Relevant Council(s)).	Sub-Plans (see C3 for list)	The CEMP Sub-plans will be developed in consultation with relevant government agencies, as required by CoA C3. Details of this consultation will be reported in the appendix of the corresponding sub plan, which will be provided to the Secretary in accordance with CoA C3.
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.	Sub-Plans (see C3 for list)	The CEMP sub-plans will be submitted with or after the submission of the CEMP but in any event, no later than one month before construction.
C7	The CEMP must be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of construction.	Section 4.3.1	This CEMP will be endorsed by the ER and provided to the Secretary for approval at least one month prior to the commencement of construction.
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 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 submitted to or approved by the Secretary.	Section 4.3.1	Construction will not commence until the CEMP and the sub plans specified in CoA C3 are approved by the Secretary.

CoA No.	Requirement	Reference	How Addressed
B11	A website providing information in relation to the CSSI must be established before commencement of works and maintained for the duration of construction, and for a minimum of 24 months following the completion of construction. Up-to-date information (excluding confidential commercial information) must be published before the relevant works commence, and maintained on the website or dedicated pages including:	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) includes current information on the Project.</p> <p>This website will be maintained for the duration of construction and for a minimum of 24 months following the completion of construction.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>
(a)	information on the current implementation status of the CSSI;	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) includes the current implementation status of the Project.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>
(b)	a copy of the documents listed in Condition A1 and Condition A2 of this approval, and any documentation relating to any modifications made to the CSSI or the terms of this approval;	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) includes the current implementation status of the Project.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>
(c)	a copy of this approval in its original form, a current consolidated copy of this approval (that is, including any approved modifications to its terms), and copies of any approval granted by the Minister to a modification of the terms of this approval;	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) includes the current implementation status of the Project.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>

CoA No.	Requirement	Reference	How Addressed
(d)	a copy of each statutory approval, licence or permit required and obtained in relation to the CSSI;	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) includes statutory approvals. In the event that licence(s) or permit(s) are obtained, documentation will be included on the Project Website.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>
(e)	a current copy of each approved document required under the terms of this approval and any endorsements, approvals or requirements from the ER, AA and Secretary, all of which must be published before the commencement of any works to which they relate or before their implementation as the case may be; and	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) will include approved documents required under the CoA and any endorsements, approvals or requirements from the ER, AA and Planning Secretary includes statutory approvals.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>
(f)	<p>a copy of the compliance reports required under Condition A30 of this approval.</p> <p>Information relating solely to construction may be removed from the website 12 months following the completion of construction.</p>	Section 6.3	<p>The Project website (http://www.parramattalightrail.nsw.gov.au) will include a copy of the compliance reports required under Condition A30.</p> <p>Additional details on the Project website are provided in the Community Communication Strategy.</p>

1.3.2 Revised Environmental Mitigation and Management Measures

Relevant REMMMs are listed in Table 1-4. This includes reference to required outcomes, relevant documents or sections references and how addressed.

Table 1-4: REMMMs relevant to the CEMP

REMMM	Requirement	Reference	How addressed
GEN-1	<p>A construction environmental management plan (CEMP) would be prepared for the construction phase of the Project. The CEMP 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, including further details on the following:</p> <ul style="list-style-type: none"> Traffic, transport and access management. Noise and vibration management. Heritage management. Air quality and dust management. Soil and water management. Flora and fauna management. Waste and resource management. Site compound and ancillary works management. Landscape and temporary works management. Emergency and incident response management. 	<p>This CEMP Sub-Plans (see C3 for list)</p>	<p>This CEMP and management sub plans demonstrate how the construction of the Project will be carried out in accordance with the requirements of GEN-1.</p> <p>All relevant commitments are listed in each sub plan with a reference of where and how it is addressed.</p>

REMMM	Requirement	Reference	How addressed
	<p>The CEMP would be prepared by the responsible contractor(s) and approved by the Secretary of the NSW Department of Planning and Environment.</p>		
GEN-2	<p>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:</p> <p>Minimise the impact of construction compounds on surrounding land uses and sensitive receivers.</p> <p>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).</p> <p>Manage stockpile areas to minimise potential pollution of watercourses, groundwater and local air quality.</p> <p>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.</p>	Site Establishment Management Plan	<p>A Site Establishment Management Plan has been prepared to set out details for each of the construction compounds, stockpile areas, laydown areas and other ancillary activities required to construct the Project.</p> <p>The SEMP identifies the environmental mitigation measures to minimise the impact of construction compounds on surrounding land uses and sensitive receivers.</p>

REMMM	Requirement	Reference	How addressed
	<p>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.</p> <p>Locate construction compounds away from or implement management measures so as to not impact on waterways.</p> <p>Flood response measures for compounds that are located on land affected by the 20-year ARI flood level (e.g. bridge support construction compounds).</p> <p>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.</p> <p>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.</p> <p>Reinstatement strategies for construction compounds. As a minimum, this would include:</p> <p>At the completion of construction, all plant, temporary buildings or vehicles would be removed.</p> <p>All land, including roadways, footpaths or other land having been occupied temporarily would be returned to their pre-existing condition or better.</p> <p>Reinstatement of community spaces, infrastructure and services would occur as soon as possible after completion of construction.</p> <p>Environmental management measures for construction compounds would be developed as part of the overall CEMP, with the</p>		

REMMM	Requirement	Reference	How addressed
	construction compounds sub-plan identifying where such measures are documented within the CEMP.		
GEN-3	<p>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:</p> <p>Classification of the incident (e.g. minor, moderate, serious) based on the severity of the likely impact on the surrounding environment and community.</p> <p>Emergency response procedures.</p> <p>Notification requirements (e.g. Transport for NSW and/or other regulatory authorities, or owners/occupiers in the vicinity of the incident).</p> <p>Mechanisms for improving environmental controls to reduce the likelihood of a similar incident occurring.</p> <p>Incident reporting and tracking.</p>	Chapter 7	Section 7 sets out how environmental incidents will be managed.
BI-3	<p>A flora and fauna management plan would be prepared as part of the CEMP. Specific measures would be identified in consultation with relevant government agencies.</p> <p>The flora and fauna management plan would include the following:</p> <p>A requirement to prepare Environmental Control Maps in accordance with Transport for NSW's Guide to Environmental Control Map. The maps would delineate ecologically sensitive areas (such as habitat areas or locations of threatened species, populations or ecological</p>	Flora and Fauna Management Plan	<p>A Flora and Fauna Management Plan FFMP has been prepared together with the CEMP and will be submitted separately as a stand-alone document.</p> <p>This FFMP provides mitigation measures to minimise impacts on flora and fauna from the construction of the Project.</p>

REMMM	Requirement	Reference	How addressed
	<p>communities), clearing extents, vegetation to be retained, and any other no-go areas.</p> <p>Procedures for the clearing of vegetation and the relocation of flora and fauna. Where possible, the removal of native vegetation would be minimised as far as practicable. Measures to minimise the removal of native vegetation would include:</p> <p>Use of high visibility fencing (such as barrier mesh) to delineate vegetation to be retained or limits of clearing.</p> <p>A trained ecologist would accompany clearing crews in order to ensure disturbance is minimised and to assist any native animals to relocate to adjacent habitat.</p> <p>Measures to reduce disturbance to sensitive fauna.</p> <p>Rehabilitation requirements, including identification of flora species and sources, and measures for the management and maintenance of rehabilitated areas (including for example a program of weed removal and monitoring).</p> <p>Weed management measures focusing on monitoring for early identification of invasive weeds and pathogens and detailed effective management controls for minimising the risk of introducing weeds and pathogens.</p> <p>Procedure for dealing with unexpected identification of Endangered Ecological Communities or threatened species during construction.</p> <p>Auditing and monitoring of the plan.</p>		

REMMM	Requirement	Reference	How addressed
AB-2	<p>An Aboriginal and non-Aboriginal heritage management plan would be prepared as part of the CEMP. Specific measures would be identified in consultation with NSW Environment, Energy and Science Group (DPE) (OEH) and other relevant government agencies. As relevant, the plan would be developed in consultation with Registered Aboriginal Parties.</p> <p>The objectives and strategies of the plan would include the following:</p> <p>Minimise impacts on items or places of heritage value.</p> <p>Procedures for carrying out salvage or excavation of heritage relics or sites (where relevant) and any recordings of heritage relics prior to works commencing that would impact the heritage relic or site.</p> <p>Procedures for interpretation of heritage values uncovered during salvage or excavation during detailed design.</p> <p>Details on management measures to be implemented to prevent and minimise impacts on heritage items (including further heritage investigations, archival recordings and/or measures to protect unaffected sites during construction works in the vicinity).</p> <p>Procedures for unexpected heritage finds, including procedures for dealing with human remains (and burials). The Transport for NSW Unexpected Heritage Finds Guideline (2014) would be implemented.</p> <p>Procedures for the reinstatement of areas of heritage value that would be temporarily impacted by construction following the completion of construction.</p> <p>Heritage monitoring and auditing requirements.</p>	<p>Heritage Management Plan</p> <p>Aboriginal Heritage Management Plan</p>	<p>Heritage and Aboriginal Heritage Management Sub Plans have been prepared together with the CEMP and will be submitted separately as a stand-alone documents.</p> <p>The HMSP and AHSP provide mitigation measures to minimise impacts on heritage items from the construction of the Project and will be implemented for the duration of the Project.</p>

REMMM	Requirement	Reference	How addressed
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.	Soil and Water Management Plan	A Soil and Water Management Plan has been prepared together with the CEMP and will be submitted separately as a stand-alone document. The plan includes management measures to manage the risk of sedimentation, littering and chemical pollution.
HY-6	<p>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. The objectives and strategies of the soil and water management sub-plan would include the following:</p> <p>Minimise the extent and duration of exposed surfaces (particularly those works that have the greatest potential to disturb soils that are contaminated or have a high erosion and runoff hazard).</p> <p>Develop and implement adequate water quality control measures prior to the carrying out of significant earthwork or bridge construction activities.</p> <p>Minimise and manage impacts on water quality and downstream receiving environments during instream activities.</p> <p>Flood response measures for activities located on land affected by the 20-year ARI flood level (e.g. bridge support construction compounds) or works within waterways (such as bridge works).</p>	Soil and Water Management Plan	A Soil and Water Management Sub Plan has been prepared together with the CEMP and will be submitted separately as a stand-alone document. The plan includes management measures to minimise impacts on soil and water from the construction of the Project which will be implemented for the duration of the Project and are consistent with the principles and practices detailed in Landcom's (2004) Managing Urban Stormwater: Soils and Construction.

REMMM	Requirement	Reference	How addressed
	<p>Where possible, reuse excavated materials as fill on other parts of the Project in preference to disposing off-site in accordance with OEH's <i>Waste Classification Guidelines (2016)</i>.</p> <p>Areas of potential contamination concern would be identified and works in these areas managed to minimise disturbance.</p> <p>Excavate pre-classified contaminated materials and transfer such materials directly into haulage trucks for off-site disposal at a waste facility licensed to accept the contaminated material.</p> <p>Transport for NSW would also undertake consultation with DPI Fisheries with respect to the development for the CEMP, and Erosion and Sediment Control Plan for the Project.</p> <p>Develop procedures for the assessment, handling and stockpiling of potentially contaminated materials, in accordance with OEH's <i>Waste Classification Guidelines (2016)</i>.</p>		
WM-2	<p>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.</p> <p>The objectives and strategies of the waste and resource management plan would include the following:</p> <p>Construction waste would be managed through the waste hierarchy established under the Waste Avoidance and Resource Recovery Act 2001 management hierarchy.</p>	Waste and Resource Management Plan	<p>A Waste and Resource Management Plan has been prepared together with the CEMP and will be submitted separately as a stand-alone document.</p> <p>This plan sets out details for managing waste generation and resource consumption on the Project.</p> <p>The plan was informed by the Parramatta Light Rail Sustainability Plan and the requirements of the <i>Waste Avoidance and Resource Recovery Act 2001</i>.</p>

REMMM	Requirement	Reference	How addressed
	<p>Classification of waste during construction in accordance with the current guidelines</p> <p>Segregation of waste into stockpiles of spoil, concrete, steel, timber, paper and cardboard and vegetation to make it easier to recycle components and prevent cross contamination.</p> <p>Procurement of materials would be carried out on an 'as needed' basis to reduce over-ordering and wastage, and exploring opportunities to reuse materials, where applicable.</p> <p>Targets for the recovery, recycling or reuse of construction waste, and beneficial reuse of spoil. A Construction Waste, Reuse, Recycling and Energy Plan would be prepared as part of the CEMP. It would ensure resource and materials use, waste disposal and energy use are minimised by tracking and reporting performance, and applying corrective action as required.</p> <p>Identification of carbon and energy strategies and initiatives to minimise carbon and energy use associated with construction (e.g. selection of equipment, inclusion of renewable energy sources to power temporary facilities and equipment, designing site offices for energy efficiency, and efficient operation of vehicles and equipment).</p> <p>Consideration of materials mitigation and management measures including use of recycled materials, recycling and reuse of materials on site, use of materials with lower embodied impact, and consideration of whole of life costs during procurement.</p> <p>Prior to disposal/removal or reuse off-site, all wastes would be classified in accordance with the waste classification guidelines (<i>Waste Classification Guidelines (OEH, 2016)</i> and <i>Waste Avoidance</i></p>		

REMMM	Requirement	Reference	How addressed
	<p>and Resource Recovery Strategy 2014-2021 (EPA, 2014) to ensure the most appropriate disposal or reuse option.</p> <p>Monitoring and compliance requirements.</p>		
HR-5	<p>Environmental management measures relating to hazards and risk would be developed and implemented as part of the CEMP. These would include:</p> <p>Potential environmental hazards and risks associated with construction activities would be identified prior to construction.</p> <p>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.</p> <p>Hazardous materials would not be stored below the ten per cent AEP flood level flood level.</p> <p>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.</p> <p>Employees would be trained in the correct use of spill kits.</p>	<p>Section 3.5 Sub-Plans required under CoA C3.</p>	<p>An Environmental Risk Register (ERA) was prepared for the project to identify hazards and risks, and to develop appropriate management measures (Appendix A2).</p> <p>The environmental management measures identified in the ERA have been incorporated into the CEMP and relevant sub plans.</p> <p>The SWMP provides management measures for the storage of hazardous materials, refuelling/maintenance of construction plant and spill response.</p> <p>The ECM will provide the location of hazardous material storage and the location of spill kits. ECMs will be prepared and maintained through the project EMS.</p>
HR-6	<p>A process for regularly reviewing work practices/procedures would be implemented throughout construction to identify, report and respond to any new environmental hazards/risks.</p>	<p>Section 3.5, 7.5, 9.1, 9.2 Sub plans</p>	<p>An ERA was prepared for the project. The ERA will be revised every six months, or in response to an incident.</p>

REMMM	Requirement	Reference	How addressed
CC-2	Construction-related climate change risks (e.g. increased frequency and severity of extreme rainfall events placing increased pressure on construction water quality control measures) would be considered during the development of environmental management measures as part of the CEMP.	Section 3.5 Appendix A2 Sub plans	The ERA has addressed climate change risk and the corresponding mitigation measures have been incorporated into the management sub plans.
VL-13	<p>A landscape and temporary works management plan would be developed as part of the CEMP. The plan would include the following:</p> <p>Approaches to temporary construction works (hoardings etc.) that consider urban design and visual impacts, including:</p> <p>Artwork, graphics and images to enhance the visual appearance of temporary works in high visibility locations.</p> <p>Project information to raise awareness on benefits, explain the proposed works at each site and provide updates on construction progress.</p> <p>Community information, including contact numbers for enquiries/complaints.</p> <p>Signage and information to mitigate impacts on local businesses which may be obscured by the construction site.</p> <p>Apply the principles of crime prevention through environmental design (CPTED) to all works, including temporary works that have a public interface.</p>	Landscape and Temporary Works Plan	The Landscape and Temporary Works Plan has been prepared together with this CEMP and can be provided for information if requested by DPE.

REMMM	Requirement	Reference	How addressed
	<p>Apply the principles of Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting and relevant safety design requirements and detail mitigation and management measures to minimise lighting impacts on sensitive receivers for all permanent, temporary and mobile light sources.</p> <p>Wherever feasible and reasonable, vegetation around the perimeter of the construction sites will be maintained.</p> <p>Measures to minimise direct and visual impacts on heritage items from works within the curtilage of or in the vicinity of heritage items.</p> <p>Regular inspections of construction hoardings and scaffolding to keep it clean and free of dust build up, with graffiti on construction hoardings and scaffolding to be removed or painted over promptly.</p>		
AQ-1	<p>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. Air quality and dust management measures that would be identified in the CEMP would include:</p> <p>Apply wheel-wash or rumble grid facilities as appropriate to remove loose material and prevent the tracking of spoil debris onto local roads.</p> <p>Clean loose materials and debris from the tailgate of vehicles unloading materials to stockpiles prior to departure from site.</p> <p>Conduct routine servicing and maintenance, and subsequent inspections to ensure that equipment continues to operate efficiently.</p>	Air Quality Management Plan	<p>An Air Quality Management Plan has been prepared together with the CEMP and will be submitted separately as a stand-alone document.</p> <p>The plan identifies triggers and procedures for dealing with significant dust and air pollution generating activities, with the aim of minimising impacts on surrounding sensitive receivers and the environment.</p>

REMMM	Requirement	Reference	How addressed
	<p>Ensure that all loads are covered when materials are being hauled to and from site.</p> <p>Ensure that compound area surfaces are well compacted or sealed to limit the potential for dust generation.</p> <p>Ensure that structures are inspected by a suitably qualified person to confirm that they do not contain any hazardous materials (e.g. asbestos) which could be broken and mobilised during demolition. Where such materials are identified, adhere to the requirements for removal and disposal listed in the Work Health and Safety Act 2011, and Work health and Safety Regulation 2011.</p> <p>Impose low speeds limits around compound sites to limit the generation of dust from vehicle movements.</p> <p>Install dust monitoring devices to quantify dust levels and determine whether control measures are adequate or whether further actions are required.</p> <p>Installation of perimeter screening around areas where there is a potential to generate emissions to air and around long-term compound and stockpile locations.</p> <p>Plan activities and avoid adversely windy conditions which may result in the generation of off-site dust impacts.</p> <p>Position stockpiling areas as far as possible from surrounding receivers.</p> <p>Regularly water exposed and disturbed areas and stockpiles especially during inclement weather conditions.</p> <p>Water demolition areas as necessary to minimise the generation of dust.</p>		

REMMM	Requirement	Reference	How addressed
	<p>Wherever possible and practical, limit the amount of materials stockpiled, extent of disturbed and exposed surfaces. Restoration of cleared areas is to occur as soon as possible.</p> <p>Apply odour suppressing agents to materials as necessary to minimise related impacts should any contaminated or hazardous materials be uncovered during the works.</p> <p>Construction plant and equipment would be well maintained and regularly serviced so that vehicular emissions remain within relevant air quality guidelines and standards (also Condition O2.1 of the EPL).</p> <p>All vehicles used on site, for transporting materials to or from site, or for any other activities associated with the Project, shall be maintained to avoid the emission of excessive air impurities in accordance with Part 5.8 of the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Clean Air) Regulation 2010.</p> <p>All on-road trucks would comply with the relevant Australian emission standards.</p> <p>All chemicals and fuels would be stored in sealed containers as per appropriate regulations and guidelines.</p> <p>The on-site storage of fuel would be kept to a minimum.</p> <p>Unloading of fuels (diesel or liquefied nitrogen gas (LNG)) would be vented via return hoses that recirculate vapours from delivery to receiver.</p> <p>On dry days, unsurfaced haul roads would be watered to aid dust suppression.</p>		

REMMM	Requirement	Reference	How addressed
	<p>Stockpiles left for extended periods would be grassed or covered with appropriate material.</p> <p>Chemical/fuel storage tanks would be fitted with a conservation vent (to prevent air inflow and vapour escape until a pre-set vacuum or pressure develops).</p>		
GG-4	Management of emissions would be incorporated into site inductions, training and pre-start talks.	Section 5.1	Sustainability requirements, including reducing greenhouse gas emissions by implementing energy efficient practises will be included in the project induction

1.3.3 Environmental Performance Outcomes

Relevant EPOs are listed in Table 1-5. This includes reference to required outcomes, relevant documents or sections references and how addressed.

Table 1-5: EPOs relevant to the CEMP

EPO	Requirement	Reference	How addressed
EPO-TT-1 Construction	The project would implement measures to minimise impacts on the road network, including staging	Transport and Access Management Plan	This EPO requirement is addressed in the Traffic, Transport and Access Management Plan prepared together with the CEMP and submitted separately. The plan includes management measures to minimise impacts on the road network.
EPO-TT-2 Construction	Pedestrian and cyclist safety would be maintained.	Transport and Access Management Plan	This EPO requirement is addressed in the Traffic, Transport and Access Management Plan prepared together with the CEMP and submitted separately. The plan includes management measures to maintain pedestrian and cyclist safety.
EPO-TT-3 Construction	Effective coordination would be carried out to minimise cumulative network impacts.	Transport and Access Management Plan	This EPO requirement is addressed in the Traffic, Transport and Access Management Plan prepared together with the CEMP and submitted separately. The plan includes management measures to minimise cumulative network impacts.

EPO	Requirement	Reference	How addressed
EPO-TT-4 Construction	Access to property would be maintained	Transport and Access Management Plan	This EPO requirement is addressed in the Traffic, Transport and Access Management Plan prepared together with the CEMP and submitted separately. The plan includes management measures to maintain property access.
EPO-NV-1 Construction	Noise levels would be minimised with the aim of achieving the noise management levels where feasible and reasonable.	Noise and Vibration Management Plan	This EPO requirement is addressed in the Noise and Vibration Management Sub Plan prepared together with the CEMP and submitted separately. The plan includes management measures to ensure noise levels would be minimised with the aim of achieving the noise management levels where feasible and reasonable.
EPO-NV-2 Construction	The project would avoid any damage to buildings or heritage items from vibrations.	Noise and Vibration Management Sub Plan	This EPO requirement is addressed in the Noise and Vibration Management Plan (CNVMP) prepared together with the CEMP and submitted separately. The plan includes management measures to avoid any damage to buildings or heritage items from vibrations.
EPO-HE-2	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts to non-Aboriginal heritage items and archaeology.	Heritage Management Plan	This EPO requirement is addressed in the Heritage Management Plan prepared together with the CEMP and

EPO	Requirement	Reference	How addressed
			<p>submitted separately. The plan includes management measures to minimise impacts to heritage items during construction.</p> <p>Not applicable to Stage 3 Activity A under Staging Report Revision 7.02 (May 2020).</p>
EPO-AB-1	The project would be sympathetic to heritage items and, where feasible and reasonable, avoid and minimise impacts on Aboriginal heritage items and archaeology.	Aboriginal Heritage Management Plan	This EPO requirement is addressed in the Aboriginal Heritage Management Plan (AHMP) prepared together with the CEMP and submitted separately. The plan includes management measures to minimise impacts to Aboriginal heritage items and archaeology during construction.
EPO-HY-1	No aspect of the project would materially adversely affect existing flood behaviour in the vicinity of the project.	Flood Management Plan	This EPO requirement is addressed in the Flood Management Plan (FMP) prepared together with the CEMP and submitted separately. The plan includes management measures to ensure the project would not materially adversely affect existing flood behaviour in the vicinity of the project.
EPO-LU-2	Access to private property would be maintained.	Transport and Access Management Plan	This EPO requirement is addressed in the Traffic, Transport and Access Management Plan (TTAMP) prepared

EPO	Requirement	Reference	How addressed
			together with the CEMP and submitted separately. The plan includes management measures to maintain property access.
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.	Flora and Fauna Management Plan	Not triggered by SOM Contract under Staging Report.
EPO-SG-1	Erosion and sediment controls during construction would be implemented in accordance with <i>Managing Urban Stormwater: Soils and Construction Volume 1</i> (Landcom, 2004) and <i>Managing Urban Stormwater: Soils and Construction Volume 2</i> (Department of Environment and Climate Change, 2008a).	Soil and Water Management Sub Plan	<p>This EPO requirement is addressed in the Soil and Water Management Plan (SWMP) has been prepared together with the CEMP and submitted separately.</p> <p>This plan provides mitigation measures to minimise impacts on soil and water from the construction of the Project and is consistent with the principles and practices detailed in <i>Managing Urban Stormwater: Soils and Construction Volume 1</i> (Landcom, 2004) and <i>Managing Urban Stormwater: Soils and Construction Volume 2</i> (Department of Environment and Climate Change, 2008a).</p>
EPO-SG-2	There would be no impacts on aquatic environments associated with the disturbance of ASS during construction.	Soil and Water Management Plan	This EPO requirement is addressed in the Soil and Water Management Plan

EPO	Requirement	Reference	How addressed
		Contaminated Land Management Plan	<p>(SWMP) and Contaminated Land Management Plan (CLMP) prepared together with the CEMP and submitted separately.</p> <p>The plans provide mitigation measures to ensure there are no impacts on aquatic environments associated the disturbance of ASS during construction.</p>
EPO-SG-3	Any contamination on project sites would be remediated to suit future land use.	Contaminated Land Management Plan	<p>This EPO requirement is addressed in the Contaminated Land Management Plan (CLMP) prepared together with the CEMP and submitted separately.</p> <p>The plan details the required remediation associated with the construction of the Project.</p>
EPO-SU-1	The project would be carried out in accordance with the Parramatta Light Rail Sustainability Strategy.	Section 4.4.3 Ref PLR1SOM-GLR-ALL-PM-PLN-000015	<p>TfNSW will prepare the Sustainability Strategy (to comply with CoA E136) for the PLR including the Project. However, the management of sustainability requirements associated with the design and delivery of the Project have been addressed in the Sustainability Management Plan.</p> <p>This management plan will demonstrate how the relevant commitments in the Sustainability</p>

EPO	Requirement	Reference	How addressed
			<p>Strategy (CoA 136) and the TfNSW Standard Requirements 4.1 (a) will be implemented on this Project.</p> <p>Regular monitoring, auditing and reporting on energy, resource use and associated greenhouse gas emissions as required by the Infrastructure Sustainability Council of Australia (ISCA) rating of 70 are addressed in the PLR Sustainability Strategy and the Project's Sustainability Management Plan.</p>
EPO-SU-2	The project would comply with the relevant requirements of the NSW Government Resource Efficiency Policy.	Waste and Resource Management Plan	This EPO requirement is addressed in the Waste and Resource Management Plan (WRMP) prepared together with the CEMP and submitted separately.

2 Project Description

2.1 General Features and Construction Activities

The Project (subject of this Plan) includes the construction of the following:

- Maintenance and Stabling Facility
- Traction Power Substations (TPS)
- Light rail stops above slab level
- Overhead wire, conductors and insulator installation
- Back Up Operating Centre (BOCC); and
- Testing and Commissioning activities.

Table 2-1 provides an overview of the general features of the Project.

Table 2-1: Overview of the Project

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
Stabling and Maintenance Facility (The facility will provide for maintenance, repair, refurbishing, upgrading, stabling, cleaning of light rail vehicles and a base for infrastructure maintenance activities)	Site office and amenities	Combined service route Drainage Hydraulics (sewer, water, fire)	Fencing Service roads Footpaths Carparks Landscaping Substation – TPS 8	Track Overhead wiring DC feeders	Maintenance building (construction of foundation and slab, structural frame, roofing and cladding, MEP fit out, finishes) Outbuildings (fire pump house,	None.

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
and will operate 24 hours a day and 7 days a week)					sanding plant building, cleaners store, train wash building)	
Corridor Zone 1 (Westmead to Riverside Theatre)	A construction site will be established at each stop and TPS location.	TPS: Substructure construction Connection to previously constructed or existing utilities including drainage and Combined Services Route (CSR)	Substation – TPS 1 & TPS 2: Installation of architectural screening, security fencing and lighting Landscaping (only at TPS 2)	Overhead wiring: Cumberland Hospital stop to Prince Alfred Square stop. Note: From Westmead Terminus Stop to Cumberland Hospital Stop is a wire free zone. DC feeder reticulation: TPS 2 to Prince Alfred Square stop TPS 2 to Cumberland Hospital stop	Stops: Prefabricated column and canopy placement Installation of wind break screens and lighting Connection to previously constructed or existing utilities Stop fit out	Westmead Terminus Westmead Hospital Westmead Children's Hospital Cumberland Hospital Factory Street Fennel Street Prince Alfred Square

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
				TPS 2 to TPS 1 TPS 1 to Westmead Terminus stop		
Corridor Zone 2 (Riverside Theatre to Robin Thomas Reserve)	A construction site will be established at each stop and TPS location	TPS: Substructure construction Connection to previously constructed or existing utilities including drainage and CSR	Substation – TPS 3: Installation of architectural screening security fencing and lighting Landscaping and seating	DC feeder reticulation: Tramway Avenue stop to TPS 3 TPS 3 to Prince Alfred Square Note: No overhead wiring in this zone (wire free)	Stops: Prefabricated column and canopy placement Installation of wind break screens and lighting Connection to previously constructed or existing utilities Stop fit out	Eat Street Parramatta Square Harris Street
Corridor Zone 3 (Robin Thomas Reserve to Parramatta River)	A worksite will be established at each stop and TPS location	TPS: Surface clearing and grubbing Substructure construction Connection to previously constructed	Substation – TPS 4: Installation of architectural screening security	Overhead wiring - Tramway Avenue to Camellia stop DC feeder reticulation – TPS 4 to	Stops: Prefabricated column and canopy placement Installation of wind break	Tramway Avenue Camellia

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
		or existing utilities including drainage and CSR	fencing and lighting Landscaping	Tramway Avenue stop	screens and lighting Connection to previously constructed or existing utilities Stop fit out	
Corridor Zone 4 (Sandown Rail Line)	N/A	N/A	N/A	Overhead wiring - Sandown Rail Line DC feeder reticulation - Sandown Rail Line	N/A	N/A
Corridor Zone 5 (North of Parramatta River to Carlingford)	A worksite will be established at each stop and TPS location	TPS: Surface clearing and grubbing Substructure construction Connection to previously constructed or existing utilities including drainage and CSR	Substation – TPS 6 & TPS 7: Installation of architectural screening security fencing and lighting Landscaping	Overhead wiring Camellia stop to Rydalmere stop Rydalmere stop to Dundas stop Dundas stop to Telopea stop	Stops: Prefabricated column and canopy placement Installation of wind break screens and lighting Connection to previously	Rydalmere Dundas Telopea Carlingford

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
				Teloepa stop to Carlingford stop DC feeder reticulation TPS 6 to field switches TPS 7 to TPS 6 TPS 7 to Carlingford stop	constructed or existing utilities Stop fit out	
Back Up Operations Centre	A temporary work site will be established at the BOCC site	<ul style="list-style-type: none"> • Surface clearing and grubbing • Substructure construction • Connection to previously constructed or existing utilities 	N/A	Connection to the existing CSR	<ul style="list-style-type: none"> • Structural concrete works and brickwork • Structural steel installation • Roofing • Internal fit out • Utilities connection 	N/A
Testing and Commissioning	Worksites will be established in	<ul style="list-style-type: none"> • None 	Testing of electrical and	LRV movements	<ul style="list-style-type: none"> • None 	All

Main works area	Site establishment	Earthworks and subsurface works	Surface works	Rail systems	Structures	Stops
	various parts of the alignment as per the T&C schedule and staging.		signalling infrastructure.	on the alignment.		

2.2 Construction Sequencing

An indicative construction programme is provided in **Table 2-2**.

Table 2-2: Indicative construction programme

Main works area	Start date	Finish date
Package 5 – Activity A (SaM facility only)	Q1 2021	Q3 2024
Package 5 – Activity B (Full alignment)	Q3 2021	Q3 2024

2.3 Ancillary Facilities

Table 2-3 provides a list of the ancillary facilities that would be required by the Project during the construction of the SaM Facility site and the corridor works. Each facility would be established in accordance with the Site Establishment Management Plan (SEMP) which has been developed for this Project and planning approval will be sought for those sites not listed in the EIS.

Table 2-3: Ancillary facilities

Facility location	Start date	Finish date
6 Grand Avenue, Camellia	October 2021	December 2024
8 Colquhoun Street, Rosehill	October 2021	December 2024
Fennell Street, Parramatta	June 2022	December 2024

Note: The process for approval of minor ancillary facilities is detailed in the Site Establishment Management Plan (SEMP).

2.4 Testing and Commissioning

Testing and commissioning (T&C) activities will involve the introduction of LRVs to the alignment, static and dynamic testing and driver training. The T&C phase is proposed to occur via the following key stages:

- Stage 1. Introduction of LRVs onto the alignment.
- Stage 2. LRV Operations.
- Stage 3. Driver Training.

The Testing and Commissioning (T&C) phase of Parramatta Light Rail – Stage 1 Supply, Operate, Maintain, Package 5 (SOM) includes the introduction of Light Rail Vehicles (LRVs) to the alignment, LRV testing and ramp-up to operational readiness, including a 28-day trial run period.

T&C is considered to be a 'construction' activity under the Infrastructure Approval (SSI-8285) and Environmental Protection Licence (EPL) 21606 and the subordinate management system framework. However, as T&C also incorporates movements of LRVs along the alignment, some approval conditions relating to rolling stock also apply. Therefore, T&C activities straddle 'construction' and 'operation' in a way that other SOM activities do not.

Key T&C activities (not necessarily in chronological order) include:

- Introduction of LRVs to the alignment:
- Static testing of LRVs at the SaMF

- Localised infrastructure tests on the alignment without LRVs
- Running an LRV during the daytime from SaMF to Carlingford.
- Increased LRV running, incorporating:
- Dynamic testing at the SaMF, including main depot interfaces
- Initial dynamic testing along the alignment (SaMF to Carlingford) with traffic controls
- LRV integration testing with signalling and communications system (SaMF to Carlingford)
- Initial dynamic testing along the alignment (Westmead to Tramway Avenue) with traffic controls, including movements near Cumberland Hospital
- Broader dynamic testing along the alignment without traffic controls
- Driver training.
- Trial running on the alignment.
- Full schedule trial running (28 days, 0500 to 0100).

Figure 5 and Figure 6 below visually present the stages and timelines for testing and commissioning activities. These figures are static and may not represent changes or necessary modifications to staging during the T&C phase.

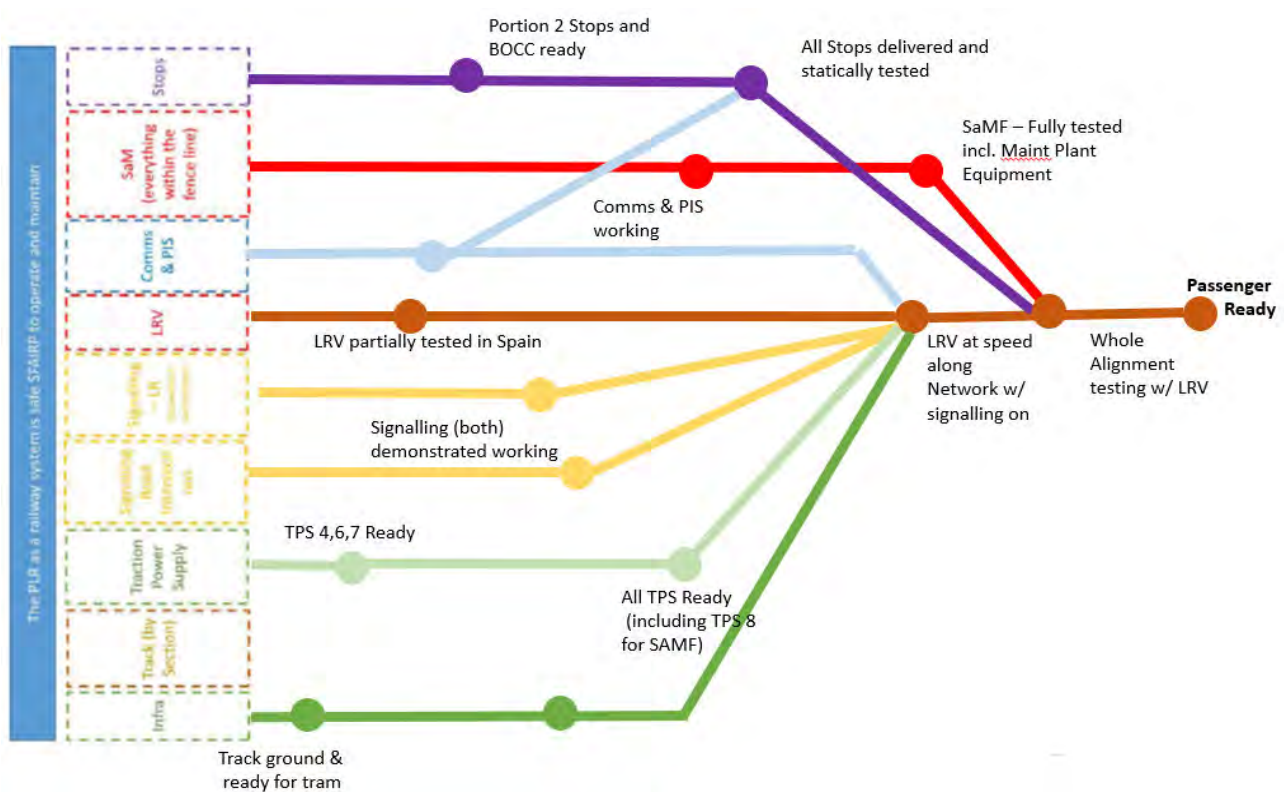


Figure 5: On Site proposed testing sequence.

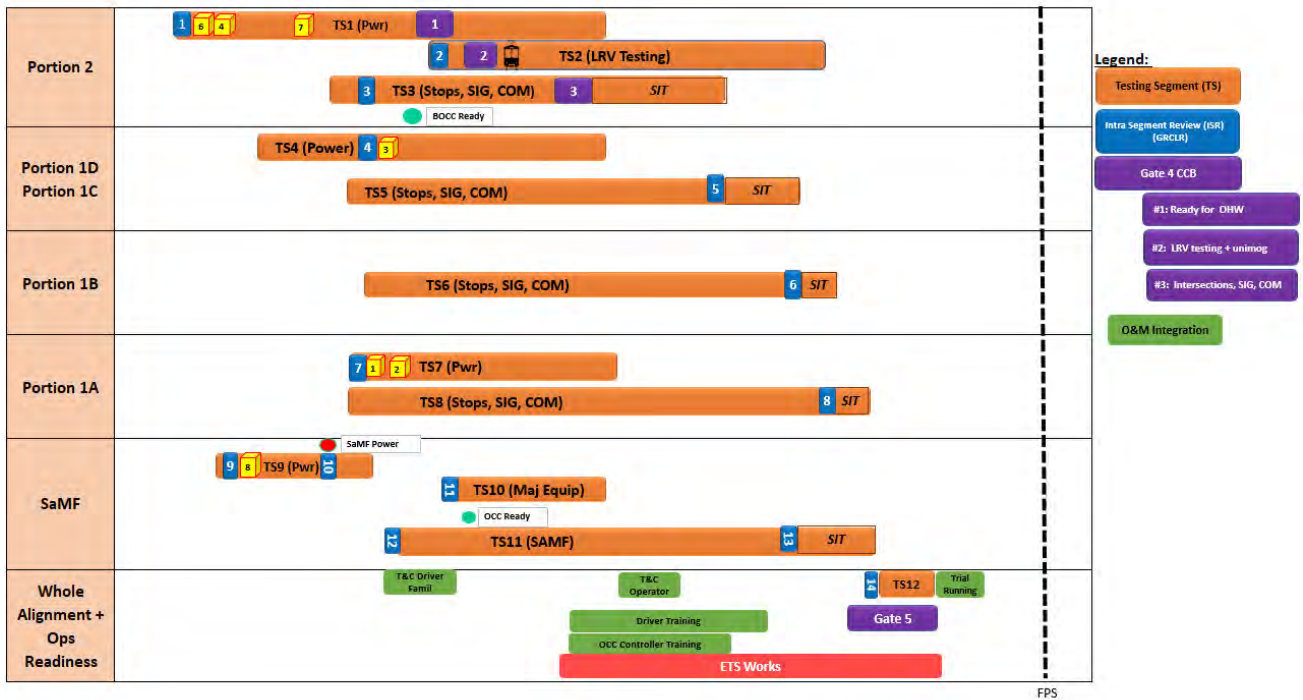


Figure 6: Test segment mapping.

3 Planning

3.1 Project Environmental Obligations

All personnel involved in the Project must adhere to the Project's environmental requirements, including:

- No work will commence without relevant environmental approvals, permits or licences in place
- Everyone holds responsibility to understand the project obligations and to ensure the necessary controls are in place to meet these obligations
- Before commencing work ensure environmental risks have been assessed and corresponding controls are in place to mitigate the risk to an acceptable level
- Comply with all project procedures
- Report all environmental incidents immediately
- Comply with all relevant environmental legislation, at all times
- Undertake and provide training to all employees on environmental requirements
- Hold each other accountable for environmental management
- Understand usage of energy and water and plan to use it in the most efficient manner practical to meet our sustainability targets.

3.2 Legal and Other Requirements

A register of relevant legislation for the Project is contained in Appendix A1. This register will be reviewed at regular intervals, such as during management reviews and after audits, and updated with any applicable changes in legislation. 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 5 of this CEMP.

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 Project. These management sub-plans also contain details on relevant legislation.

A complete list of the Minister's CoA, REMMM and EPOs would be included in the Project's Compliance Tracking Program (CTP). The CTP is managed by TfNSW and has been provided to DPE for information. The timing, compliance status, responsibility and evidence or reference of compliance would be included in the compliance reports undertaken as described in the CTP (Section 8.4).

3.3 Guidelines and Specifications

The main guidelines and specifications relevant to this CEMP include:

- Environmental Management Plan Guideline – Guideline for Infrastructure Projects (DPE – April 2020)
- AS/NZS ISO14001: 2004, 'Environmental Management Systems - requirements with guidance for use'
- Post-approval requirements for State significant projects: Management Plan Guidelines (Draft March 2017).

- TfNSW Environmental Incident Classification and Reporting 9TP-PR-105
- TfNSW Guide to Environmental Incident and Non-compliance Reporting using the INX System 9TP-SD-005
- TfNSW Guide to Environmental Control Map (3TP-SD-015/8.0)
- AS/NZS 4360:2004 Risk Management Standards
- AS/NZS 3100:2009, Risk Management Principles and Guidelines (ISO 31000 – Risk Management)
- AS/NZS ISO 19011:2014 - Guidelines for Auditing Management Systems.

The Sub-plans to this CEMP also contain details of legislation, guidelines, standards and specifications relevant to each sub-plan.

3.4 Approvals, Permits and Licensing

In addition to the Infrastructure Approval, GRCLR is required to secure the following permits and licences listed in Table 3-1.

Table 3-1: Approvals, Licenses, Permits and Requirements

Regulatory authority	Approvals/licences required
DPE	The Planning Approval was issued by the DPE on 29/05/18 and modified on 21/12/18 and 25/01/19.
Environment Protection Authority (EPA)	Project EPL 21606 was issued by EPA on 14 th December 2021 under clause 33(4) of Schedule 1 of the <i>POEO Act</i> .
Roads and Maritime Services (RMS)	<p>Section 138 of the <i>Roads Act 1993</i> requires that GRCLR obtain consent of the appropriate roads authority for the erection of a structure, or the carrying out of a work in, on or over a public road, or the digging up or disturbance of the surface of a public road. If the applicant is a public authority, the roads authority must consult with the applicant before deciding whether or not to grant consent or concurrence.</p> <p>Parramatta Light Rail Project Collaboration Agreement between TfNSW and RMS provides for authorisation for RMS to use its Road Authority power for works along the corridor and in the areas of Off Corridor Works.</p>
Rural Fire Service	Exemption to allow hot works to be undertaken on total fire ban days as detailed under Section 99 of the <i>Rural Fires Act 1997</i> will be sought, if required.

The following authorisations are not required for CSSI projects and therefore are not applicable to this Project:

- The concurrence under Part 3 of the *Coastal Protection Act 1979* of the Minister administering that Part of that Act
- A permit under section 201, 205 or 219 of the *Fisheries Management Act 1994*
- An approval under Part 4, or an excavation permit under section 139, of the *Heritage Act 1977*
- An Aboriginal heritage impact permit under section 90 of the *National Parks and Wildlife Act 1974*
- An authorisation referred to in section 12 of the *Native Vegetation Act 2003* (or under any Act repealed by that Act) to clear native vegetation or state protected land
- A bush-fire safety authority under section 100B of the *Rural Fires Act 1997*
- A water use approval under section 89, a water management work approval under section 90 or an activity approval (other than an aquifer interference approval) under section 91 of the *Water Management Act 2000*.

3.5 Environmental Aspect and Impacts.

An environmental risk assessment workshop was held on 21 February 2020 focussing on Activity A, being the SaMF. A further review was carried out in October 2020 with consideration to both Activity A and Activity B works and was updated accordingly to accommodate both SaMF and whole of alignment risks. An environmental risk assessment relating to T&C activities was completed in November 2023. The findings of these workshops and reviews have been incorporated into the ERA Register and this CEMP.

The ERA is a live document and ongoing review will be undertaken every six months and prior to key construction milestones, to ensure any changes to the risks are identified as the Project progresses and is included in this CEMP. The ERA will continue to be reviewed in response to significant issues, incidents and non-compliances.

Key aspects identified include:

- Noise impacts from out of hours works;
- Uncontrolled discharge of water from site;
- Contaminated land and water management;
- Dust and air quality impacts;
- Impact on local roads from construction traffic (light and heavy vehicles).

The environmental risk assessment workshop was undertaken by GRCLR staff, and key D&C contractors, from the following disciplines:

- Planning, environment and sustainability;
- Construction management;
- Program and planning;
- Design;
- Safety; and
- Project Directors.

Each activity was assessed to identify the relevant steps in the activity and the associated environmental hazards, initial risk levels, mitigation measures and to avoid, manage and/or minimise the risks and residual risks. Each of these items is documented in the environmental risk register (Appendix A2). Where relevant, the requirements from the Deed, CoA and REMMM will be incorporated into the environmental risk assessment, particularly in developing the specific site controls.

3.6 Environmental and Sustainability Policy

The GRCLR Environmental and Sustainability Policy (provided in Appendix A3) was issued on 24 September 2021 and has been signed by the GRCLR Project Director. Details on the policy are provided in 3.6.1 and 3.6.2.

3.6.1 Intent

GRCLR will design, construct, operate and maintain a world-class light rail network that empowers prosperity for the Greater Parramatta Area and supports the realisation of the Future Transport 2056 Strategy.

GRCLR is committed to ensuring an environmentally sustainable future for Parramatta Light Rail, our customers and the Greater Parramatta Area.

3.6.2 Policy

To achieve the intent, GRCLR will:

- Lead effectively and live our accountabilities and responsibilities at all levels of the organisation, starting with the directors through to employees and subcontractors. This includes all upholding the principles of social sustainability and social accountability across our workforce, our activities and our supply chain
- Comply with all environmental requirements included in relevant legislation, the Conditions of Approval, Preferred Infrastructure Report and the Environmental Impact Statement
- Integrate sustainability principals across all GRCLR activities, including design, construction, procurement, commissioning, operations and maintenance
- Collaborate with and proactively engage with all stakeholders at all levels
- Create a culture of continuous improvement for environment and sustainability management
- Understand, comply with and embrace our environment and sustainability compliance obligations
- Establish annual objectives for environmental management and regularly verify the compliance and effectiveness of the measures to ensure that objectives are met
- Promote an environmentally aware, sustainability-focused culture within GRCLR, stakeholders, customers and the Greater Parramatta community
- Commit to the prevention of pollution, protection of biodiversity, implementation of restorative actions, minimisation of resource use and waste, reduction of greenhouse gas emissions, and enhancement of climate change resilience through adaptation and mitigation across the delivery of works and during operations; and
- Plan effectively and provide and use the necessary resources to meet environmental objectives.

This policy will be communicated to and applies to all GRCLR employees and subcontractors and will be made publicly available.

3.7 Environmental Performance Criteria

As a means of assessing environmental performance during construction of the Project, environmental performance criteria have been established. The performance of the Project will be monitored against the performance criteria. Project performance monitoring will be documented in the Project construction compliance reports and at least on an annual basis as part of a management review.

The Project performance criteria are provided in Table 3-2. Performance criteria for specific aspects of the Project are incorporated into relevant environmental management sub-plans.

Table 3-2: Environmental Criteria and Targets

Criteria	Target
Environmental inspection and audit action close-out rate	>85% of actions closed out within agreed timeframes
Environmental incidents and non-compliances action close-out rate	>85% of actions closed out within agreed timeframes
Attendance and pro-active participation rate at TfNSW/ER/environmental management coordination/Environmental Reference Group meetings	>85% attendance and pro-active participation
ISC rating	Achieve an ISC score of 70 (as built)
Construction of the Project in accordance with Planning Approval.	Full compliance with Planning Approval
Compliance with Conditions of Environment Protection Licence (EPL)	Full compliance with EPL
Compliance with all legal requirements	No regulatory infringements (PINs or prosecutions).
Engage with the affected and broader community, minimise complaints and community impacts	Disseminate regular Project updates and other information through the Project website and other tools identified in the Communications and Engagement Plan. Record and respond to complaints within the timeframe specified in the Community Communication Strategy.

3.8 Project Refinements

Refinements to the Project may result from a change in circumstances during construction, value engineering or outcomes from preceding work packages. Changes would be communicated to the D&C Environment Manager or environment team either through formal change processes or via informal communications.

Any proposed changes would be assessed for consistency against the approved Project. The GRCLR Environment and Sustainability Manager will undertake or direct the assessment of the proposed changes for potential impacts and compare them to the proposed impacts for the approved Project. Where required a Consistency Assessment will be prepared and, in the first instance, provided to TfNSW for review and approval and the ER for information.

Changes that are not consistent with the Project Approval will require modification under Section 5.25 of the *EP&A Act* and determination by the Minister for Planning and Public Spaces. The ER will be informed, and a modification application prepared and be lodged by TfNSW to the Secretary for determination.

If required, the CEMP and Sub-plans would be updated as required to incorporate any additional potential environmental impacts, mitigation and management measures that result from the proposed changes.

4 Implementation and Operation

4.1 Environmental Management System Overview

The Project will be managed in accordance with the GRCLR Integrated Management System (IMS) implemented for the SOM package and includes an Environmental Management System (EMS). The EMS will be adopted as the guiding environmental management framework for the Project. The EMS is compliant with AS/NZS ISO 9001 and AS/NZS ISO 14001:2015 and is integrated into the overall SOM IMS which includes assurance, quality and health and safety management systems.

The EMS will guide the development of the Project's governance documentation, including this CEMP and associated Sub-plans, procedures and management tools, to achieve the commitments established by the GRCLR Environment and Sustainability Policy, to ensure environmental performance and sustainability objectives and targets are achieved.

All works carried out on the site will be in accordance with:

- The CoAs, REMMMs and EPOs
- Environment Protection Licence (EPL) 21606
- Client requirements as detailed in the contract
- GRCLR IMS.

4.2 Resources, Roles, Responsibilities and Authority

4.2.1 Roles and Responsibilities

The key environmental management roles and responsibilities for the construction phase of the Project are described in Table 4-1.

Organisational charts are located at Appendix A5.

Table 4-1: GRCLR Roles and Responsibilities

Title	Roles, responsibilities and authorities relevant to this plan
GRCLR Project Director	Provide environmental leadership across the entire SOM package of works and ensure all SOM obligations under the CoA, legislation and contract to appropriately implement this CEMP are fulfilled.
GRCLR Communications Manager	Ensure environmental complaints and enquiries regarding the establishment of ancillary facilities are recorded and responded to appropriately Identify residential and/or commercial stakeholders who are adjacent to or adjoin the ancillary facilities and consult them prior to ancillary facilities establishment and on an ongoing basis Lead the development of strategies and plans relating to community relations Provide leadership in strategic planning and management of community relations considerations

Title	Roles, responsibilities and authorities relevant to this plan
	<p>Prepare community updates, social media posts, website updates, stakeholder emails, letterbox drops, advertisements</p> <p>Produce community relations training material for project toolboxes and inductions</p> <p>Provide community information to be communicated in regular toolbox meetings</p> <p>Induct all personnel in community relations protocols and procedures</p> <p>Maintain liaison with TfNSW Senior Communications Liaison Officer</p> <p>Communicate with the construction team about receiving complaints and identify potential resolution options</p> <p>Liaise with the D&C Environment Manager to ensure that adequate mitigation measures are in place</p> <p>Consult with the ER to close out complaints and comply with the reporting, review and inspection requirements</p>
GRCLR Environment and Sustainability Manager	<p>Provide environmental oversight, direction and leadership regarding the environmental management of the Project.</p> <p>Ensure this CEMP satisfies legal and Project requirements and is implemented accordingly</p> <p>Notify TfNSW, the Environmental Representative and agencies as required in response to environmental incidents</p> <p>Act as the primary contact for TfNSW, Environmental Representative, Acoustic Advisor, Independent Arborist and Interface Contractors</p> <p>Effectively oversee the development and implementation of the EMS</p> <p>Review and oversee design and construction works, including testing and commissioning, to ensure compliance is adopted into operational phase for key aspects</p> <p>Authority to take immediate action to shut down any activity and direct installation of pollution control measures</p> <p>Provide specialist environment, planning and sustainability advice to the Project Director and other functional managers to facilitate the SOM works</p> <p>Oversee the development, implementation, assessment and verification of sustainability measures for all works</p> <p>Oversee the establishment of performance expectations, goals and standards for managing all potential adverse impacts</p> <p>Oversee the environmental management and sustainability induction and training program</p> <p>Oversee the preparation of environmental assessments on design changes and obtain any necessary planning approvals</p>

Title	Roles, responsibilities and authorities relevant to this plan
	<p>Oversee environmental monitoring, inspections and audits</p> <p>Oversee investigation and close out of any environmental complaints</p> <p>Manage compliance tracking and reporting, including with EPL Conditions</p> <p>Oversee the keeping of all environmental records</p> <p>In consultation with the Project Director and Senior Construction Manager, oversee the investigation and reporting of environmental incidents</p> <p>Attend all EPS meetings, inspections undertaken by the ER and monthly Environment Reference Group meetings</p> <p>Interface and co-ordinate with INFRA and other PLR contractors to achieve environmental alignment and management of cumulative impacts (including, but not limited to: OOHW, heritage, tree impacts)</p> <p>Meet all requirements and data collection required to achieve an ISCA score of 70 (as built)</p> <p>Be the primary contact for the ER, IA and AA on behalf of GRCLR.</p>
Design and Construct Environment Manager	<p>Is responsible for the on site environmental management and reports to the GRCLR Environment and Sustainability Manager</p> <p>Ensure this CEMP is implemented, and that appropriate training is provided regarding the requirements of this Plan</p> <p>Obtain all necessary environmental approvals prior to commencing ancillary facilities establishment</p> <p>Ensure inspections, observations, monitoring and audits are performed so that compliance is maintained</p> <p>Report, manage and close out all non-compliances</p> <p>Review and update environmental risks and controls at regular intervals and key milestones</p> <p>Act as the main point of site contact for the GRCLR Environment and Sustainability Manager</p> <p>Ensure corrective and preventative actions are taken after incidents and lessons are shared with other projects or parent companies.</p> <p>Assist in the development and delivery of environmental training and awareness</p> <p>Conduct the environmental component of the site inductions.</p> <p>Provide specialist environment, planning and sustainability advice to the construction and design managers to facilitate the delivery of the design and construction works</p> <p>Manage the development, implementation, assessment and verification of sustainability measures for design and construction works</p>

Title	Roles, responsibilities and authorities relevant to this plan
	<p>Ensure the performance expectations, goals and standards for managing all potential adverse impacts are effective and implemented</p> <p>Undertake inspections, observations, monitoring and audits as required</p> <p>meet with the construction team regularly to discuss upcoming construction activities, on-site environmental management, and any recent complaints or issues. Meeting minutes will be recorded and retained</p> <p>Manage the development, implementation and updating of the ECMs.</p>
Design and Construct Project Director	<p>Provide environmental leadership and ensure the SOM Design and construction works fulfils the obligations under the CoA, legislation and contract to appropriately implement this CEMP</p> <p>Ensure adequate resources are provided to effectively implement this CEMP</p> <p>Ensure the requirements of this CEMP is communicated to the supply chain</p> <p>Authority to take immediate action to shut down any activity and direct installation of pollution control measures.</p>
Senior Construction and Staging Manager	<p>Manage the delivery of the construction process including establishment of ancillary facilities</p> <p>Ensure work is planned and executed to maintain compliance with environmental requirements.</p> <p>Plan construction works in a manner that avoids or minimises impact to environment</p> <p>Accountable for environmental controls</p> <p>Responsible for environmental compliance and performance</p> <p>Understand their environmental responsibilities as detailed in the management plans</p> <p>Stop work immediately if an unacceptable impact on the environment is likely to occur</p> <p>Actively ensure that subcontractors and suppliers are complying with environmental requirements</p> <p>Liaise and co-operate with TfNSW and other government authorities as required</p> <p>Be contactable 24hrs to shut down construction work in the event of an emergency</p> <p>Work with the ER and comply with the reporting, review and inspection requirements</p>

Title	Roles, responsibilities and authorities relevant to this plan
Civil Construction Team	<p>Ensure appropriate mitigation and management measures are implemented and maintained on site</p> <p>Implement corrective or preventative actions as required to fulfil the requirements of this Plan.</p> <p>Ensure appropriate mitigation and management measures are implemented and maintained on site</p> <p>Ensure regular inspections and monitoring requirements are undertaken to check effectiveness of environmental controls</p> <p>Report environmental incidents and complaints immediately.</p> <p>Attend Project inductions and environmental awareness training relevant to the ancillary facility</p> <p>Understand and comply with environmental responsibilities</p> <p>Be aware of surrounding sensitive environmental and social constraints and act in a manner that minimises impacts to those sensitive areas</p> <p>Notify their supervisor immediately of any environmental incidents, near misses and hazards.</p>
TfNSW Representative	<p>Receive a copy of this CEMP</p> <p>Review documentation provided by GRCLR, where required</p> <p>Act as point of contact between TfNSW and GRCLR</p> <p>Site inspections on behalf of TfNSW</p> <p>Attendance at GRCLR project-management reviews</p> <p>Represent the Project when engaging with DPE and EPA</p> <p>Review project-environmental performance</p> <p>Manage all DPE reporting requirements.</p>
Testing and Commissioning Manager	<p>Receive a copy of this CEMP</p> <p>Review documentation provided by GRCLR, where required</p> <p>Notify the Environmental Manager of upcoming T&C works, to ensure required permits etc. are in place and modified over time if required.</p>

4.3 Responsibility and authority

A number of additional roles are required by the Project CoA and the GRCLR commitment to continuous improvement. The GRCLR will work closely with these people to identify and minimise environmental risk and associated impacts. These roles are detailed below.

TfNSW is the “Proponent” under the CoA with ultimate responsibility to DPE for compliance with the Planning Approval.

4.3.1 Environmental Representative

CoA A19 to 22 requires a suitably qualified and experienced Environmental Representative (ER) to be engaged for the Project. The nominated and approved ER is independent of the design and construction personnel.

CoA A23 requires that for the duration of the works until after the commencement of operation, or as agreed with the Secretary, the approved ER must:

- a) receive and respond to communication from the Secretary in relation to the environmental performance of the CSSI;
- b) consider and inform the Secretary on matters specified in the terms of this approval;
- c) consider and recommend to the Proponent any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and the community;
- d) review documents identified in Table 2 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:
- e) 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 NSW Government 15 Department of Planning and Environment Conditions of Approval for Parramatta Light Rail (Stage 1) – CSSI 8285 MOD 1 –determined 21 December 2018 CSSI 8285 MOD 2 – determined 25 January 2019
- f) 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);
- g) regularly monitor the implementation of the documents listed in Table 2 to ensure implementation is being carried out in accordance with the document and the terms of this approval;
- h) 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;
- i) as may be requested by the Secretary, assist the Department in the resolution of community complaints;
- j) 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 a minor environmental impact; and
- k) 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.

CoA A24 requires that the Proponent must provide the ER with all documentation requested by the ER in order for the ER to perform their functions specified in Condition A23 (including preparation of the ER monthly report), as well as:

- a) the complaints register (to be provided on a daily basis); and
- b) a copy of any assessment carried out by the Proponent of whether proposed work is consistent with the approval (which must be provided to the ER before the commencement of the subject work).

In addition to the conditions set out in the Planning Approval, GRCLR personnel will work with the ER and comply with the reporting, review and inspection requirements. The Environment Manager will be the primary contact for the ER on behalf of the project.

The CEMP will be endorsed by the ER and then submitted to the Secretary for approval no later than one month before the commencement of construction.

The CEMP will be consulted and involved in the preparation and implementation of the Out of Hours Works Protocol in accordance with CoA E28.

4.3.2 Acoustic Advisor

CoA A26 requires a suitably qualified and experienced Acoustics Advisor (AA) to be engaged for the duration of construction and for no less than six months following completion of construction in accordance with the Planning Approval. The nominated AA is independent of the design and construction personnel.

The CoA A29 requires the AA to fulfil the following requirements:

- a) Receive and respond to communication from the Secretary about the performance of the CSSI in relation to noise and vibration;
- b) Consider and inform the Secretary on matters specified in the terms of this approval relating to noise and vibration;
- c) Consider and recommend, to the Proponent, improvements that may be made to work practices to avoid or minimise adverse noise and vibration impacts;
- d) Consider consultation outcomes with affected receivers to determine the adequacy of noise mitigation and management measures including work hours and respite periods;
- e) 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);
- f) 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;
- g) In conjunction with the ER, the AA must:
 - i. 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;
 - ii. 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;
 - iii. consider relevant minor amendments made to the CEMP, relevant sub-plans and noise and vibration monitoring programs that require updating or are of an administrative nature, and are consistent with the terms of this approval and the management plans and monitoring programs approved by the Secretary and, if satisfied such amendment is necessary, endorse the amendment. This does not include any modifications to the terms of this approval;
 - iv. assess the noise impacts of minor construction ancillary facilities; and

- h) 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.

Additionally, the AA is to:

Be consulted and involved in the preparation and implementation of the Out of Hours Works Protocol in accordance with CoA E28, and Report to the Secretary on outcomes of the community consultation, the identified works and respite periods and the scheduling of the likely out-of-hour works in accordance with CoA E37.

4.3.3 Independent Arborist

CoA E102 requires an Independent Arborist (IA). The nominated IA is independent of the design and construction personnel.

The CoA E103 requires the IA to fulfil the following requirements:

- a) be the principal point of advice in relation to the assessment and management of CSSI impacts on trees;
- b) prepare a Tree Register of all trees within the CSSI footprint (either for the entire CSSI or separate areas where tree removal and/or pruning is proposed) before the removal of any trees;
- c) identify those trees within the footprint that must be removed for construction to proceed or for CSSI operations; and
- d) identify those trees where their fate is uncertain and may be retained or may be pruned (either for construction or for ongoing maintenance during operation).

The Tree Register must satisfy the requirements of CoA E104 and include recommendations made by the IA. The Tree Register and evidence of Considerations by the Project must be submitted to the Secretary prior to removal /damage or pruning of a tree.

4.4 Environmental Documentation

4.4.1 Construction Environmental Management Plan

This CEMP provides the system to manage and control the environmental aspects of the Project during construction. It identifies all requirements applicable to activities described in Section 2. It also provides the overall framework for the system and procedures to ensure environmental impacts are minimised and legislative and other requirements are fulfilled.

The strategies defined in this CEMP have been developed with consideration of the CoAs, REMMMs, EPOs and EPL. This CEMP establishes the system for implementation, monitoring and continuous improvement to minimise impacts from the Project on the environment.

This CEMP will be endorsed by the ER and provided to the Secretary for approval at least one month prior to the commencement of construction. In accordance with CoA C8 construction will not commence until the CEMP and the sub plans specified in CoA C3 are approved by the Secretary or provided to the Secretary for information (as required by CoA C3).

4.4.2 Environmental Management Sub-plans

Subject-specific environmental management sub-plans support the CEMP. These documents are prepared to identify requirements and processes applicable to specific impacts or aspects of the Project. They address the relevant requirements of the CoAs, REMMMs, EPOs and EPL.

A list of construction sub-plans for this Project, their approval and consultation requirements are provided in Table 4-2.

The establishment of construction ancillary facilities will be done in accordance with CoA C18 and the Site Establishment Management Sub Plan.

Table 4-2: Environmental Management Plans

Document name	Approval pathway/ requirement
Traffic, Transport and Access Management Plan	CoA C3 (a)
Flora and Fauna Management Plan	CoA C3 (e)
Noise and Vibration Management Plan	CoA C3 (b)
Soil and Water Management Plan	REMMM GEN-1 and Hy-6
Heritage Management Plan	CoA C3 (d)
Aboriginal Heritage Management Plan	CoA C3 (d)
Air Quality Management Plan	REMMM GEN-1 and AQ-1
Construction Waste and Resource Management Plan	REMMM GEN-1 and WM-2
Contaminated Land Management Plan	REMMM CM-3
Site Establishment Management	CoA C18
Flood Management Plan	CoA C3 (c)

4.4.3 Sustainability Management Plan

TfNSW has prepared a Sustainability Strategy to comply with CoA E136 and EPO-SU-1 for the PLR including the Project. The management of the Sustainability Strategy's requirements associated with the construction of the Project will be addressed in the Delivery Sustainability Management Plan (Ref PLR1SOM-GLR-ALL-PM-PLN-000015). Implementation of the Sustainability Management Plan will be managed by the GRCLR Environment and Sustainability

Manager. The plan will demonstrate how the relevant commitments in the Sustainability Strategy (CoA 136 and EPO-SU-1) will be implemented on this Project.

4.4.4 Environmental Control Maps

Environmental Control Maps (ECMs) are live documents prepared to assist in the planning and delivery of the Project. The Project traverses a range of environmental and socially sensitive areas/sites. To assist construction planning and management, these site constraints are consolidated on series of map-based sheets that extend the length of the Project.

In accordance with the requirements of the *TfNSW 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 sensitive areas, mitigation measures and controls, including those from relevant management sub plans. ECMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simply written instructions.

The ECMs are live documents encompassing the whole Project. They will be further developed as construction progresses and input is provided from the Project management team, the ER and TfNSW.

All construction personnel and subcontractors undertaking a task governed by an ECM must participate in training on relevant ECMs and acknowledge that they have read and understood their obligations by signing an attendance record prior to commencing work. This process is the responsibility of the D&C Environment Manager or delegate.

The implementation of the ECMs, including 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-compliances are recorded, and corrective actions implemented.

The ECMs will be prepared and maintained by the D&C Environment Manager or delegate with input from specialists as required. ECMs are live documents and will be document controlled separately to the CEMP. The current version will be available to all construction personnel and subcontractors undertaking a task governed by an ECM.

ECMs will be provided to the ER for review at least one week prior to the commencement of any activities in the area covered by the document. All comments received from the ER will be addressed and endorsement obtained prior to commencement of works.

4.5 Sub-contractor Management

All sub-contractors will work on the Project in accordance with the CEMP and appendices. All sub-contractors will be inducted and provided with additional environmental training where required based on the environmental risk of their activities.

GRCLR will conduct appropriate monitoring of each sub-contractor's environmental protection measures ensuring these measures are effectively implemented and maintained.

Based on environmental risk, sub-contractors will also be required to develop an activity specific environmental work method statement (EWMS), which will include a risk assessment and mitigation measures associated with their activities before commencing works to confirm that their process and procedures are appropriate.

All Sub-contractors engaged by GRCLR for works shall undertake works in accordance with:

- Relevant Environmental Legislation, Codes of Practice and Australian Standards
- GRCLR's quality, safety and environmental management system policies and procedures
- Submitted EWMS.

4.5.1 Sub-contractor Assessment

All subcontractors are to be assessed in line with their ability to perform the task. Consideration will be given to:

- Past performance, demonstrated capability and quality of work
- The nature and scope and scale of the subcontractor's activities
- Safe work practices and use of EWMS
- The sub-contractor's capacity to manage its own environmental performance effectively
- The environmental sensitivity of the area(s) in which the sub-contractors will be working
- The potential environmental impacts of the sub-contractor's activities
- The qualifications and experience of staff
- The sub-contractor's previous environmental performance
- Only sub-contractors with adequate qualifications and environmental systems will be engaged to provide services.

4.5.2 Managing sub-contractor service delivery

Sub-contractors are to submit environmental management documentation e.g. EWMS before commencing work. These documents will be reviewed by the Environmental Manager and, where required, TfNSW and ER to confirm they are appropriate and meet the requirements of this CEMP and associated sub plans, the Project deed and CoAs.

Where Sub-contractor provided documents are deemed not suitable following review by GRCLR, the sub-contractor will be requested to review and re-submit documentation. Works will not commence for the specific work activity until documents have undergone review and acceptance.

The D&C Environment Manager or delegate will review/discuss the relevant ECM with Sub-contractors at their commencement at a new work area.

4.5.3 Monitoring sub-contractor

Sub-contractors are expected to provide an appropriate level of supervision of their workers on site and implement appropriate monitoring practices such as: work area inspections, task observations and EWMS implementation.

GRCLR will monitor Sub-contractor's environmental compliance through mechanisms such as work area inspections, observations, audits and reviews.

Sub-contractors environmental compliance will also be monitored by other parties in accordance with the CoA.

4.5.4 Review of sub-contractor performance

A meeting will be held with the Site Supervisor and Senior Construction and Staging Manager at the completion of works to review the Subcontractor's performance and assess their ability to efficiently perform on the contract. Additional reviews may be maybe required following incidents, non-compliances or continuous poor performance.

Records of review are to be documented and the information is then to be sent to the Senior Construction and Staging Manager for collation and further reference.

5 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 D&C Environment and Sustainability Manager will coordinate the environmental training in conjunction with other training and development activities (e.g. safety).

5.1 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 and to ensure the implementation of the relevant mitigation measures.

Short-term visitors to site undertaking inspections / entering the site (such as regulators) will be required to undertake a visitors' induction prior to accessing the site and must be accompanied by inducted personnel at all times, in line with WH&S law.

Temporary visitors to site for purposes such as deliveries, will be required to stay in designated delivery areas, or otherwise be accompanied by inducted personnel at all times.

The D&C Environment 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:

- GRCLR's environmental policy
- Relevant details of the CEMP and sub management plans including purpose and objectives
- Requirements of due diligence and duty of care
- Conditions of environmental licences, permits and approvals
- Environmental and compliance obligations associated with the Project approval, including the CoAs, REMMMs, EPOs and EPL
- Potential environmental emergencies/incidents on site and the required response
- Reporting and notification requirements for pollution and other environmental incidents
- Mitigation measures for the control of environmental issues
- Interface protocols with other PLR contractors (e.g. Infrastructure and Remediation contractors)
- High risk activities and associated environmental safeguards
- Working in or near environmentally sensitive areas
- The environmental control map(s), their purpose, scope and use
- Role specific environmental management requirements and responsibilities
- Sustainability requirements, including reducing greenhouse gas emissions by implementing energy efficient practises

- Waste management and segregation.

In accordance with Condition G3.1 of the EPL, the induction would also:

- Clearly identify the location of all relevant noise sensitive receivers, and
- Highlight the requirements to minimise noise and vibration impacts on these receivers.

A record of all project inductions will be maintained and kept on-site, and in the GRCLR IMS. The D&C Environment Manager may authorise amendments to the induction at any time. Possible reasons for changes to the induction will relate to such things as:

- Project modifications;
- Construction progression (i.e. as risk profile of works change);
- Legislative changes;
- Amendments to this CEMP or related documentation.

An induction register will be kept at the project site office, maintained by the D&C Environment Manager.

5.2 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.

Key environmental issues relevant to construction include (but are not limited to):

- Hours of work, including management strategies to be implemented for out of hours works
- The scope and requirements of the specific site environment plans and ECMs
- Erosion and sediment control
- Wet weather shut down procedures and responsibilities
- Emergency and spill response
- Noise and vibration goals and specific mitigation measures
- Traffic/access, location of entry/exit points, traffic routes, parking, haulage routes
- Soil and water issues and controls and dewatering and discharge requirements
- Air quality and dust issues and management
- Contamination issues and management
- Sensitive receivers such as the local community and appropriate mitigation measures
- Sustainability measures
- Waste management and recycling
- Recent environmental incidents and lessons learnt.

Toolbox talks will also be used as a forum for sharing any lessons learned. These lessons may be recorded and distributed to relevant stakeholders.

Toolbox talk attendance will be mandatory and attendees of toolbox talks will be required to sign an attendance form. Attendance records will be retained within the GRCLR IMS.

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.

A training schedule identifying relevant toolbox talks and environmental awareness training would be developed and updated throughout construction of the Project as training needs are identified.

5.3 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 site supervisors will conduct a daily pre-start meeting with the site workforce before the commencement of work each day, at the start of each new shift, or when there are changes to work activities or the risks present onsite 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 developed by the D&C Environment and Sustainability Manager and will include any environmental issues that could potentially be impacted by, or impact on, the day's construction activities. All attendees at each works site will be required to sign on to the pre-start and acknowledge their understanding of the issues explained.

Pre-start topics, dates delivered, and a register of attendees will be recorded and kept at the Project site office and uploaded into the GRCLR IMS.

6 Communication

6.1 External and Government Authority Liaison

The GRCLR Environment and Sustainability Manager or delegate has the responsibility to report on the ongoing environmental performance of the Project to TfNSW and the ER.

The GRCLR Environment and Sustainability Manager will report regularly to TfNSW on progress and any key environmental matters through a concise monthly Environmental Management Report detailing items within the preceding month. This monthly Environmental Management Report will include but not be limited to:

- Record of any out of hours works undertaken
- Details and investigation outcomes of any environmental incidents or non-compliances
- Details of any complaints and the associated response
- Visits to site by EPA, council or other regulatory authorities
- Any specific issues raised by the ER.

If the Project is visited by EPA or any other regulator or government agency, TfNSW will be notified as soon as practicable, and a report will be prepared on each occasion. The report will be provided to TfNSW within one working day of the visit.

To ensure the EPA can liaise with the Project team directly in the case of an emergency, the following contacts will be made available to be contacted by the EPA on a 24-hour basis; they will both have the authority to take immediate action to shut down any activity or to effect any pollution control measure, as directed by an authorised officer of the EPA:

- Project Director
- GRCLR Environment and Sustainability Manager (or delegate).

Relevant government agencies would be consulted throughout construction, as required. This will generally be undertaken by TfNSW with the support of the GRCLR Environment and Sustainability Manager.

TfNSW will manage all communications with DPE and keep them up to date with project progress and respond to any queries.

If GRCLR is required to consult, notify or submit documentation to a government agency (such as EPA, DPI or COP) or a stakeholder (such as a landowner or Aboriginal group representative), then GRCLR must provide the required documentation, notification or conduct consultation directly with the agency or stakeholder and provide a copy or summary of the consultation to TfNSW. If a meeting is proposed with a government agency or stakeholder, GRCLR must give reasonable notice, preferably five days, to TfNSW to allow their attendance.

6.2 Internal Communication

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

The D&C Environment Manager or delegate will meet with the construction team regularly to discuss upcoming construction activities, on-site environmental management, and any recent complaints or issues. Meeting minutes will be recorded and retained.

The D&C Environment Manager and GRCLR Environment and Sustainability Managers will meet on a regular basis to discuss the upcoming construction works and the associated environmental, planning and sustainability, risks and potential issues. Any potential interface contractor or stakeholder communications would also be discussed.

Meetings may also be scheduled with the ER and relevant TfNSW environmental staff. The purpose of these meetings would be to communicate ongoing environmental performance and to identify any issues to be addressed.

In addition, D&C Environment Manager and GRCLR Environment and Sustainability Managers will regularly participate in toolbox talks. This forum will provide an opportunity for the environment team members to communicate on environmental performance, to advise on any upcoming sensitive environmental matters for future work areas and to receive feedback from on-site personnel.

Further internal communications regarding environmental issues and aspects will be through awareness training as described in Section 5.

6.3 Stakeholder and Community Consultation

The Community and Engagement Plan (PLR1SOM-GLR-ALL-PM-PLN-000007) sets out how GRCLR will comply with the communications and engagement requirements of the CoAs, the SOM contract and the TfNSW Project Community Communication Strategy (CCS). It outlines processes for providing accurate information to the TfNSW representative regarding current and upcoming contractor activities, and all associated community impacts and potential announcements. It addresses the following:

- Communication and engagement approach, objectives and framework
- Key milestones
- Roles and responsibilities of project team members
- Key messages
- Identification of communications tools, timelines and actions to be implemented
- Proposed community liaison and marketing activities
- Identification of stakeholders that will be affected by the works and targeted consultation
- Issues analysis and impacts to stakeholders, and proposed mitigation measures
- Management of complaints and enquiries
- Crisis and incident management
- Monitoring and evaluation.

6.4 Complaints Management

In accordance with *AS/NZS 10002-2014 Guidelines for Complaint Management in Organisations*, a complaint management system ensures guidelines are in place for the effective and consistent handling of complaints.

Resolving complaints at the earliest opportunity in a way that respects and values the person's feedback can be one of the most important factors in recovering the person's confidence in the Project and it can help prevent further escalation of the complaint. GRCLR's approach to receiving a complaint will be:

- Promptly acknowledge receipt of complaint

- Address each complaint with integrity and in an equitable, objective and unbiased manner
- Implement best practices in complaint handling
- Adopt flexible approaches to problem solving to enhance accessibility for people making complaints and/or their representatives
- Protect the identity of people making complaints where this is practical and appropriate.
- Personal information that identifies individuals will only be disclosed or used as permitted under the relevant privacy laws, secrecy provisions and any relevant confidentiality obligations.

GRCLR will adhere to the complaints management system which has been established for the Project as outlined in the CCS and in accordance with TfNSW's Customer Complaints and Feedback Policy. GRCLR will also meet the requirements of Environment Protection Licence (EPL) 21606 with regard to the receipt, recording and reporting of pollution complaints.

TfNSW has established a dedicated 24-hour telephone number (1800 139 389), postal address (Level 4, 4 Parramatta Square, 12 Darcy Street Parramatta NSW 2150), email address (parramattalightrail@transport.nsw.gov.au) which is staffed by a call centre provider appointed by TfNSW. The Project telephone number, and email address will be visible on hoarding at each GRCLR construction site. Project contact details will be included on all communications collateral.

GRCLR will answer all phone calls transferred by the call centre from the community information line in person and/or investigate the complaint immediately, with a phone call to be made to the complainant within two hours. An initial response will be provided during this phone call, unless the complainant agrees otherwise.

For email complaints received during construction hours, an initial written response will be provided within four hours of email receipt, and a written or verbal response within two hours if a contact telephone number is provided. For email complaints received outside construction hours an automated response will be provided immediately confirming receipt explaining that a full response will follow, and then within the first four hours of the next business day from receipt provide a written response.

For complaints received by email within construction hours, a written response will be provided within 24 hours of receipt, or a verbal response within two hours if a contact telephone number is provided.

Written responses to complainants will be forwarded to TfNSW for their approval prior to sending to the complainant and a copy provided to the TfNSW representative.

Received complaints pertaining to the SOM contract for action, response and resolution will be forwarded to the GRCLR Communications Manager. If a complaint has been received in person by another contractor, community member or stakeholder TfNSW will advise GRCLR. If a complaint has been referred to GRCLR and is not related to GRCLR activities TfNSW will be advised immediately.

Other processes that will be followed include:

- GRCLR will advise the TfNSW PLR Senior Community Liaison Officer of a complaint on the day of the complaint or the following working day if the complaint has been received after 5pm
- GRCLR will forward information on any complaints received, including response times and details of any actions undertaken or proposed or investigations occurring, to the relevant TfNSW representative in writing within one business day
- GRCLR will provide feedback to requests for information from a TfNSW representative, TfNSW communications team or the Community Complaints Commissioner in relation to responses to complaints within two hours of the request;

- GRCLR will escalate complaints in accordance with the Escalation and Dispute Resolution Process as outlined in the CCS;
- GRCLR will resolve all complaints within seven business days, and if the complaint cannot be resolved the complainant will be kept informed and updated of the progress until the complaint is resolved;
- GRCLR will record all complaints within 24 hours of receipt of the complaint which will include:
 - Date and time of complaint
 - Method of complaint (e.g. phone, email, meeting)
 - Name and contact details of complainant
 - Summary of complaint
 - Nature of complaint
 - Number of people affected by a complaint
 - Details of actions undertaken or proposed and investigations
 - Response to complain
 - Details of whether mediation was required or used;
 - Response times
 - Number of complaints.
- GRCLR will provide the complaint closeout actions and date of implementation in writing to the relevant TfNSW representative
- GRCLR will add the complainant to the list of stakeholders to be called within seven days ahead of proposed work if the complainant requests follow up information and wishes to receive calls
- GRCLR will provide a monthly report to TfNSW outlining the complaints received for that month, including lessons learnt from the complaint that can be or have been applied
- GRCLR will take all actions and implement all practicable measures to prevent the reoccurrence of stakeholder and community complaints
- GRCLR will comply with all directions from the TfNSW in relation to the resolution of any escalated complaints.

In accordance with CoA B9, the GRCLR will maintain a Complaints Register, owned by TfNSW, throughout construction and for 12 months following the completion of construction, that records information on all complaints received about the Project.

The Complaints Register will record the:

- (a) number of complaints received;
- (b) number of people affected in relation to a complaint;
- (c) means by which the complaint was addressed and whether resolution was reached, with or without mediation.

In accordance with CoA A24 (a) the complaints register will be provided to TfNSW by GRCLR. TfNSW will provide the complaints register to the ER on each working day. If a complaint is received outside working hours, the register will be provided to the ER on the next working day.

6.4.1 Pollution Complaints Management

EPL 21606 requires additional actions to those outlined above for the management of pollution complaints related to construction works undertaken by GRCLR or their subcontractors. Under the *Protection of the Environment Operations Act 1997*, pollution is defined as air pollution, land pollution, noise pollution and water pollution.

Complaints related to pollution will be managed by GRCLR as described below:

- GRCLR will keep a legible record of all pollution complaints received, including details of the following:
 - The date and time of the complaint;
 - The method by which the complaint was made;
 - Any personal details of the complainant which were provided by the complainant or, if no such details were provided, a note to that effect;
 - The nature of the complaint;
 - The action taken by the licensee in relation to the complaint, including any follow-up contact with the complainant; and
 - If no action was taken by the licensee, the reasons why no action was taken.
- For pollution complaints related to noise and vibration:
 - GRCLR will investigate these complaints within two hours of the complaint being made, or as agreed in a documented complaint management agreement with the complainant;
 - GRCLR must offer to the complainant to undertake attended noise or vibration monitoring at their premises if the investigation identifies GRCLR works as the likely source of the complaint and if no monitoring data representative of the complainant's location and of the works is available;
 - If the occupant of the premises accepts the offer of attended noise or vibration monitoring GRCLR will undertake the attended monitoring as soon as practicable or at a time agreed with the complainant; and
 - GRCLR will, in respect of each complaint made, advise each complainant of the results of its investigation of their complaint and any proposed remedial action within a reasonable period of time.

EPL 21606 also requires GRCLR to report pollution complaints received to the Environment Protection Authority (EPA) daily, as described below:

- GRCLR will submit by 2:00pm each business day a report to the EPA that provides details of all complaints received in relation to its construction works;
- For pollution complaints received on a Saturday, Sunday or public holiday, GRCLR is required to submit the report by 2.00pm on the next business day.
- The report will:
 - Be made on the GRCLR Pollution Complaints Report Form (PLR1SOM-GLR-ALL-EN-FRM-001001);
 - Be submitted by email to the EPA; and
 - Include the complaints received between 12am and 12pm
- If the works were undertaken outside of standard construction hours or high noise impact works hours, the report will include details of how the requirements of the conditions under which the works have been undertaken have been met.

- Note that GRCLR is not required to submit a report for any reporting period during which no complaints have been received.

To meet these pollution complaint reporting requirements, the GRCLR Communications Team will inform the GRCLR Environment, Planning and Sustainability Team immediately when a pollution complaint is received.

6.5 Working hours

6.5.1 Standard construction hours

As per CoA E21 and Condition L4.1 of the EPL, standard construction hours are:

- 7:00am to 6:00pm Mondays to Fridays, inclusive
- 8:00am to 12:00pm Saturdays
- At no time on Sundays or public holidays.

Extended working hours are permitted under CoA E22, with the exception of 'Eat Street' during the following hours:

- 6:00pm to 7:00pm Mondays to Fridays, inclusive
- 12:00pm to 6:00pm Saturdays.

Notwithstanding Condition E21, works may be undertaken in the Camellia and Rosehill precincts (east of James Ruse Drive) and the Carlingford 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.

6.5.2 Working outside of Standard Construction Hours

The Construction Noise and Vibration Management Plan (CNVMP) details the protocols and assessment requirements for working outside the approved construction hours specified in CoA E21, E22 and EPL conditions L4.1.

7 Environmental Incident and Emergency Response

The purpose of this procedure is to clearly outline the process to be followed in the event of an environmental incident or emergency, including the following (as required by GEN-3):

- Classification of the incident
- Notification and reporting requirements
- Incident investigation
- Preparedness and response
- Continuous improvement.
- Pollution incidents are managed in accordance with the Pollution Incident Response Management Plan (PIRMP) developed for the project (PLR1SOM-GLR-ALL-PE-PLN-000001) in line with the requirements of EPL 21606 and the *Protection of the Environment Operations Act 1997*.

7.1 Incident Classification

TfNSW Environmental Incident Classification and Reporting 9TP-PR-105 defines an incident as 'an occurrence or set of circumstances, as a consequence of which pollution (air, water, noise and land) or an adverse environmental impact has occurred, is occurring, or is likely to occur. Table 7.1 provides incident definitions and Table 7.2 displays the five levels of environmental incident, as defined by the GRCLR Incident Management Plan.

Table 7-1: Environmental Incident Definitions

Type	Definition	Source
Environmental Incident	An occurrence or set of circumstances that causes, or threatens to cause, material harm.	Planning Approval
Material harm	Is harm that: a) Involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or b) Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding \$10,000 (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment)	Planning Approval
Notifiable event	Any environmental incident or non-compliance that triggers a specific statutory requirement to notify a regulatory authority.	<i>TfNSW Environmental Incident Classification and Reporting 9TP-PR-105</i>
Non-compliance	An occurrence, set of circumstances or development that is a breach of the planning approval but is not an environmental incident.	<i>TfNSW Environmental Incident Classification and Reporting 9TP-PR-105</i>

Table 7-2: Incident Classification

Incident Level	Incident Level Description	Example Events
Level 1	Managed at the site level but may need external resourcing over and above that which is usually used by local work teams to manage incidents.	Minor spills.
Level 2	Requires off-site co-ordination with moderate levels of external resourcing and support; and/or Causes or has the potential to cause a moderate impact on the environment.	Minor fire
Level 3	Major incident/event that impacts the community beyond the scope of a Level 2 incident.	Emergency evacuation of all or part of the work site; or LRV serious collision, fire or derailment.
Level 4	Major incident which requires the activation of the IMT for operational and strategic direction.	Any emergency that significantly impacts on Delivery Activities; Any incident that requires the deployment of EMLOs to external agencies; and Incident involves multiple emergency agencies i.e. Police Forward Command Post.
Level 5	Requires or has incurred Combat Agency support/ input. State-wide emergency protocols have been triggered for this level of incident.	Major disaster.

7.2 Notification and Reporting of Incidents

TfNSW and the ER will be notified verbally immediately in the event of an environmental incident, and in writing within 4 hours, in accordance with the *TfNSW Environmental Incident Classification and Reporting Procedure (9TP-PR-105)*. Additional details of the incident would be provided within 48hrs.

Initial notifications will include the following information as a minimum:

- Time, date, nature, duration and location of the incident
- Location of the place where incident has occurred
- Nature, the estimated quantity or volume and the concentration of any pollutants involved
- Circumstances in which the incident occurred and cause of the incident, if known
- Action taken or proposed to be taken to deal with the incident.

A report of the incident, including the results of the incident investigation will be provided to TfNSW within a week of the incident in accordance with the *TfNSW Guide to Environmental Incident and*

Non-compliance Reporting using the INX System 9TP-SD-005 and CoA A45, unless otherwise agreed. The report would include the time and date of the incident, details of the incident and would identify any consequent non-compliance with the environmental requirements of the Project. All incidents are also recorded in the Incident Register PLR1SOM-GLR-ALL-PM-REG-000011.

TfNSW hold the primary responsibility for notifying and reporting incidents to DPE (CoA A44) in writing (compliance@planning.nsw.gov.au). The notification must identify the Project (including the CSSI application number) and set out the location and nature of the environmental incident. If an incident requires EPA notification under the POEO Act, TfNSW will also notify DPE within 24 hours after the notification was given to the EPA. GRCLR will assist and cooperate with TfNSW to fulfil these obligations. TfNSW and GRCLR will implement all written requirements of the Secretary, which may be given at any point in time, to address the cause or impact of an incident within any timeframe specified by the Secretary or relevant public authority in accordance with CoA A46.

Notification and reporting of an incident as defined in Table 7.1, to the relevant authorities, ER and other stakeholders will also be undertaken as required. This will generally be undertaken by TfNSW with the support of the GRCLR Environment and Sustainability Manager.

Subcontractors on the Project will be required to notify GRCLR of all environmental incidents, with verbal notification to be provided immediately. Failure to complete the required notifications will be considered a system non-compliance.

7.2.1 Fauna strike to be reported

During the Testing and Commissioning phase, especially during driver training and trial running, the risk of fauna strike increases. In the event of fauna strike of a native species which is observed by the driver, the GRCLR Environment and Sustainability Manager is to be notified. The notification may be verbal or in writing and shall include the following details:

- Fauna struck
- Impact of strike (injury, death) and does the fauna need assistance
- Time and date
- Location on the alignment.

The GRCLR Environment and Sustainability Manager is to include a summary of the number and type of fauna strikes in the Monthly Environment Report referred to in Table 8.5.

7.3 Incident Investigation

Incident investigation will consider the following:

- Sequence of events that led to the incident.
- The key findings of the investigation (i.e. what are the main causes of the incident)
- The management methods to be changed and/or implemented to avoid the incident reoccurring
- What can we learn from this investigation into the incident?

Section 2.8 of the *TfNSW Standard Requirements* specifies the following incident investigation protocols:

- GRCLR will undertake a preliminary investigation of all Class 3 incidents within five business days of the incident, unless otherwise agreed by TfNSW. Major investigations must be completed within 20 business days of the incident. Terms of reference for major investigations will be issued by TfNSW. If TfNSW requires the appointment of an external independent investigator, GRCLR will bear the cost of that appointment

- TfNSW may participate in any investigation being undertaken by GRCLR or initiate its own investigations. If TfNSW instigates its own investigation GRCLR will provide TfNSW with all assistance reasonably required for the purposes of the investigation, this includes the waiver of legal professional privilege over any investigation report prepared by, or on behalf of, GRCLR. The parties may agree that any investigation report that is subject to legal professional privilege may, between GRCLR and TfNSW, be subject to a common interest privilege
- In the event of an incident or issue, GRCLR will not contact or provide information to any person (other than that which is required to directly manage the Incident or to comply with law), including any stakeholder, the media or the public, without the prior approval of the TfNSW. GRCLR will make available senior personnel to respond to the community, the media and other stakeholders when required by TFNSW.

7.4 Preparedness and Response

In accordance with CoA E26, on becoming aware of the need for emergency construction works, GRCLR will notify the ER of the need for those activities or works. GRCLR will also use best endeavours to notify all affected sensitive receivers of the likely impact and duration of those works.

The immediate response to all incidents is to make the area safe and then undertake any reasonable actions to prevent further environmental harm without posing additional risk to staff, workforce or the public. In the event of an environmental incident or emergency, responses described in Table 7-3 will be implemented. The D&C Environmental Manager will ensure the construction site is suitably prepared to respond to an emergency/incident, as set out in Table 7-3.

The key to effective prevention of environmental incidents is monitoring, inspection and training. The approach set out in sections 8.1 (monitoring), 8.2 (inspection), 8.3 (auditing) and 5 (training) would minimise the potential of environmental incident and ensure the site team act appropriately to minimise the impact if an incident occurs.

Table 7-3: Preparedness and response

Emergency / incident	Preparation	Response	Responsibility
Significant adverse dust event due to weather conditions	<p>Monitor meteorological conditions for the area</p> <p>Visually monitor works in high wind conditions</p> <p>High wind 'stop works' protocols in place</p> <p>Establish contingency strategy for additional dust control measures, additional water carts, dust suppressants, stockpile covers etc.</p>	<p>Stop dust generating activities until adverse conditions subside.</p> <p>Deploy mitigation measures to dust producing areas.</p>	<p>Site Supervisor</p> <p>D&C Environment Manager</p>
Discovery of contamination or acid sulphate soils.	<p>Review previous land uses</p> <p>Include contamination awareness in the site</p>	<p>Quarantine suspected area</p>	<p>Site Supervisor</p> <p>D&C Environment Manager</p>

Emergency / incident	Preparation	Response	Responsibility
	<p>induction where the potential exists</p> <p>Include contingency in relevant work procedures and safe work method statements (SWMSs)</p> <p>Identify potential service providers for contamination control and removal.</p>	<p>Cover or provide dust mitigation</p> <p>Record incident in the INX as a safety incident</p> <p>Engage licensed/approved removal and disposal organisation</p> <p>Complete post removal verification</p>	
Flooding	<p>Monitor meteorological conditions</p> <p>All chemicals, fuels and other hazardous substances to be in secured containers and stored within a sealable shipping container</p> <p>Remove plant and equipment from low lying areas</p> <p>Review site drainage flow paths</p> <p>Redirect site drainage to prevent flooding of residential/business premises</p> <p>Ensure site drainage does not concentrate surface flow</p> <p>Review and address the potential for excess water entering the site</p> <p>Review and maintain erosion and sedimentation controls</p>	<p>Recover materials washed from site including sediment and other waste.</p> <p>Check effectiveness of erosion and sedimentation devices and other flood controls maintain where required and safe to do so.</p>	Site Supervisor D&C Environment Manager
Temporary erosion and sediment controls are damaged.	<p>Plan controls to be suitable for expected conditions</p> <p>Ensure sufficient materials, labour and plant are available for additional controls.</p>	<p>A review of the site to be undertaken by the D&C Environmental Manager and Site Supervisor.</p> <p>Controls to be repaired or replaced within appropriate timeframes.</p>	Site Supervisor D&C Environment Manager

Emergency / incident	Preparation	Response	Responsibility
Spill of hazardous or toxic substance	<p>Awareness training of appropriate response and procedures to be incorporated into site induction</p> <p>Material safety data sheets on site for all materials and kept up to date</p> <p>Adequate supply of absorbent materials available in the site compound and on vehicles at work location</p> <p>Emergency telephone numbers for emergency response organisations prominently displayed around office and issued to supervisors</p>	<p>Ensure the area is made safe first. Contain or limit the spill using sandbags to construct a bund wall, use of absorbent material, temporary sealing of cracks or leaks in containers, use of geotextile or silt fencing to contain the spill.</p> <p>Report spills immediately to D&C Environmental Manager</p> <p>Material to be disposed of in accordance with the manufacturers' recommendations and applicable legislation.</p> <p>If required, implement procedures to notify the relevant authorities.</p>	Site Supervisor D&C Environment Manager
Vibration causing structural damage	<p>Choose correct plant when working near structures</p> <p>Apply safe working distances during planning phase</p> <p>Implement vibration monitoring at commencement of vibration generating works to ensure compliance with standards</p>	<p>Activities causing vibration would cease under direction of the D&C Environment Manager or Site Supervisor. Any occupants of buildings may be evacuated with due consideration to safety, and the area secured to prevent unauthorised access.</p> <p>A structural assessment to be undertaken and if any damage is associated with construction, rectification work would be agreed.</p>	D&C Environment Manager
Unapproved clearing / damage to protected vegetation – threatened/endangered species.	<p>Clearly demarcate site boundaries</p> <p>Clearly demarcate clearing areas and brief site personnel</p>	<p>Immediately cease activities</p> <p>Engage consultant to assess damage to vegetation and presence of any</p>	Site Supervisor D&C Environment Manager

Emergency / incident	Preparation	Response	Responsibility
	<p>Identify/mark vegetation to be retained or that is protected.</p> <p>Identify species that may be impacted, include material within the project induction</p> <p>Included requirements within construction planning documentation.</p>	<p>endangered or threatened communities.</p>	
<p>Injury/death to protected/endangered/threatened fauna.</p>	<p>Identify potentially impacted species prior to commencement on site.</p> <p>Identify species that may be impacted, include material within the project induction</p> <p>Review/inspect vegetation to be cleared prior to clearing – utilise ecologist/spotter where there is the potential for endangered/threatened species</p> <p>Engage with local vet/WIRES representative on the appropriate contact/procedure</p> <p>Develop site procedure for the short-term management of injured fauna</p>	<p>Immediately cease activities upon discovery of injured fauna</p> <p>Implement procedure for short-term management and transportation to a designated vet or WIRES</p> <p>Undertake additional vegetation inspection to identify any remaining fauna prior to recommencement.</p>	<p>Site Supervisor D&C Environment Manager</p>
<p>Damage / destruction of indigenous/European heritage item.</p>	<p>Ensure site investigations detail any heritage items on or in proximity to the site.</p> <p>Include awareness material within the project induction</p> <p>Develop a 'stop works' protocol for any heritage find on site.</p>	<p>Cease works and stabilise the area, under the direction of the D&C Environmental Manager or Site Supervisor.</p> <p>Request an archaeologist to assess the significance and archaeological potential of the uncovered feature.</p>	<p>Site Supervisor D&C Environment Manager</p>

7.4.1 Environmental Incident Simulation Drills

Environmental incident simulation drills including testing of the PIRMP will be undertaken at least once every 12 months. Additional drills may be required at the discretion of the GRCLR Environment and Sustainability Manager in response to notifiable pollution incidents.

Environmental incident simulation drills may be integrated into other emergency and incident testing and training programs and delivered as a desktop simulation or practical exercise. The Environment and Sustainability will coordinate the drill and prepare a brief report on the outcomes and lessons learned.

7.5 Continuous Improvement

Continuous improvement of the Incident and Emergency Response Procedure will be achieved through ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-compliances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-compliances and deficiencies
- Verify the effectiveness of the corrective and preventative actions
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets
- Adopt mitigation measures from the ERA in the relevant management Sub-plans.

8 Inspections, Monitoring and Auditing

This section outlines the processes and procedures that will be implemented to monitor and review environmental performance and compliance with environmental requirements.

8.1 Environmental Inspections

The D&C Environment and Sustainability Manager and/or delegate will undertake pre-work inspections, weekly, and pre and post-rainfall inspections of the work sites to evaluate the effectiveness of environmental controls, and to ensure controls are in place in accordance with the ECMs and CEMP Sub-plans.

The environmental inspection checklist in Appendix A5 will be used to ensure that all environmental aspects are reviewed during inspection. Positive compliance and actions arising from the inspections will be recorded on the actions register and each action will be allocated to the supervisor for the work area for close-out. The environmental inspection checklist is a live document and will focus on high risk activities and processes, works in environmentally sensitive areas and site preparedness for adverse weather conditions. It will be updated regularly based on the progress of the Project and the outcomes of the quarterly risk assessment review.

Table 8-1 details the various inspections which will occur, their frequency and who will attend or arrange. All actions that arise from the site inspections listed in Table 8.1 will be closed out or responded to within the agreed time frames.

Records of monitoring and inspection will be documented and will be used to:

- Evaluate performance against legal, regulatory, contract, permit, licence and other commitments
- Identify required corrective actions
- Provide input into the process of review and improvement of environmental
- Track and trend progress against objective and targets
- Inform compliance requirements for environmental reporting.

Table 8-1: Environmental inspections

Activity	Type of Inspection	Frequency	Responsibility
Site inspection (quality, safety & environment)	Visual	Daily.	Site Supervisor.
Environmental inspection	Visual	Weekly or prior to and following significant rainfall events.	D&C Environment and Sustainability Manager or delegate.

Activity	Type of Inspection	Frequency	Responsibility
Environmental Representative / TfNSW representative inspection	Visual	Weekly or as determined by the nature of activities being undertaken and their associated environmental risks	GRCLR Environment and Sustainability Manager to accompany third party.
EPA or stakeholder inspection	Visual	On request.	GRCLR Environment and Sustainability Manager (or delegate) to accompany third party.
Noise and vibration inspection	Visual	<p>Minimum frequency of AA inspections will be determined based on the potential risk of noise impacts. Inspections will occur as a minimum, quarterly during site establishment works and monthly during construction.</p> <p>Additional site inspection may be undertaken by AA, at their discretion, in the following events:</p> <ol style="list-style-type: none"> 1. Noise or vibration related complaint 2. Where a work site has not fully implemented the noise management protocols 3. Where requested by the IC/TfNSW to assess compliance with the Planning Approval 	<p>Acoustic Advisor</p> <p>GRCLR Environment and Sustainability Manager to accompany third party.</p>
Tree inspection	Visual	Prior to any works that may impact a tree as defined in the IoA.	<p>Independent Arborist</p> <p>D&C Environment and Sustainability Manager to accompany third party.</p>

Activity	Type of Inspection	Frequency	Responsibility
Site Shut-Down Inspection	Visual	<p>Where site needs to be shut down for an extended period of time (i.e. greater than three (3) consecutive days) for reasons including, but not limited to:</p> <ul style="list-style-type: none"> • predicted significant weather events; • public holidays; • handover of site to other contractors. <p>Inspections will occur:</p> <ul style="list-style-type: none"> • Maximum one (1) week prior to shut-down and immediately prior to site shut down; • Where shut-down extends beyond seven (7) consecutive days, weekly and immediately following any significant weather event; and <p>In response to a complaint.</p>	Site Supervisor and / or D&C Environment and Sustainability Manager.

8.2 Environmental Monitoring Programs

Table 8-2 provides the environmental monitoring programmes that will be implemented in consultation with government agencies during the construction of the Project. The programmes would be endorsed by the ER and submitted to the Secretary for information at least one month before commencement of construction.

Details of additional monitoring programmes, as required according to the environmental receptors of construction, are detailed in the individual sub plans which have been prepared together with this CEMP in accordance with CoA C3.

Table 8-2: Summary of monitoring programmes required by CoA C9

CoA / REMMM	Description	Relevant sub plan	Consultation requirements
CoA C9 (a) HY-1	Water quality (turbidity) monitoring	Soil and Water Management Sub Plan (PLR1SOM-GLR-ALL-PM-PLN-000035)	DPE, EPA, relevant council(s)

CoA C9 (b)	Noise and vibration monitoring	Noise and Vibration Management Sub Plan (PLR1SOM-GLR-ALL-PM-PLN-000034)	Relevant council(s), EPA, NSW Health (as relevant)
CoA C9 (c)	Grey-headed flying fox monitoring	Flora and Fauna Management Sub Plan (PLR1SOM-GLR-ALL-PM-PLN-000033)	Environment, Energy and Science Group (DPE)

In accordance with CoA C10, construction monitoring programmes listed in **Table 8-2** must provide the following:

- Details of baseline data available
- Details of baseline data to be obtained and when
- Details of all monitoring of the Project to be undertaken
- The parameters of the Project to be monitored
- The frequency of monitoring to be undertaken
- The location of monitoring
- The reporting of monitoring results against relevant criteria
- Procedures to identify and implement additional mitigation measures where results of monitoring are unsatisfactory
- Any consultation to be undertaken in relation to the monitoring programs.

8.2.1 Monitoring records

As per Condition M1.1-M1.3 of the EPL, descriptive results of all monitoring required to be undertaken will be recorded (in a legible form, or in a form that can readily be reduced to a legible form) and retained (for at least 4 years after the monitoring or event to which they relate took place), and produced in a legible form to any authorised officer of the EPA who asks to see them. Details of the date, time, and location at which the samples were taken, along with the name of the sampler(s) will be recorded.

8.2.2 Weather monitoring

As per Condition M2.1 of the EPL, weather monitoring will be undertaken either on-site, or via analysis of equivalent weather information obtained from the Australian Bureau of Meteorology (i.e. BOM weather station in Parramatta). Monitoring will include temperature, humidity, wind direction, wind velocity and rainfall, which may be used to inform site activities.

8.3 Auditing and Reporting

Environmental audits would be conducted at regular intervals during construction of the Project to assess environmental performance and ensure compliance with all environmental obligations. Audits will include works undertaken by subcontractors. Internal and external environmental audits would be undertaken in accordance with *AS/NZS ISO 19011:2014 Guidelines for Auditing Management Systems* and follow an environmental audit programme submitted to the Secretary for information no later than one month before commencement of construction.

The environmental audit programme, as submitted to the Secretary, will implemented for the duration of construction. An indicative audit programme is provided in Table 8-3. TfNSW has submitted the audit program to DPE as part of the Compliance Tracking Program.

Table 8-3: Indicative Environmental Audit Programme

Audit	Scope	Timing	Responsibility	Recipient of audit report
Internal audit	<p>Compliance with CoAs/REMMs/EPOs, legal requirements, TfNSW requirements, CEMP and sub plans</p> <p>[Each audit will follow an audit checklist which will focus on areas for improvement and high-risk activities.]</p> <p>[The findings of the internal audits will be used to update the compliance tracking program (Section 8.4)]</p>	Annually (alternate six months to external audit)	GRCLR Environment and Sustainability Manager	CAF GRCLR
Independent audit	<p>Compliance with CoAs/REMMs/EPOs, legal requirements, TfNSW requirements, CEMP and sub plans,</p> <p>Environmental performance of the Project and its effects on the surrounding environment.</p> <p>Recommendation of measures and actions to improve environmental performance.</p> <p>[Each audit will follow an audit checklist which will focus on areas for improvement and high-risk activities.]</p> <p>[The scope will be prepared in consultation with the ER and TfNSW]</p>	<p>GRCLR will comply with the audit program scheduled by TfNSW.</p> <p>Annually (alternate six months to internal audit)</p>	TfNSW Independent auditor	CAF GRCLR TfNSW Secretary
TfNSW audit	Compliance with CEMP and sub plans, Deed, and environmental protection licence.	Annually (at same time as external audit above).	TfNSW representative Independent auditor	CAF GRCLR TfNSW Independent auditor

All independent environmental audits of the CSSI would be conducted by a suitably qualified, experienced and independent auditor with, where required, a team of independent technical experts, as required by CoA A42.

In accordance with CoA A43 TfNSW are required to submit a copy of the independent environmental audit report to the Secretary for information, with a response to any recommendation contained within the report within six weeks of completing the audit. GCRLR will support this requirement by implementing all recommendations of the independent environmental audit report within six weeks of completion of the audit.

8.4 Compliance Tracking Program

A Compliance Tracking Program (CTP) has been prepared by TfNSW and endorsed by the ER. It is managed and maintained centrally by TfNSW for the entire PLR Program in accordance with CoA A30-32. A Compliance Tracking Register (CTR) will be maintained and updated in the INX System and will be reviewed quarterly by TfNSW. The CTR will be reviewed and endorsed by the ER every six months, and will be maintained by TfNSW for the duration of the Project, and for a minimum of one (1) year following the commencement of operations.

A Pre-construction Compliance Report will be prepared and submitted to the Secretary for information no later than one (1) month before the commencement of construction. The Pre-construction Compliance Report:

- Details how the CoAs pertinent to the pre-construction phase and commencement of construction have been complied with; and
- Proposed commencement dates of construction activities.

Six monthly Construction Compliance Reports will be prepared and submitted to DPE for information from the date of the commencement of construction and for the duration of construction. The construction compliance reports will be endorsed by the ER and 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
- Any other matter relating to compliance with the terms of this approval or as requested by the Secretary.

A Pre-Operation Compliance Report will be prepared and submitted to the Secretary for information no later than one (1) month before the commencement of operation. The Pre-Operation Compliance Report must include:

- details of how the terms of this approval that must be addressed before the commencement of operation have been complied with; and
- the commencement date for operation.

Table 8-4 summarises the programme and frequency for compliance reporting. In accordance with CoA A33 each compliance report will be made publicly available on the project website and DPE will be notified in writing when this has been done.

Table 8-4: Compliance Reporting

CoA	Item	Details	Timing	Responsibility	Recipient(s)
A31	Compliance Tracking Register	The Compliance Tracking Register in accordance with the Compliance Tracking Program	Compliance Tracking Register is reviewed quarterly by TfNSW.	GRCLR TfNSW	TfNSW
A34	Pre-construction Compliance Report	The Pre-construction Compliance Report must be submitted to DPE for information and endorsed by the ER	At least one month before the commencement of construction	GRCLR	TfNSW ER DPE
A37	Construction Compliance Reports	Construction Compliance Reports must be prepared and submitted to DPE for information	Every six months from the date of the commencement of construction, endorsed by the ER.	GRCLR	TfNSW ER DPE Project website
A43	Environmental Audit Report	Environmental Audit Report	Within six weeks of completing the audit.	GRCLR	DPE
A44	Notification of Incidents	TfNSW will immediately notify the DPE and ER of all environmental incidents. The notification will identify the Project (including the CSSI application number) and set out the location and nature of the incident.	Immediately after the Proponent becomes aware of an incident	TfNSW	DPE

CoA	Item	Details	Timing	Responsibility	Recipient(s)
A45	Incident Report	A report to the DPE within one week of the notification of an incident. The report will outline time and date of the incident, details of the incident and any consequent non-compliance with the CoA.	Within one week of notification of an incident	GRCLR TfNSW	DPE
A47	Notification of Incident notified under POEO		Within 24 hours after notification give to EPA	GRCLR TfNSW	EPA DPE
C16	Construction Monitoring Program		At least one month before the commencement of construction	GRCLR TfNSW	DPE

8.5 Other Reporting

Additional reporting requirements identified in the Project documents are included in Table 8-5. Further reporting may be necessary as works progress. In such circumstances, Table 8-5 would be updated.

Table 8-5: Additional reporting requirements

Report	Details	Frequency	Responsibility	Recipient
Environment report	To be incorporated into the Project monthly report – to address environmental statistics (e.g. incidents, regulatory action, complaints on environmental issues), monitoring program performance, and key environmental issues	Monthly	GRCLR Environment and Sustainability Manager	TfNSW

Report	Details	Frequency	Responsibility	Recipient
ER monthly report	CoA A23 (i) Report on the ER's actions and decisions on matters specified in the ER Protocol for the preceding month of site environmental performance following routine inspections any non-compliances with the CEMP and corrective/ management actions required.	Monthly	ER GRCLR to provide input	DPE and other relevant regulatory agencies
Noise and Vibration Report	CoA A29 (h) 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).	Monthly	AA GRCLR to provide input	Secretary and other relevant regulatory agencies
Annual Return	EPL 21606 Conditions R1.1-R1.7 Annual Return to provide details of compliance with EPL conditions, monitoring undertaken and complaints received, pollution incident response etc.	Annually 60 days after end of reporting period (14 December) Due 12 February	GRCLR Environment and Sustainability Manager	EPA
Notification of environmental harm	EPL 21606 Conditions R2.1-R2.2 Notify incidents causing or threatening material harm to the environment	Immediately after becoming aware (phone) Within 7 days of becoming aware (written)	GRCLR Environment and Sustainability Manager	EPA Environment Line: 131 555

Report	Details	Frequency	Responsibility	Recipient
Written report (material harm)	EPL 21606 Conditions R3.1-R3.4 To be prepared and provided to the EPA if requested, if an Officer of the EPA suspects on reasonable grounds that an event has occurred at the premises, and said event is causing or likely to cause material harm to the environment.	As required, timing of response to be specified by the EPA.	GRCLR Environment and Sustainability Manager	EPA
Daily complaints report	EPL 21606 Condition R4.1 A report detailing all complaints received in relation to construction activities regulated by the licence. As per the details provided in Section 6.4.1 of this CEMP.	By 2pm each business day complaints are received	GRCLR Environment and Sustainability Manager	EPA
Preliminary Investigation Report (Noise and Vibration)	EPL 21606 Condition R4.2 If requested by an authorised officer. Detailing noise levels and assessment of any noise monitoring undertaken in accordance with Condition M4.5.	By 4:30 pm on the next working day following any noise or vibration monitoring.	GRCLR Environment and Sustainability Manager	EPA
Follow-Up Investigation Report (Noise and Vibration)	EPL 21606 Condition R4.3 If exceedance detected during monitoring. Confirmation of monitoring procedure, meteorological conditions, assessment, proposed remedial actions etc.	Within 5 business days of any noise or vibration monitoring that detected the exceedance.	GRCLR Environment and Sustainability Manager	EPA

8.6 Non-Compliance, Corrective and Preventative Actions

An environmental non-compliance is defined in the *TfNSW Guide to Environmental Incident and Non-compliance Reporting using the INX System 9TP-SD-005* as a non-compliance with any condition of approval, license condition or any other statutory approval or requirement relevant to the activity and/or area where the activity occurs. Environmental non-compliance may be identified through improvement opportunities, regular environmental inspections or monitoring, internal or external audits, complaints, community consultation, observations or through incident management. The ER, AA, TfNSW and/or a public authority may also raise a non-compliance or improvement notice.

The D&C Environment Manager or delegate is responsible for the investigation, tracking and appropriate close-out of non-compliance. Where an environmental non-compliance is identified and is substantiated, a corrective action request will be issued following consultation with the concerned parties.

Non-compliance will be managed in accordance with the GRCLR Integrated Management System (IMS) and recorded in a corrective action report in accordance with:

- TfNSW Guide to Environmental Incident and Non-compliance Reporting using the INX System 9TP-SD-005
- TfNSW Environmental Incident Classification and Reporting 9TP-PR-105.

The corrective action report will document the agreed actions and timeframes for addressing the environmental non-compliance. Timeframes would be set to ensure any chance of recurrence is eliminated as soon as practicable, in line with the requirements of EPL Condition R4.3.

Environmental non-compliance of a serious nature will be closed out immediately.

The status of corrective actions would be reported at least monthly for review at the monthly management meeting. Non-compliance would be reviewed and reported on in the monthly environmental reports.

In accordance with Condition M5.1 of the EPL, if it is reasonably suspected that an event has occurred at the premises or in connection with the carrying out of the activities that has caused, is causing, is likely to cause or has the potential to cause material harm to the environment, then monitoring, sampling, video recording and/or the taking of photographs is to be carried out as soon as practicable, and as directed by an authorised officer of the EPA.

9 Review and Improvement

9.1 Management Reviews

Management reviews would be undertaken as part of the GRCLR continual improvement process. The management review process would consider the suitability and effectiveness of the environmental management system and effectiveness and proper implementation of this CEMP and would be undertaken annually. This will involve a formal meeting, attended by the TfNSW representative and may include the wider management team and a review of systems from other functional areas.

The review will consider:

- Opportunities to improve environmental management processes and practices
- Client and agency feedback
- Consideration of non-compliances and deficiencies
- Consideration of effectiveness of corrective and preventative actions
- Changes or developments in the contractors' EMS.

The outcomes of the reviews may result in the amendment of this CEMP or related documents, revision to the environmental management system, risk assessment review, re-evaluation of the Project's objectives and targets as well as feeding into other Project documents. Necessary system improvements would be identified and raised as corrective actions. Any changes to this CEMP would be managed in accordance with Section 9.2.

9.2 Revision of this Plan

Periodic assessments and reviews of this CEMP and Sub-plans will be conducted by project management personnel as required or at least every six months from the commencement of construction. This review will generate actions for the continual improvement of the CEMP and supporting management plans. The periodic or six monthly reviews of the CEMP will be offer specific opportunities to identify improvements in the documents. They would be updated as required:

- To take into account changes to the environment or generally accepted environmental management practices, new risks to the environment, any hazardous substances, contamination or changes in law
- Where requested or required by DPE or any other authority
- In response to internal or external audits or quarterly management reviews, modification of approval, as results of complaints, incidents, non-compliance.

The updated plans must be endorsed by the GRCLR Environment and Sustainability Manager and approved internally by the Project Director.

Modifications to the CEMP or management sub plans must be submitted to the ER for endorsement. Minor amendments and administrative changes to CEMP may be approved by the ER, with consultation with the AA if relevant. These amendments will be included in the six monthly Construction Compliance Report in accordance with CoA A37.

Minor changes would typically include those that:

- Are editorial in nature (e.g. staff and agency/Authority name changes)

- Do not increase the magnitude of impacts on the environment when considered individually or cumulatively
- Are in response to audit findings or periodic reviews
- Do not comprise the ability of the Project to meet approval or legislative requirements.

Where the Environmental Representative deems it necessary, the revised plans would be provided to relevant stakeholders for review and comment if required and forwarded to the Secretary of DPE for approval. The revised CEMP would be provided to ER and TfNSW for review prior to submission to any stakeholders or the Secretary.

10 Documentation

10.1 Environmental Records

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

- CEMP and sub plans
- Procedures and protocols
- Monitoring programmes
- Checklists, forms and templates
- internal and external audit reports
- records of the Contractor's Subcontractors monitoring their own activities
- records of the Contractor's monitoring of Subcontractors activities
- risk management records.

Environmental records may include, but are not limited to:

- All monitoring, inspection and compliance reports/records
- Surveillance and audits of subcontractors' environmental performance and controls
- Register of equipment used for environmental monitoring, equipment calibration frequency and certificates
- Correspondence with public authorities
- Environmental training including:
 - Who was trained
 - When the person was trained
 - The name of the trainer
 - A general description of the training content.
- Reports on environmental incidents, other environmental non-compliances, complaints
- and follow-up action
- Minutes of the CEMP and construction EMS review meetings and any resulting actions
- Results of internal and external audits.

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 GRCLR Environment and Sustainability Manager, or their delegate, has the authority to change any of the environmental management documentation.

10.2 Document Control

GRCLR will coordinate the preparation, review and distribution of the environmental documents. The latest version of all documents would be retained on the Project

document management system. GRCLR will implement appropriate document control processes using Teambinder and Aconex to control the flow of documents within and between GRCLR and TfNSW, stakeholders and subcontractors. All environmental records will be retained for a period of no less than five years from the last Date of Portion Completion.

The process will also ensure that documentation is:

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

A register will identify current document revisions, records or data. The Document Register will be maintained in the GRCLR IMS. Additionally, a copy of the EPL will be kept at the premises and available for inspection by any employee or agent of the licensee working at the premises, as well as being produced on request to any authorised officer of the EPA (Conditions G1.1-1.3 of the EPL).

Appendices

Appendix A1: Relevant Legislation

Act	Summary of Obligations
<p><i>Environmental Planning and Assessment Act 1979</i></p> <p><i>Environmental Planning and Assessment Regulation 2021</i></p>	<p>This Act and Regulation establishes a system of environmental planning and assessment of development proposals for the State.</p>
<p><i>Protection of the Environment Operations Act (1997) and Subordinate Regulations</i></p>	<p>The object of the Act is to achieve the protection, restoration and enhancement of the quality of the NSW environment. The Act repealed and consolidated a number of existing Acts to rationalise, simplify and strengthen the regulatory framework for environmental protection in NSW.</p> <p>Subordinate Regulations include:</p> <ul style="list-style-type: none"> • Protection of the Environment Operations (Clean Air) Regulation 2022 • Protection of the Environment Operations (General) Regulation 2022 • Protection of the Environment Operations (Waste) Regulation 2014
<p><i>Local Government Act 1993</i></p> <p><i>Local Government (General) Regulation 2005</i></p>	<p>The Local Government Act and Local Government (General) Regulation provide a legal framework for an environmentally responsible system of Local Government including the responsibility to administer various regulatory systems (e.g. Environmental Planning, Development Consents).</p>
<p><i>Roads Act 1993</i></p> <p><i>Roads (General) Regulation 2000</i></p>	<p>This Act and Regulation primarily provide for such things as the opening and closing of public roads, identification of road boundaries and road widening, road levels, classification of public roads, road work, protection of public road and regulation of traffic, regulation of work, structures and activities.</p>
<p><i>Soil Conservation Act 1938</i></p>	<p>This Act makes provision for the conservation of soil resources, farm water resources and the mitigation of erosion. The Act is binding on the Crown; however, the Crown is not liable for prosecution. The Act provides for notification in the government gazette catchments where erosion is liable to cause degradation of rivers, lakes etc. (i.e. protected land).</p>
<p><i>Environment Protection and Biodiversity Conservation Act 1999</i></p>	<p>The main purpose of this Act is to provide for the protection of the environment especially those aspects that are of national environmental importance and to promote ecological sustainable development. The Act binds the Crown. Do not take, use, keep or interfere with “nationally significant” cultural and natural resources, protected wildlife and protected plants without Approval.</p>

Act	Summary of Obligations
<p><i>Biodiversity Conservation Act 2016,</i></p> <p><i>Local Land Services Act 2013</i></p>	<p>This Act and Regulation provide for the conservation and management of Native Vegetation by requiring Development Consent to be obtained for the clearing of Native vegetation.</p> <p>This Act and Regulations also provide for obtaining licenses to harm or pick threatened species populations or ecological communities whether plant or animal or to damage any critical habitat. The offence of picking or harming any threatened species is covered under the National Parks & Wildlife Act Part 8A. It is a defence under Part 8A of that Act if the offence was essential to carrying out development that is in accordance with a Development Consent within the meaning of the EP&A Act or an approval within the meaning of Part 5 of the EP&A Act.</p>
<p><i>Land and Environment Court Act 1979</i></p>	<p>The Land and Environment Court is constituted under this Act. The jurisdiction of the Court is divided into numerous classes. The relevant classes for the project cover matter such as the prosecution for offences under various environmental legislation and to appeal against permits or orders.</p>
<p><i>Greenhouse Gas (GHG) Emissions National Greenhouse and Energy Reporting Act 2007</i></p>	<p>Corporations emitting more than 50kT of carbon dioxide equivalent units are required to register and report their Scope 1 and Scope 2 emissions for all Facilities in which they have Operational Control.</p> <p>Facilities emitting more than 25kT of carbon dioxide equivalent units must register and report Scope 1 and Scope 2 emissions.</p>
<p><i>Contaminated Land Management Act 1997</i></p> <p><i>Contaminated Land Management Regulation 2013</i></p>	<p>This Act provides for a process to investigate and remediate land that has been contaminated and presents a significant risk of harm to human health. Section 60 of the Act is a "Duty to Report Contamination". This duty applies to owners of land and persons who become aware their activities have contaminated the land.</p>
<p><i>Rural Fires Act 1997</i></p>	<p>This Act is intended to prevent, mitigate and suppress bush and other fires. It places a duty on Laing O'Rourke as the occupier of the site to extinguish fires during bush fire danger periods or if unable to do so notify appropriate firefighting authorities of the existence of the fire and its location.</p>
<p><i>Environmentally Hazardous Chemicals Act 1985</i></p>	<p>This Act prohibits the manufacturing, processing, keeping, distributing, conveying, using, selling or disposing of an environmental hazardous chemical or waste (prescribed activity) except under the provisions of a chemical control or a licence. The EPA is required to prepare inventories of environmentally hazardous chemicals and declared chemical wastes.</p>

Act	Summary of Obligations
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i>	The purpose of this Act is to regulate the transport of Dangerous Goods by road and rail in order to promote public safety and protect property and the environment. The transport of Dangerous Goods is required to be appropriately licensed (both vehicle and driver).
<i>Water Management Act 2000</i> <i>Water Management (General) Regulation 2018</i>	This Act repeals the Rivers and Foreshores Improvement Act, 1948 and the Water Act, 1912. The provisions of both the aforesaid Acts are progressively rescinded as Water Management Plans are prepared and gazetted for catchment areas within the state. This Act and Regulation provide for the protection, conservation and ecologically sustainable development of water sources of the State and in particular to protect, enhance and restore water sources and their associated ecosystems.
<i>National Parks and Wildlife Act 1974</i>	The relevance of this Act is firstly in respect to the protection and preservation of aboriginal artefacts. Discovery of material on site suspected as being of aboriginal origin must be reported and protected pending assessment and direction by TfNSW's Representative. Secondly, it is an offence under Part 8A of this Act to pick or harm threatened species. (Refer to the notes under the Threatened Species Conservation Act for more information)
<i>Biosecurity Act 2015</i> <i>Biosecurity Regulation 2017</i>	This Act relates to diseases and pests that may cause harm to human, animal or plant health or the environment, and for related purposes. Declared weeds are listed in Schedule 8 of the Biosecurity Regulation 2017.
<i>Water Act 1912</i>	This Act provides for licences to extract water for construction purposes either from surface or artesian sources. Should construction water be extracted from surface (other than sedimentation ponds) or artesian sources a licence will be required.
<i>Heritage Act 1977</i>	This Act provides for the preservation and conservation of heritage items such as building, works, relic, and places of historic interest, scientific, cultural, social, archaeological, architectural, natural or aesthetic significance. Under this Act a relic means any deposit, object or material evidence which is 50 or more years old and relates to the settlement of the area (not being an aboriginal settlement). It is an offence under this Act to wilfully and knowingly damage or destroy items of heritage value. Do not demolish damage, move or develop around any place, building, work, relic, moveable object, precinct, or land that is the subject of an interim heritage order or listing on the State Heritage Register or heritage

Act	Summary of Obligations
	listing in a Local Environmental Plan without an approval from the Heritage Council (NSW) or local council.
<i>Aboriginal and Torres Strait Islander Heritage Protection Act 1984</i>	This Act provides for the preservation and protection from injury or desecration to areas and objects of significance to Aboriginals. Areas and objects can be protected by Ministerial Declaration and it is then an offence to contravene such a declaration.

Appendix A2: Environmental Risk Register

Risk Ref #	Environmental Aspect	Impact **	Impact Category	Site Specific Risk Description ***	Risk category	Project specific Location(s)	Existing Standard Controls and Assumptions	Consequence	Likelihood	Rating	Additional Project or Site Specific Management Actions	Responsibility (Risk Owner)
1 1	Project vehicle movements in the public domain - all activities	Traffic congestion due to high volume of construction vehicles around the TPS and Stop construction zones and SAMF	Traffic, Transport and Access	Complaints received on community hotline	Reputation - Community	Haulage routes to SAMF and construction sites Construction zones at the TPS and Stop construct on areas Back Up Control Centre	Traffic, Transport and Access Management Sub Plan - Road deliveries would be scheduled to avoid peak road congestion periods Traffic Management/Control Plan developed by Traffic team detailing haulage routes and delivery timeframes. Road closures will be subject to ROL approvals and traffic changes will be undertaken during off peak times where possible	Minor Likely	Low	None	The structural elements of the TPS and Stops will be prefabricated off site and lifted into place.	D&C Environmental Manager
1 2	Project vehicle movements in the public domain - all activities	Noise emissions from construct on vehicles impacting sensitive receivers	Noise and Vibration	Complaints received on community hotline	Reputation - Community	Haulage routes to SAMF Construction zones at the TPS and Stop construct on areas Back Up Control Centre	Traffic, Transport and Access Management Sub Plan - Road deliveries would be scheduled to avoid key sensitive periods as much as is practicable. The Noise and Vibration Management Plan (NVMS) details the protocols and assessment requirements for working out of the approved construct on hours specified in CoA E21 and E22.	Minor Likely	Low	None	The Project will implement an Out-of-Hours Work Protocol to meet the requirements of EPL 21606.	D&C Environmental Manager
1 3	Project vehicle movements in the public domain - all activities	Construction heavy vehicles using public roads prohibited by EPO TT-26 (Railway Pde Westmead, Trott St North Parramatta and Noller Pde Parramatta)	Traffic, Transport and Access	Non-compliance with approval	Environment - Environment Effects / Cultural Heritage	TPS2, Fennel St/Prince Alfred Square Stops, Harris Street Stop	Site Specific Traffic Management Plan and WMSs include requirement to not using these roads	Minor Likely	Risk	None		
2 1	Light emissions during night-time activities - all activities	Disturbance of nearby receivers	Community	Complaints received on community hotline	Reputation - Community	Residents adjacent to night works during construction for TPS and Stop construct on areas and Back Up Control Centre	The Project will implement the Out-of-Hours Work Protocol to meet the requirements of EPL 21606 which includes light spill control provisions. OOHW inspections will review and address identified light spill issues.	Minor Likely	Low	None		D&C Environmental Manager
3 1	Greenhouse gas emissions - all activities	Contribution to climate change	Community	Not applicable - due to its relatively small scale and temporary nature, the construction works would have a minor influence on climate change through greenhouse gas emissions.	Environment - Environment Effects / Cultural Heritage	Whole alignment	Delivery Phase Sustainability Management Plan includes greenhouse gas reduction strategies to be implemented during construction.	Minor Very Likely	Low	None		D&C Environmental Manager
4 1	Waste production - all activities	Excessive waste production and landfill reliance	Waste and Hazardous Material	Cost to project for disposal of waste.	Financial - Project / Program / TPD Budgets	SAMF site TPS and Stop construct on zones	Waste and Resources Management Sub Plan - The following strategies would be employed to minimise impacts: Apply waste management hierarchy, use or pre-fabricated infrastructure, classification and segregation of waste to minimise landfill quantities, use lined waste facilities and track waste movements, training of staff to minimise landfill waste volumes and manage waste appropriately.	Minor Likely	Low	None		D&C Environmental Manager
4 2	Waste production - all activities	Poor waste management practices	Waste and Hazardous Material	Inappropriate waste handling and disposal	Environment - Environment Effects / Cultural Heritage	All project areas	Waste and Resources Management Sub Plan - The following strategies would be employed to ensure waste is managed appropriately. Waste audits, site inspections, toolboxes/training	Moderate Unlikely	Low	None		
5 1	Resource use - all activities	Excessive resource use	Environment	Project cost, resource use and waste volumes	Financial - Project / Program / TPD Budgets	SAMF site TPS and Stop construct on zones Back Up Control Centre	Waste and Resources Management Sub Plan - The following strategies would be employed to minimise impacts: Where practicable, surplus existing materials will be identified and utilised where fit for purpose, products and materials containing recycled content or packaging used as a preference to non-recycled materials, consideration of embodied carbon of construction materials, preference for locally sourced goods and services (Procurement Plan), efficient use of energy and water (DPSMP), training of staff in best practice, monitoring of resource use (DPSMP).	Minor Likely	Low	None		GRCLR Environment and Sustainability Manager
6 1	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation	Dust emissions reducing air quality for offsite receivers	Air and Dust	Complaints received on community hotline Complaints received and investigation from regulators resulting in potential stop work	Reputation - Community	SAMF site TPS and Stop construct on zones Back Up Control Centre	Air Quality Management Sub Plan - The following strategies would be employed to minimise impacts: perimeter screening, stabilisation of unsealed ground, modification of activities according to wind speed, dust suppression techniques to work areas and stockpiles, covering of haul roads, dust monitoring, training, regular review of mitigation effectiveness.	Minor Likely	Low	None		D&C Environmental Manager

6.2	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation -Craneage -Stop infrastructure installation	High noise and vibration levels impacting offsite receivers	Noise and Vibration	Complaints received on community hotline Complaints received and investigation from regulators resulting in potential stop work Damage to properties or sensitive equipment Breach Project EPL	Reputation - Community	SAMF site TPS and Stop construction zones Back Up Control Centre	Construction Noise and Vibration Management Sub Plan - The following strategies would be employed to minimise impacts: noise and vibration monitoring at nearby receivers, application of noise and vibration abatement strategies if required, high noise tasks to be scheduled to minimise disruptions to receivers, respite periods to be applied as required, notification of nearby receivers of high noise activities, training, regular review of mitigation effectiveness.	Minor Likely	Low	The Project will implement an Out-of-Hours Work Protocol to meet the requirements of EPL 21606.	D&C Environmental Manager
6.3	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation	Sediments, wastes and contaminants impacting land	Land Contamination	Breach of PoEO Act and EPL 21606 Complaints by regulator (EPA) or council resulting in stop work notice	Environment - Environment Effects / Cultural Heritage	SAMF site TPS and Stop construction zones Back Up Control Centre	Soil and Water Management Sub Plan & Waste and Resources Management Sub Plan - The following strategies would be employed to minimise impacts: Maintenance to ensure effective functioning of the site boundary erosion on sediment control fence and water treatment plant, progressive erosion and sediment controls around work areas, good site housekeeping, location of stockpiles, wastes and contaminants outside of drainage lines and flood-prone areas, unexpected contamination finds procedure, environmental incident and emergency response procedure to be followed in case of contaminant spills, availability of spill kits, appropriate storage of contaminants and wastes to prevent escape, training, regular review of mitigation effectiveness.	Moderate Unlikely	Low	Environmental Control Maps will be prepared for each construction zone and will incorporate relevant sensitive areas, mitigation measures and controls, including those from relevant management sub plans. ECOMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simple written instructions.	D&C Environmental Manager
6.4	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation -Craneage -Stop infrastructure installation	Sediments, wastes and contaminants impacting water quality	Water Pollution	Breach of PoEO Act and EPL 21606 Complaints by regulator (EPA) or council resulting in stop work notice	Environment - Environment Effects / Cultural Heritage	SAMF site TPS and Stop construction zones Back Up Control Centre	Soil and Water Management Sub Plan & Waste and Resources Management Sub Plan - The following strategies would be employed to minimise impacts: Maintenance to ensure effective functioning of the site boundary erosion on sediment control fence and water treatment plant, progressive erosion and sediment controls around work areas, monitoring of water treatment plant discharge, good site housekeeping, testing and treatment of any groundwater abstracted or rainwater collected prior to discharge, location of stockpiles, wastes and contaminants outside of drainage lines and flood-prone areas, unexpected contamination finds procedure, environmental incident and emergency response procedure to be followed in case of contaminant spills, availability of spill kits, appropriate storage of contaminants and wastes to prevent escape, training, regular review of mitigation effectiveness.	Major Unlikely	High	Environmental Control Maps will be prepared for each construction zone and will incorporate relevant sensitive areas, mitigation measures and controls, including those from relevant management sub plans. ECOMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simple written instructions.	D&C Environmental Manager
6.5	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation -Craneage -Stop infrastructure installation	Impact to heritage	Heritage	There is no known heritage within the SAMF site. Remediation of the site would preclude the potential for undiscovered heritage. All works at the Stop construction zones is above ground however heritage buildings are in close proximity to works.	Environment - Environment Effects / Cultural Heritage	Stops construction zones Back Up Control Centre	Heritage Management Sub Plan - Unexpected Finds Procedure	Moderate Very Unlikely	Low	Environmental Control Maps will be prepared for each construction zone and will incorporate relevant sensitive areas, mitigation measures and controls, including those from relevant management sub plans. ECOMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simple written instructions.	D&C Environmental Manager
6.6	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation -Craneage -Stop infrastructure installation	Impact to flora and fauna	Flora and Fauna	Most vegetation removal has been completed prior to Supply Operate and Maintain Works (Package 5) Tree removal at TPS sites Tree pruning during OHV installation Impacts on Grey-headed Flying Fox colony	Reputation - Government / Media Stakeholders	SAMF site TPS and Stop construction zones Back Up Control Centre Alignment	If any flora or fauna are identified within a construction zone the Flora and Fauna Management Sub Plan requirements will be implemented Flying Fox Monitoring program will be implemented to assess impacts of construction works.	Minor Very Likely	Low	Environmental Control Maps will be prepared for each construction zone and will incorporate relevant sensitive areas, mitigation measures and controls, including those from relevant management sub plans. ECOMs are specifically designed to communicate requirements, actions, processes and controls to construction personnel using plans, diagrams and simple written instructions.	D&C Environmental Manager
6.7	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation	Disturbance to contaminated and resulting in inappropriate waste disposal / material cross contamination / inappropriate site management of material	Waste and Hazardous Material	Stop work delays affecting project programme, and increased costs (material management / disposal costs) Regulatory fine / prosecution	Environment - Environment Effects / Cultural Heritage	SAMF site AeIS identified in the EIS Areas remediated PCPLR	Contaminated Land Management Plan - The following strategies would be employed to minimise impacts: Implementation of LTEMPS for sites. Visual inspections and monitoring will be performed during excavation. Unexpected contaminated material will be dealt with in accordance with the Unexpected Finds Procedure. Contaminated materials will be stored in an impervious bunded area and covered to avoid the risk of leachate, odours or contaminated dust, as directed by a suitably qualified person. Staff will be trained on the identification and management of potential contamination issues.	Moderate Likely	Medium	None	D&C Environmental Manager
6.8	Civil construction: -Earthworks -Drainage installation -CSR installation -Fencing and gates installation -Roadworks -Utilities installation	Food impacts to neighbouring properties	Community	Construction activities such as: stockpiling, inappropriate ERSER controls or poor housekeeping obstructing site drainage or water flowpaths.	Environment - Environment Effects / Cultural Heritage	All project areas	The Construction Soil and Water Management Plan and Construction Flood Management Plan requirements will be implemented to avoid flooding impacts to neighbouring properties	Moderate Very Unlikely	Low	Ensure work site can be evacuated and people and plant if flood is expected.	D&C Environmental Manager
6.9	Civil construction: -Earthworks -Drainage -Landscaping	Contamination of site as a result of contaminated material import	Land Contamination	Materials imported without appropriate certificates containing contaminants	Environment - Environment Effects / Cultural Heritage	SAMF, TPS and BOCC	WRMP details controls for imported material. Engineering team to maintain material import register, internally audited during construction by EPS team	Moderate Unlikely	Low	None	D&C Environmental Manager Engineering Team

61	Civil construction: -Earthworks -Utilities -Drainage -Landscaping	Non-compliance with regulatory requirements (LTEMP)	Land Contamination	Requirements of LTEMPs not implemented during construction activities	Financial - Project / Program / TPD Budgets	SoMf Other areas subject to a LTEMP	LTEMPs included in EMS. LTEMP requirements included in WMSs. Dedicated resources for implementation of LTEMP at SoMf.	Minor Unlikely	High	Fortnightly review of water extraction data	D&C Environmental Manager Engineering Team
71	Testing and commissioning -LRV -BOCC -TPS	Noise impacts to nearby receivers on power up and testing of PLR components	Noise and Vibration	Complaints received on community hotline Complaints received and investigation from regulators resulting in potential stop work	Reputation - Community	Whole alignment	Construction Noise and Vibration Management Sub Plan - The following strategies would be employed to minimise impacts: Pre-works sampling to derive appropriate values, noise emission monitoring at nearby receivers, application of noise abatement strategies if required, high noise tasks to be scheduled to minimise disruptions to receivers, rest periods to be applied as required, notification of nearby receivers of high noise activities, training, regular review of mitigation effectiveness.	Minor Likely	Low	The Project will implement the Out-of-Hours Work Protocol to meet requirements of EPL 21606. An application to vary the EPL may be required to allow OOHW testing and commissioning works.	D&C Environmental Manager
72	Testing and commissioning -LRV -BOCC -TPS	Traffic impacts as a result of testing and commissioning	Traffic, Transport and Access	Complaints received on community hotline Complaints received and investigation from regulators resulting in potential stop work	Reputation - Community	Whole alignment	Construction traffic management plan processes to be followed to undertake testing and commissioning with minimal impact.	Minor Unlikely	N/A	None	D&C Construction Management Team
73	Whole of project duration	Non-compliance with regulatory requirements (Planning Approval/EPL/Legislation)	Systems and Documentation	Administrative Prosecution or suspension of Project Approval EPL 21606	Financial - Project / Program / TPD Budgets	N/A	Training to be implemented in accordance with the CEMP and Sub-plans to ensure site staff are aware of environmental obligations. The Project Induction and Pre-starts are utilized to address items that are prior to that stage of construction (such as works around heritage items) Regular compliance audits and inspections and reporting will track performance against CEMP requirements and allow gap analysis for close out actions. Quarterly compliance reviews against Planning Approval. Annual Return for EPL 21606.	Severe Unlikely	Very High	None	D&C Environment Manager
81	Sustainability - Contract	Project unable to meet contractual ISC Target	Economic	Non-conformance with contractual obligation	Financial - Project / Program / TPD Budgets	N/A	Dedicated sustainability resource engaged to develop and implement sustainability delivery management plan and drive development/support the project during the ISC submission process.	Moderate Unlikely	Low	None	D&C Environment and Sustainability Manager
82	Sustainability - Waste Management	Project unable to meet contractual waste diversion targets	Environment	Non-conformance with contractual obligation and inability to meet ISC Was 1 & 2 credits	Sustainability Performance	N/A	Implementation of the project WRMP and DPSMP. Frequent auditing and tracking to determine performance against target.	Moderate Likely	Medium	None	D&C Environment and Sustainability Manager
83	Sustainability - Procurement	Unable to meeting procurement requirements in Contract/ISC due to multiple contractor involvement	Economic	Procurement processes not aligned with Pro 1- requirements. Subcontractor assessments not considering sustainability during on-boarding. Missed innovation opportunities.	Sustainability Performance	N/A	Procurement policies and plans to be reviewed and assessed across all contractors to ensure alignment with principle contractor procurement principles.	Moderate Likely	Medium	None	D&C Environment and Sustainability Manager D&C Procurement Manager
84	Sustainability - Resource Usage	Design and construction activities do not meet contractual Energy, Water and Material Reduction Targets	Environment	Non-conformance with contractual obligation and inability to meet ISC Mat 1 & 2, Enr 1 & 2 and Wat 1 & 2 Credits.	Sustainability Performance	N/A	Implementation of reduction strategies outlined in the DPSMP during construction. Dedicated resource to manage and review sustainability considerations during design and model performance.	Moderate Unlikely	Low	None	D&C Environment and Sustainability Manager
85	Sustainability - Climate change	Climate change not considered during design and operations	Environment	Climate change adaptations not considered and addressed in detailed design.	Sustainability Performance	N/A	Dedicated resource to manage and review climate change considerations during design and to monitor performance during construction and operations.	Moderate Unlikely	Low	None	D&C Environment and Sustainability Manager
86	Sustainability - Social	Community consultation and engagement not sufficient to empower community to provide feedback or be engaged with the project.	Social	Community consultation and engagement not undertaken or consistent enough to inform, include and empower local community groups during design and construction.	Sustainability Performance	N/A	Community engagement team to implement CSEP, supported by Sustainability resource to align with ISC requirements. Auditing of community engagement process and feedback by external communications expert/professional.	Moderate Unlikely	Low	None	D&C Environment and Sustainability Manager D&C Community Engagement Manager

Appendix A3: Environmental Policy

GREAT RIVER CITY LIGHT RAIL ENVIRONMENT AND SUSTAINABILITY POLICY

Intent

Great River City Light Rail Pty Ltd (GRCLR) is the Supply, Operate and Maintain (SOM) Contractor for Parramatta Light Rail Stage 1. We understand what goes into making every journey an exceptional customer experience that is safe, reliable and integrated with other modes of transport.

GRCLR will design, construct, operate and maintain a world-class light rail network that empowers prosperity for the Greater Parramatta Area and supports the realisation of the Future Transport 2056 Strategy.

GRCLR is committed to ensuring an environmentally sustainable future for Parramatta Light Rail, our customers and the Greater Parramatta Area.

Policy

To achieve this, GRCLR will:

1. Lead effectively and live our accountabilities and responsibilities at all levels of the organisation, starting with the Directors through to employees and Subcontractors. This includes all upholding the principles of social sustainability and social accountability across our workforce, our activities and our supply chain;
2. Comply with all environmental requirements included in relevant legislation, the Conditions of Approval, Preferred Infrastructure Report and the Environmental Impact Statement;
3. Integrate sustainability principals across all GRCLR activities, including design, construction, procurement, commissioning, operations and maintenance;
4. Collaborate with and proactively engage with all stakeholders at all levels;
5. Create a culture of continuous improvement for environment and sustainability management;
6. Understand, comply with and embrace our environment and sustainability compliance obligations;
7. Establish annual objectives for environmental management and regularly verify the compliance and effectiveness of the measures to ensure that objectives are met;
8. Promote an environmentally aware, sustainability-focused culture within GRCLR, stakeholders, customers and the Greater Parramatta Community;
9. Commit to the prevention of pollution, protection of biodiversity, implementation of restorative actions, minimisation of resource use and waste, reduction of greenhouse gas emissions, and enhancement of climate change resilience through adaptation and mitigation across the delivery of works and during operations; and
10. Plan effectively, and provide and use the necessary resources to meet environmental objectives.

To support this policy, GRCLR has established an Integrated Management System (IMS), with appropriate policies, procedures and practices in place, which captures the requirements of AS/NZS ISO 14001:2016.

This Policy will be communicated to and applies to all GRCLR employees and Subcontractors, and will be made publicly available.


Peter Matthews
Project Director

GREAT RIVER CITY LIGHT RAIL
LIFE MORE LIVEABLE 

Document Owner	Document Number	Version	Date of Issue	24/09/2021
Peter Matthews	PLR1SOM-GLR-ALL-PM-PRO-000004	3	Last Review Date	09/09/2021
			Review period	Annual
			Next review Date	09/09/2022

Appendix A4: Environmental Inspection Checklist

GRCLR Environmental Inspection Checklist

Project/Work Area & Activity:			
Inspection Date:		Inspection Type:	<input type="checkbox"/> Dry <input type="checkbox"/> Rain
Rainfall (last 24hrs)		Rainfall (5 days)	
	mm		mm
Wind Conditions:	<input type="checkbox"/> Calm <input type="checkbox"/> Slight Wind <input type="checkbox"/> Strong Wind		

Inspection Item	Acceptable / Yes	Not Acceptable / No	N/A	Notes or Action required	By	Closed (date)
1. Approvals						
Is there an ECM/ESCP for the area of works?						
Are the relevant permits in place for the work activity? (out of hours/dewatering)						
Do site staff understand the risks in the work area?				Site Staff names:		
2. Water Quality						
Are erosion and sediment controls installed as per ESCP and in good working condition?						
Are catch or diversion drains adequate to control stormwater runoff, excavations covered and secured to prevent stormwater ingress?						
Do ERSED controls require de-silting/repair?						
Concrete washout established and maintained?						
3. Soil Conservation						
Are stockpiles are located away from waterways and drainage lines?						
Stockpiles adequately contained/covered?						

Inspection Item	Acceptable / Yes	Not Acceptable / No	N/A	Notes or Action required	By	Closed (date)
Do stockpiles require seeding/stabilizing?						
Is mud/soil from vehicle wheels present on public roads?						
4. Air Quality						
Is dust from construction visible during inspection?						
Are trucks carrying uncovered loose material entering or leaving site?						
Are plant and/or equipment generating visible emissions for more than 10 seconds?						
5. Flora and Fauna						
Is there protected/threatened flora and/or fauna present at area of works?						
Are sensitive areas and/or no-go zone fencing and signage in place?						
Are stockpiles kept away from no-go zones						
6. Landscape Rehabilitation						
Are there any areas where revegetation has been ineffective that require attention?						
Watering in adequate and as per revegetation /landscaping plan?						
7. Archaeology and Heritage						
Are known heritage items within the works zone?						
Are sensitive areas and/or no-go zone fencing and signage in place?						
8. Groundwater						
Has groundwater been intercepted during works?						
Is there a plan/procedure for dewatering?						
9. Noise and Vibration and Light Spill						

Inspection Item	Acceptable /	Not Acceptable /		Notes or Action required	By	Closed (date)
	Yes	No	N/A			
Is noise likely to impact nearby sensitive receivers?						
Are vibration generating activities being carried out likely to affect nearby structures or sensitive receivers?						
Are day-makers/lighting towers set-up in a way that prevents light spill to nearby receivers?						
Have receivers been appropriately notified of the works?						
10. Hazardous Substances and Dangerous Goods						
Are spill kits available/ accessible to plant operators?						
Are hazardous materials/ dangerous goods correctly stored on site? (e.g. bunded area)						
Refueling undertaken in designated areas or using spill mat/drip tray?						
11. Waste Management						
Is the site tidy and waste bins available?						
Are appropriate and segregated waste bins available?						
Is material being stockpiled separately to prevent cross-contamination?						
Are volumes of waste exported from site being tracked and recorded?						
Contaminated material handled, contained and disposed of appropriately?						
12. Sustainability						
Are energy/fuel re-use/ reduction opportunities being missed or poorly implemented on site?						
Are material re-use/ reduction opportunities						

Inspection Item	Acceptable / Yes	Not Acceptable / No	N/A	Notes or Action required	By	Closed (date)
being missed or poorly implemented?						
Is waste being segregated effectively?						
13. Energy Tracking						
Energy Meter Reading at project office/compound						
14. Water Tracking						
Water Meter Reading at project office/compound						

Additional Items/ Opportunities for Improvement/ Innovations			
Inspection by			
Signature:		Date:	

Appendix A5: SOM Organisational Charts

Figure A5 – 1 GRCLR Organisational Chart

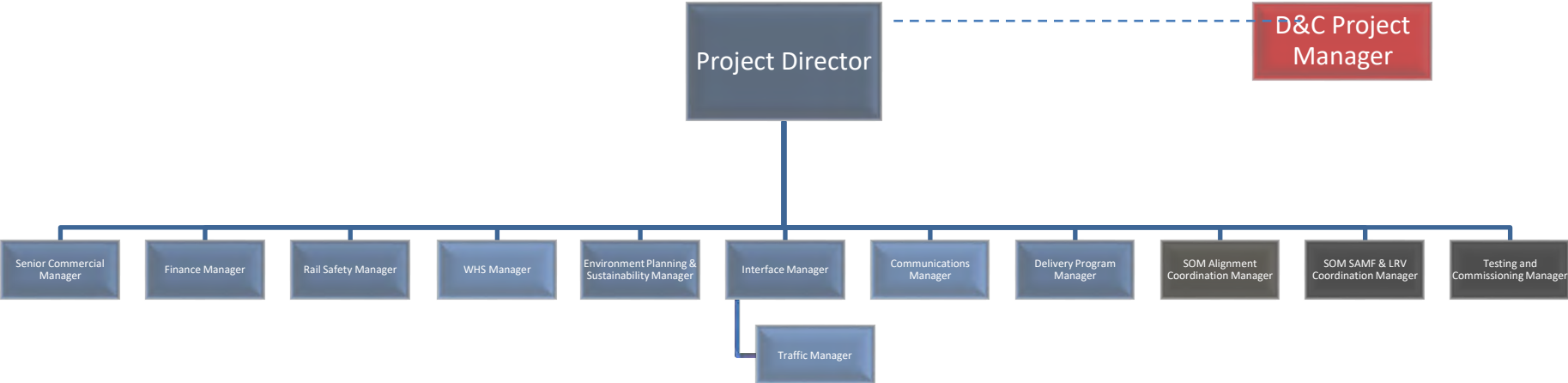


Figure A5 – 2 D&C Organisational Chart (Part A)

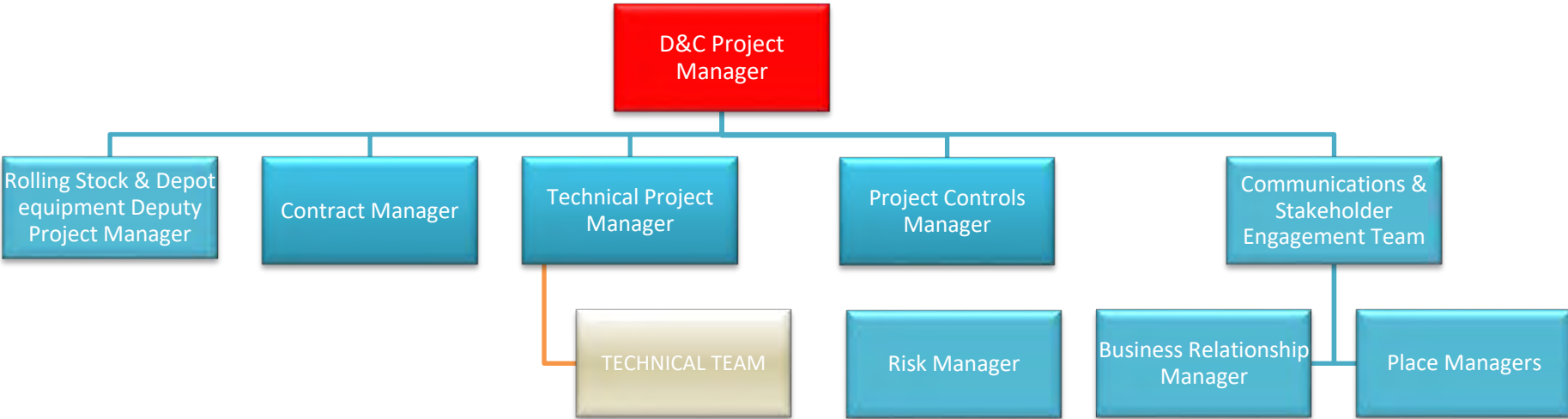
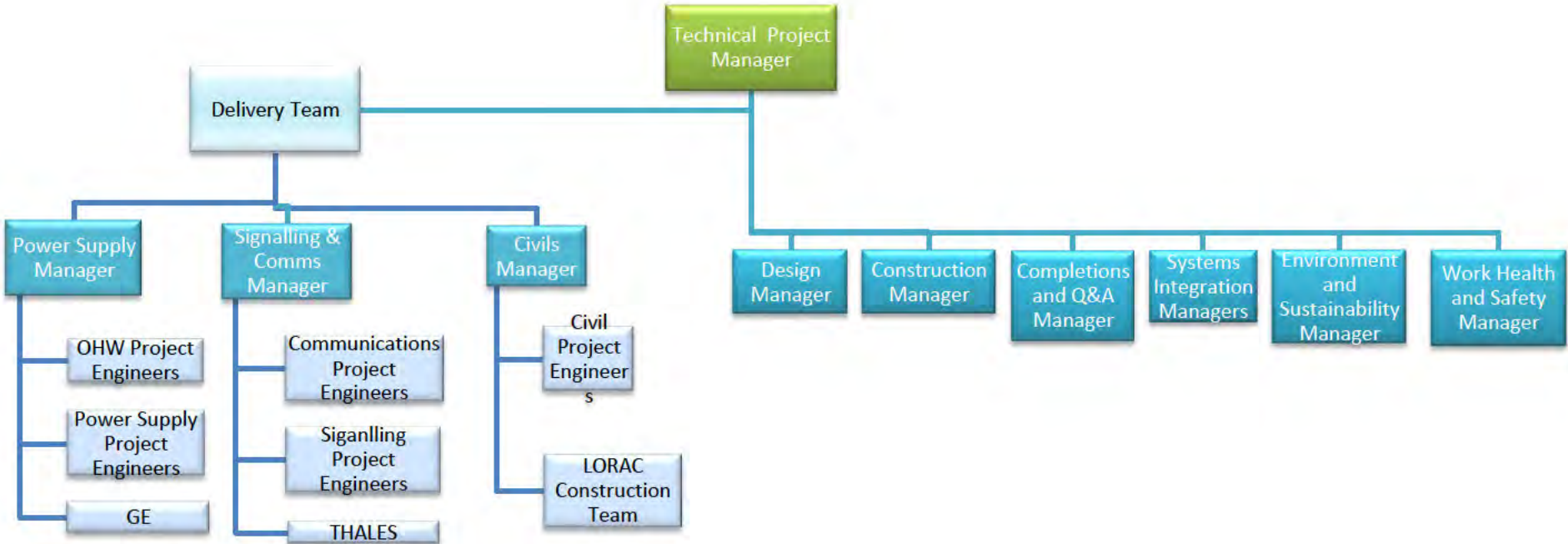


Figure A5 – 2 D&C Organisational Chart (Part B)



Appendix A6: CEMP Consultation Report

CoA A5 Consultation Report – Construction Environmental Management Plan

Transport for NSW

Supply, Operate, Maintain (SOM) Package 5

Parramatta Light Rail

November 2023

[PLR1SOM-GLR-ALL-EN-RPT-001002]



Appendix A7: Environmental Representative (ER) Endorsement

REF: AQ1148.05 PLR GLR CEMP rev7 endorsement 231122

Monday 22nd November 2023

██████████
Senior Manager Environment
Transport for NSW
Parramatta Light Rail

Re: Parramatta Light Rail, Construction Environment Management Plan. Supply, Operate, Maintain (SOM) Package

Pursuant to SSI8285 Condition of Approval A23 (d) ii), as the approved Environmental Representative, I confirm that I have reviewed the following updated documents for continued consistency with the requirements of the Conditions of Approval.:

- Construction Environment Management Plan (CEMP), Supply, Operate, Maintain (SOM) Package 5 - Parramatta Light Rail (PLR1SOM-GLR-ALL-PM-PLN-000014 Rev 7.1), dated 17/11/2023, and
- CoA A5 Consultation Report – Construction Environmental Management Plan, Supply, Operate, Maintain (SOM) Package 5 - Parramatta Light Rail (PLR1SOM-GLR-ALL-EN-RPT-001002 Rev E), dated 21/11/2023

In my opinion the aforementioned updated documents are consistent with the requirements included in or required under the terms of the Conditions of Approval for the Parramatta Light Rail (Stage 1) development.

These documents have been updated to include the testing and commissioning scope of works associated with the SOM package.

Yours sincerely,



██████████
Environmental Representative
The APP Group

██████████
██████████ [@app.com.au](mailto:██████████@app.com.au)

██████████
Senior Manager Environment and Sustainability
TfNSW
PO Box K659
Haymarket NSW 1240

12/12/2023

Subject: Parramatta Light Rail – Stage 1 – Package 5 - Supply, Operate and Maintain (SOM) Works Construction Environment Management Plan and Sub-Plans Update

Dear ██████████

I refer to your recent submission of the Construction Environmental Management Plan for the above Project Stage and its supporting suite of documents.

I note the documents:

- have been prepared in consultation with key stakeholders.
- have been reviewed by Transport for NSW and no issues have been raised with the department.
- have been endorsed by the Environmental Representative and Acoustic Advisor
- meet the relevant requirements of the conditions of SSI-8285

Accordingly, as nominee of the Planning Secretary, I approve the documents listed in Table 1 below, under conditions C1, C3 and C8 of SSI-8285.

Table 1: Documents for Approval

Document Name	Document Version	Reference Number
Construction Environmental Management Plan (CEMP)	V7.1 20/11/23	PA-356
Construction Noise and Vibration Management Plan (CNVMP)	V4.1 20/11/23	PA-356
Construction Heritage Management Plan (CHMP)	V2 8/11/23	PA-356

I also acknowledge submission of the documents listed in Table 2 below to the Planning Secretary for Information.

Table 2: Documents for Information

Document Name	Document Version	Reference Number
Construction Flora and Fauna Management Plan	V5.1 20/11/23	PA-356
Construction Traffic, Transport and Access Management Plan	V4.1 20/11/23	PA-356
Construction Soil and Water Management Plan	V4 20/11/23	PA-356
Construction Air Quality Management Plan	V4 18/10/23	PA-356
Construction Waste and Resource Management Plan	V4 18/10/23	PA-356
Contaminated Lands Management Plan	V2 18/10/23	PA-356

If there are any inconsistencies between the documents and the conditions of approval, the conditions prevail.

Please make the documents publicly available on the project website as soon as possible.

If you wish to discuss the matter further, please contact [REDACTED] at [REDACTED]

Yours sincerely

[REDACTED]

Acting Team Leader - Rail Infrastructure Management
Infrastructure Management
As nominee of the Planning Secretary