

# Redfern Station Upgrade – New Southern Concourse

## Appendix C: Construction Environmental Management Framework





# Redfern Station Upgrade - New Southern Concourse

## Appendix C - Construction Environmental Management Framework

# Redfern Station Upgrade - New Southern Concourse

## Appendix C - Construction Environmental Management Framework

Client: Transport for NSW

ABN: 18 804 239 602

Prepared by

**AECOM Australia Pty Ltd**

Level 21, 420 George Street, Sydney NSW 2000, PO Box Q410, QVB Post Office NSW 1230, Australia

T +61 2 8934 0000 F +61 2 8934 0001 www.aecom.com

ABN 20 093 846 925

09-Sep-2020

Job No.: 60597833

AECOM in Australia and New Zealand is certified to ISO9001, ISO14001 AS/NZS4801 and OHSAS18001.

© AECOM Australia Pty Ltd (AECOM). All rights reserved.

AECOM has prepared this document for the sole use of the Client and for a specific purpose, each as expressly stated in the document. No other party should rely on this document without the prior written consent of AECOM. AECOM undertakes no duty, nor accepts any responsibility, to any third party who may rely upon or use this document. This document has been prepared based on the Client's description of its requirements and AECOM's experience, having regard to assumptions that AECOM can reasonably be expected to make in accordance with sound professional principles. AECOM may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified. Subject to the above conditions, this document may be transmitted, reproduced or disseminated only in its entirety.



## Quality Information

Document Redfern Station Upgrade - New Southern Concourse

Ref 60597833

Date 09-Sep-2020

Proponent name Transport for NSW

Postal address Level 5, Tower A, Zenith Centre 821 Pacific Highway Chatswood NSW 2067

Prepared by Shani Walton

Reviewed by Rachel O'Hara, Justin Perrott

### Revision History

Rev	Revision Date	Details	Authorised
			Name/Position
7.0	22-May-2020	Final	Rachel O'Hara Principal Environmental Scientist, CEnvP
8.0	9-Sept-2020	Revised final for Response to Submissions Report	Justin Perrott TfNSW Associate Director Environmental Management

## Table of Contents

1.	Introduction	1
1.1	Purpose and scope	1
1.2	Project Delivery Strategy	1
1.3	Environment and Sustainability Policy	1
1.4	Project description	1
2.	Legislative and other requirements	2
2.1	Key legislative requirements	2
2.2	Environmental approvals	3
2.3	Standards and guidelines	3
3.	Environmental management requirements	4
3.1	Construction Environmental Management Framework	4
3.2	Sustainability Management Plan	4
3.3	Construction Environmental Management Plan	5
3.4	Environmental risks and opportunities	6
3.5	Construction Environmental Management Plans and supporting documents	6
3.6	Environmental control maps	6
3.7	Environmental Monitoring Assurance Program	7
3.8	Additional Environmental Assessments	7
3.9	Condition surveys	10
3.10	Construction document approvals	10
3.11	Training, Awareness and Competence	11
3.12	Environmental Incident Management	12
3.13	Environmental Representative	12
3.14	Roles and Responsibilities	13
3.15	Environmental Inspections and Auditing	13
3.16	Compliance Reporting	14
3.17	Review and revision	14
3.18	Environmental Records	15
4.	Stakeholder and Community Involvement	16
4.1	Overview	16
4.2	Community Liaison Management Plan	16
4.3	Business and Property Consultation	17
4.4	Complaint Handling	17
5.	General site works	18
5.1	Site Establishment	18
5.2	Pre-construction works	18
5.3	Piling and other Early Works	19
5.4	Archaeological Test, Excavation and Salvage Activities	19
5.5	Working Hours	19
5.6	Site Layout	22
5.7	Reinstatement	22
5.8	Cumulative Impacts	22
6.	Environmental Aspects	23
6.1	Construction Traffic Management	23
6.1.1	Construction Traffic Management Performance Outcomes	23
6.1.2	Construction Traffic Management Implementation	23
6.1.3	Construction Traffic Mitigation	24
6.2	Construction Noise and Vibration Management	25
6.2.1	Construction Noise and Vibration Management performance outcomes	25
6.2.2	Construction Noise and Vibration Management Implementation	25
6.2.3	Construction Noise and Vibration Mitigation	26
6.3	Heritage Management	26
6.3.1	Heritage Management performance outcomes	26
6.3.2	Heritage Management Implementation	27

	6.3.3	Heritage Mitigation	28
6.4		Visual Amenity Management	28
	6.4.1	Visual Amenity Management Performance Outcomes	28
	6.4.2	Visual Amenity Management Implementation	28
	6.4.3	Visual Amenity Mitigation	29
6.5		Soil and Water Management	29
	6.5.1	Soil and Water Management performance outcomes	29
	6.5.2	Soil and Water Implementation	30
	6.5.3	Soil and Water Mitigation	31
6.6		Water Resource Management	31
	6.6.1	Water Resource Management Performance Outcomes	31
	6.6.2	Water Resource Implementation	31
	6.6.3	Water Resource Mitigation	32
6.7		Air Quality Management	32
	6.7.1	Air Quality Management Performance Outcomes	32
	6.7.2	Air Quality Implementation	32
	6.7.3	Air Quality Mitigation	33
6.8		Flora and Fauna Management	33
	6.8.1	Flora and Fauna Management Performance outcomes	33
	6.8.2	Flora and Fauna Implementation	33
	6.8.3	Flora and Fauna Mitigation	33
6.9		Waste Management	34
	6.9.1	Waste Management Performance Outcomes	34
	6.9.2	Waste Implementation	34
	6.9.3	Waste Mitigation	35
Appendix A			
		TfNSW Environment and Sustainability Policy	A
Appendix B			
		DPIE EMP Preparation Checklist	B
Appendix C			
		Environmental Monitoring Assurance Program	C

## List of Tables

Table 2-1	NSW legislative requirements	2
Table 2-2	Environmental standards and guidelines	3
Table 3-1	Approval method for additional environmental assessment documentation	8
Table 3-2	Approval method for construction documentation	10
Table 6-1	Construction Traffic Management Implementation	23
Table 6-2	Construction Noise and Vibration Management Implementation	25
Table 6-3	Heritage Management Implementation	27
Table 6-4	Visual Amenity Management Implementation	28
Table 6-5	Soil and Water Management Implementation	30
Table 6-6	Water Resource Management Implementation	31
Table 6-7	Air Quality Management Implementation	32
Table 6-8	Flora and Fauna Management Implementation	33
Table 6-9	Waste Management Implementation	34

## List of Figures

Figure 3-1	Additional Environmental Assessment Flowchart	9
Figure 5-2	OOHW Protocol Flowchart	21

## 1. Introduction

### 1.1 Purpose and scope

This Construction Environmental Management Framework (CEMF) has been prepared for the Redfern Station Upgrade – New Southern Concourse (the Project). The CEMF sets out the environmental, stakeholder and community management requirements for construction. It provides a “road map” and linkage document between the planning approval documentation and the construction environmental management documentation.

### 1.2 Project Delivery Strategy

Novo Rail (the Contractor) is the appointed contractor undertaking the design and construction of the Project under an Alliance contract. The contractual framework involves a unified partnership between the Alliance parties, John Holland, Laing O’Rourke, Aurecon and TfNSW.

Novo Rail is responsible for the environmental management of the Project. This includes responsibility for environmental compliance by any subcontractors engaged. Novo Rail has adopted the Laing O’Rourke Environmental Management System, supported by key elements from the TfNSW Environmental Management System to fulfill its environmental obligations.

### 1.3 Environment and Sustainability Policy

The Contractor will develop a project specific Environment and Sustainability Policy that will reflect a commitment for the delivery of the Project to:

- align with, and support the Transport for NSW (TfNSW) Environment and Sustainability Policy (Appendix A)
- minimise impacts on the environment
- procure, deliver and promote sustainable transport options that promote value for money
- comply with relevant legislations
- build and support a transport system that improves social, environmental and economic needs.

Subcontractors will be required to undertake their works in accordance with this policy.

### 1.4 Project description

The Project involves the construction of a pedestrian concourse to the south of the existing Lawson Street concourse providing both lift and stair access to Platforms 1-10. The new pedestrian concourse will provide a new connection across the railway corridor, extending between Little Eveleigh Street and Marian Street in the suburbs of Redfern and Eveleigh and include associated interchange upgrades.

## 2. Legislative and other requirements

The key environmental obligations to be addressed are contained within this section including:

- key legislative requirements
- Project approval documentation
- Conditions of Approval
- other permits, approval and licences
- standards and guidelines.

### 2.1 Key legislative requirements

**Table 2-1** below identifies key NSW environmental legislative requirements and their application to the construction of the Project, current as at the date of this document. These legislative requirements will be regularly reviewed and updated by the Contractor and appointed Subcontractors. The CEMP will include a comprehensive register detailing legal requirements to be applied to the Project, which will be maintained through the life of the Project. The legal register in the CEMP will be reviewed on a six-monthly basis and/or in instances where significant legislative and or regulatory change occurs, relevant to the Project.

**Table 2-1 NSW legislative requirements**

Legislation and administering authority	Requirements	Application to Redfern Station Upgrade
<i>Contaminated Land Management Act 1997</i> NSW Environment Protection Authority (EPA)	The Act provides a process for the investigation and remediation of land where contamination presents a significant risk of harm to human health or some other aspect of the environment.	TfNSW must follow the process where contaminated land is identified.
<i>Dangerous Goods (Road and Rail Transport) Act 2008</i> EPA / SafeWork NSW	A licence is required for the storage (SafeWork NSW) and /or transport (EPA) of prescribed quantities of dangerous goods.	Contractors must obtain a licence where storage of dangerous goods would exceed licensable quantities
<i>Environmental Planning and Assessment Act 1979</i> Department of Planning, Industry and Environment (DPI&E)	Encourages proper environmental impact assessment and management of development areas for the purpose of promoting the social and economic welfare of the community and a better environment.	TfNSW must adhere to mitigation measures and conditions within the planning approval documentation. The proponent and their contractors must endeavour to deliver in a consistent manner within the assessed scope of works.
<i>Heritage Act 1977</i> NSW Department of Premier and Cabinet	The Act aims to encourage the conservation of the State's heritage and provides for the identification and registration of items of State heritage significance.	TfNSW projects assessed under Part 5.2 of the <i>Environmental Planning and Assessment Act 1979</i> (EP&A Act) are exempt from approvals required under Part 4 and permits required under section 139.
<i>Protection of the Environment Operations Act 1997</i> EPA	The relevant objective of the Act is to prevent environmental pollution and harm to the environment.	Contractors must implement strategies to prevent pollution of the environment.



Legislation and administering authority	Requirements	Application to Redfern Station Upgrade
<i>Roads Act 1993</i> Roads and Maritime Service (RMS)	The relevant objective of the Act is to regulate the carrying out of various activities on public roads.	As TfNSW is a public authority, approval from the relevant roads authority (City of Sydney Council) is not required however ongoing consultation will occur. Relevant Road Occupancy Licences (ROLs) or local Council equivalent will be obtained for any road closures required
<i>Waste Avoidance and Resource Recovery Act 2001</i> EPA	The objectives of the Act are to reduce environmental harm and provide for the reduction in waste generation.	Contractors must implement strategies to reduce waste volumes and report on waste generated.

## 2.2 Environmental approvals

Redfern Station Upgrade is classified as State Significant Infrastructure and approval has been sought from DPIE in accordance with Section 5.2 of the *Environmental Planning and Assessment Act 1979*.

Once approved, the requirements of the approval are to be complied with by TfNSW. Responsibility for implementing mitigation measures and conditions of approval will be allocated between TfNSW and the Contractor as appropriate.

## 2.3 Standards and guidelines

Numerous environmental publications, standards, codes of practice and guidelines are relevant to TfNSW construction and are referenced throughout this Construction Environmental Management Framework. A summary of these applicable standards and guidelines is provided in **Table 2-2**.

**Table 2-2** Environmental standards and guidelines

Standard / guideline	Relevant authority	CEMF reference
ISO 14001:2015 Environmental Management System – Requirements with Guidelines for Use	DPIE	Section 3.1
RMS Traffic Control at Worksites Manual	TfNSW	Section 6.1
AS 1742.3 Manual of uniform traffic control devices Part 3: Traffic control for works on roads	TfNSW	Section 6.1
Interim Construction Noise Guidelines (Department of Environment and Climate Change, 2009)	EPA	Section 6.2
AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting	EES	Section 6.4
Australian and New Zealand Guidelines for Fresh and Marine Water Quality	ANZECC	Section 6.5
Managing Urban Stormwater: Soil and Construction (Landcom, 2008)	EPA	Section 6.5
Waste Classification Guidelines (NSW EPA, 2014)	EPA	Section 6.9

Additional standards and guidelines are also referenced in the EIS. These would be incorporated into the CEMP, as indicated in the EIS.

The Construction contractor would prepare a detailed register of the relevant standards and guidelines to ensure these are referenced in the construction environmental documentation, as relevant.

### 3. Environmental management requirements

#### 3.1 Construction Environmental Management Framework

This project-specific CEMF has been developed to be consistent with the Environmental Management Systems established by TfNSW & Laing O'Rourke. It includes:

- a project-specific policy that addresses environmental and sustainability commitments
- the defined roles and responsibilities for managing environmental and sustainability requirements
- requirements for training, awareness and competence in addressing environmental and sustainability risks and opportunities.
- the processes for:
  - identifying and responding to changing legislative or other requirements
  - assessing design and construction methodology changes for consistency against the planning approvals
  - the identification and management of project specific environmental and sustainability risks and opportunities and appropriate mitigation measures
  - addressing environmental and sustainability requirements as part of procurement and supply chain delivery
  - management, investigation, reporting and notification of environmental events including incidents, complaints and corrective and preventative measures
  - monitoring and measurement of activities such as inspections, audits, and/or other monitoring programs
  - tracking and reporting performance against compliance targets
  - reviewing environmental and sustainability performance on a periodic basis.

All Subcontractors will be required to implement their works in accordance with this CEMF and the Contractor's EMS certified under AS/NZS ISO 14001:2015.

#### 3.2 Sustainability Management Plan

A Sustainability Management Plan (SMP) will be developed to address and detail:

- The requirements of the relevant planning approval documentation, any relevant conditions of other permits and licences, the sustainability provisions of the contract documentation, and this Construction Environmental Management Framework
- The sustainability management team structure, including key personnel, authority and roles of key personnel, lines of responsibility and communication, minimum skill levels of each role and interfaces with the overall project organisation structure
- strategies for adaptation to climate change, resource management (including energy, water and waste), workforce development, procurement and biodiversity management
- Sustainability initiatives to be implemented during the Project
- How sustainability initiatives will be identified and implemented
- The processes and methodologies for:
  - assurance, monitoring, auditing, corrective action, continuous improvement and reporting on sustainability performance
  - achieving the required ISCA performance under systems identified in contract documents
  - undertaking climate change risk assessment

- the identification and implementation of climate change adaption measures
- The approach to sustainable procurement including:
  - The processes and procedures that will be used to provide environmental and social improvement
  - The processes and environmental and social criteria that will be used for the selection of Subcontractors
  - The processes that will be used to ensure ethical sourcing of labour and materials
  - Where equipment, materials or labour are procured from locations outside Australia, the processes that will be used to ensure human rights impacts and risks are identified and mitigated.

### 3.3 Construction Environmental Management Plan

A Construction Environmental Management Plan (CEMP) and associated sub-plans, described further below, will be developed to address the requirements of the relevant planning approval documentation, the conditions of all other applicable permits and licences, the environmental provisions of the contract documentation and requirements and processes defined under the Construction Environmental Management Framework. The CEMP will be prepared in accordance with DPIE's *Environmental Management Plan Guideline* (DPIE, 2020). A preparation checklist is included in Appendix B.

As a minimum the CEMP will:

- Include a description of applicable activities to be undertaken during construction until asset-handover
- Include an environmental risk and opportunities methodology as described in further detail under Section 3.4 below
- For the CEMP and each sub-plan under the CEMP include a matrix of the relevant Conditions of Approval or Consent referencing where each requirement is addressed
- For the CEMP and each sub-plan under the CEMP, establish and implement objectives and targets, from the project-defined performance outcomes
- For each role that has environmental accountabilities or responsibilities, including key personnel, provide a tabulated description of the authority and roles of key personnel, lines of responsibility and communication, minimum skill level requirements and their interface with the overall project organisation structure
- Assign the responsibility for the implementation of the CEMP to the Contractor's Environmental Manager, who will have appropriate experience. The Contractor's Project Director or equivalent will be accountable for the implementation of the CEMP
- Include induction and training requirements and a summary of the Training Needs Analysis required in Section 3.10
- Management strategies for reviewing the effectiveness of mitigation measures
- Detailed processes and methodologies for surveillance and monitoring, auditing and review, and reporting on environmental and sustainability performance including compliance tracking
- Include procedures for emergency and incident management, non-compliance management, and corrective and preventative action
- Include procedures for the control of environmental records.

The CEMP and sub-plans will be prepared in consultation with relevant stakeholders in accordance with the conditions of approval. The CEMP and sub-plans will include a section on stakeholder comments and responses.

Following internal Alliance approval, the CEMP and sub-plans will be reviewed and approved by an independent Environmental Representative (ER) (see Section 3.12) prior to any construction works commencing.

### 3.4 Environmental risks and opportunities

A methodology has been established to address the management and implementation of environmental risks and opportunities. This process addresses the following:

- identification of applicable activities to be undertaken during construction until asset-handover
- identification of project-specific environmental hazards and opportunities associated with the identified activities
- ascertain the extent of risk and beneficial opportunities where applicable
- determine suitable mitigation measures proportionate to the extent of the risks and opportunities identified in order to avoid and minimise risk and realise beneficial opportunities where applicable
- allocation of defined responsibility for managing the risks and opportunities.

The environmental risks and opportunities will be maintained within a register under the CEMP. The register will be reviewed by relevant stakeholders at periodic intervals to assess the effectiveness of controls in place. The register's review frequency is to be observed based on the risk profile and other relevant influences including but not limited to, the introduction of new/alterd processes of significance; change in scope impacting on the controls under the Project; significant internal restructuring and legislative and regulatory change impacting upon the Project.

The identified risks and opportunities will be communicated to relevant individuals through updates to relevant documentation including the CEMP, project inductions, pre-work briefings, plant startup checks and toolbox talks and training and awareness sessions. Refer below to Section 3.11 Training, Awareness and Competence for further information.

### 3.5 Construction Environmental Management Plans and supporting documents

Issue-specific management plans will be prepared as part of the CEMP and SMP for high risk environmental aspects, and implemented to address relevant environmental impacts and opportunities for the full duration of the Project and at each stage of the Project. For medium to low risk aspects, Environmental Risk Action Plans (ERAPs) will be incorporated into the CEMP as identified in Section 6 of the CEMF.

The sub-plans will be structured with key headings. This will assist with facilitating the implementation of relevant requirements listed under Section 6 of the CEMF including project-specific CoAs requirements and performance outcomes.

The sub-plans are to align with TfNSW procedures where applicable will be prepared in accordance with DPIE's *Environmental Management Plan Guideline* (DPIE, 2020). The CEMP sub-plans will be prepared in consultation with relevant stakeholders in accordance with the conditions of approval. The CEMP sub-plans will include a section on stakeholder comments and responses.

### 3.6 Environmental control maps

Environmental Control Maps (ECMs) will provide detailed illustrative maps that outline controls for managing potential environmental impacts and opportunities within the Project area.

The ECMs will be prepared in accordance with TfNSW *Guide to Environmental Control Map* DMS-SD-015 and at a minimum will meet the below criteria:

- Reflect current and proposed representation of work areas
- Indicate which environmental procedures or environmental approvals are applicable
- Illustrate work areas showing significant structures, work areas and boundaries

- Illustrate environmental control measures and environmentally sensitive receivers
- Are endorsed by the Contractor's Environmental Manager or delegate
- Will be included in relevant training programs to ensure the requirements are understood.

ECMs are to be revised to reflect changes within the Project area as needed. This may be required where changes to the physical site introduce new potential environmental impacts requiring additional and/or refined controls. Revised ECM's are to be adequately communicated to project personnel through suitable means such as project-induction, pre-work briefings, plant start-up checks and tool-box talks and training and awareness sessions. Refer below to Section 3.11 Training, Awareness and Competence for further information.

ECMs and revised ECMs are to be reviewed and endorsed by the independent Environmental Representative.

### 3.7 Environmental Monitoring Assurance Program

The Environmental Monitoring Assurance Program (EMAP) addresses issue-specific items associated with project activities such as managing heritage, noise, biodiversity, waste, air and water quality management. The EMAP also comprises hold and observance points in facilitating decision making and maintaining compliance under the Project with each of these various activities.

Appendix C of this document, includes the EMAP's high risk issue-specific items, identified through a risk- assessment process and in accordance with the EIS findings. Appendix C provides details on the internal process, how decisions are made or acceptance criteria, approval or hold-point responsibilities and frequency and timing. High-risk items include applying appropriate noise mitigation, vibration monitoring and heritage and other unexpected finds. Medium and low-risk items hold-points and decision-making triggers will be included in the full EMAP under the CEMP.

Construction activities are not to proceed without objective review and approval by the nominated authority. These hold points will be incorporated into the CEMP, sub plans, Safe Work Method Statements, work instructions and construction methodologies, and working plans for the Project. Reviews of the EMAP will be scheduled periodically and updates made based on review of the risk assessment (Section 3.4),

### 3.8 Additional Environmental Assessments

Where the requirement for an additional environmental assessment is identified, this will be undertaken prior to undertaking any physical works associated with the additional assessment. The environmental assessment will include:

- A description of the existing surrounding environment
- Details of the ancillary works and construction activities required to be carried out including the hours of works
- An assessment of the environmental impacts of the works, including, but not necessarily limited to, traffic, noise and vibration, air quality, soil and water, ecology and heritage
- Details of mitigation measures and monitoring specific to the works that will be implemented to minimise environmental impacts
- Identification of the timing for completion of the construction works, and how work areas will be reinstated (including any necessary rehabilitation)
- Any community consultation activities associated with the change.

Any additional environmental assessment will be undertaken in accordance with TfNSW's planning approval process as outlined in Figure 3-1.

TfNSW will either approve the additional assessment or recommend the preparation of a modification for the approval of DPIE as shown in Table 3-1.



**Table 3-1 Approval method for additional environmental assessment documentation**

Construction phase documentation	Acceptance criteria/ approval	By whom	Frequency and timing
Minor changes to project scope or methodology	Environmental Review	TfNSW	Prior to the commencement of construction
Moderate changes to project scope or methodology	Consistency Assessment	TfNSW	Prior to the commencement of construction
Major changes to project scope or methodology	Detailed Environmental Impact Assessment	DPIE	Prior to the commencement of construction

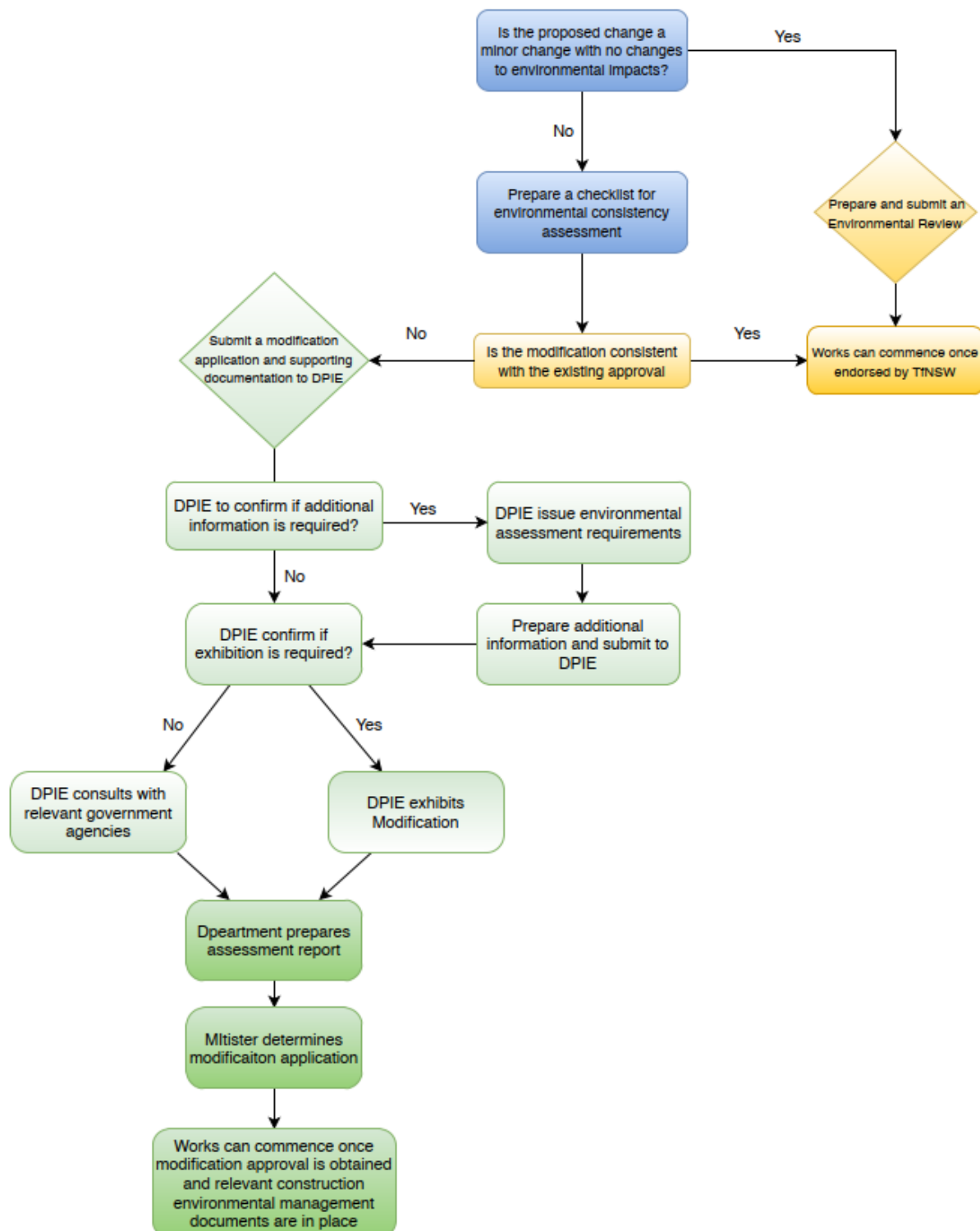


Figure 3-1 Additional Environmental Assessment Flowchart

### 3.9 Condition surveys

Prior to the commencement of construction, pre-construction Building Condition Surveys will be offered, in writing, to the owners of buildings where there is a potential for construction activities to cause cosmetic or structural damage. If accepted, a comprehensive written and photographic condition report will be produced by an appropriate professional prior to relevant works commencing.

Prior to the commencement of construction, a Road Dilapidation Report will be prepared for all local public roads proposed to be used by heavy vehicles.

### 3.10 Construction document approvals

Table 3-1 outlines the proposed approval method for the construction documentation to be prepared under this CEMF. The ER will notify DPIE when approval of CEMP and sub-plans is achieved, commencement dates of construction and operation of the Project, and through periodic compliance reporting. Any pre-construction documents, required under the Approval, that are not listed in Table 3-1, may also be approved by the Environment Representative

**Table 3-2 Approval method for construction documentation**

Construction phase documentation	Acceptance criteria/ approval	By whom	Frequency and timing
CEMP and sub-plans	CEMP and sub-plans prepared in consultation with the relevant government agencies. Compliance and adequacy review and approval	Environmental Representative	Prior to the commencement of construction
Environmental Control Maps (ECM)	Compliance and adequacy review and approval	Environmental Representative	Prior to the commencement of construction of works described in the ECM
Community Liaison Management Plan		Environmental Representative following endorsement from TfNSW Associate Director Community Engagement	Prior to the commencement of construction
Environmental Monitoring Assurance Program	Compliance and adequacy review and approval	Environmental Representative	Prior to the commencement of construction Throughout the project
Performance and compliance monitoring and reporting	Compliance and adequacy review and approval	Environmental Representative	Throughout the project
Pre-construction approval	Pre-construction Minor Works Approval Form Activity based management plans	Environmental Representative	Prior to the commencement of pre-construction works

### 3.11 Training, Awareness and Competence

Project workforce personnel are to be provided with relevant environmental and sustainability information and training where suitable to ensure that they are aware of their responsibilities and are competent to carry out the work in a compliant and environmentally responsible and sustainable manner.

Environmental and sustainability requirements are to be communicated to workforce personnel during site induction and on-going training via tool box meetings, briefings, notifications and similar type of delivery forums.

Workforce personnel are to receive induction and training and/or awareness in the following:

- Applicable Environmental and Sustainability Policies and Commitments
- Site environmental objectives and targets
- Understanding individual authorities and responsibilities
- Site environmental rules and hold points
- Potential consequences of departure from rules
- Emergency procedure and response (e.g. Spill clean-up)
- Basic understanding of their legal obligations
- Sustainability in regards to specific training and learning requirements.

As a minimum training will include site induction, regular toolbox talks and topic specific environmental and sustainability training and awareness as follows:

- The project site induction will be provided to all site personnel and will include, as a minimum:
  - Purpose, objectives and key issues
  - Applicable policies and procedures for managing the environment and sustainability aspects and associated key performance indicators
  - Due diligence, duty of care and responsibilities
  - Relevant conditions of any environmental licence and/or the relevant conditions of approval
  - Site specific issues and controls including those described in the environmental and sustainability documentation
  - Reporting procedure for environmental hazards and incidents
  - Communication protocols
- Toolbox talks will be held on a regular basis in order to provide a project or site wide update, including any key or recurring environmental issues
- Topic specific environmental training should be based upon, but is not limited to, issue specific sub-plans required under Section 6.

A Training Needs Analysis will be conducted which:

- Identifies that all staff are to receive an environmental induction and undertake environmental awareness training
- Identifies the competency requirements of staff that hold environmental roles and responsibilities documented within the Construction Environmental Management Plan and sub-plans
- Identifies appropriate training courses/events and the frequency of training to achieve and/or maintain these competency requirements
- Implements and documents as part of the CEMP a training schedule that plans attendance at environmental training events, provides mechanisms to notify staff of their training requirements,

and identifies staff who do not attend scheduled training events or who have overdue training requirements.

### 3.12 Environmental Incident Management

An environmental incident is an occurrence or set of circumstances, as a consequence of which

- pollution (air, water, noise, or land) has occurred, is occurring, or is likely to occur
- an adverse environmental impact has occurred, is occurring, or is likely to occur.
- causes or threatens to cause material harm
- may or may not be or cause a non-compliance.

Adverse environmental impact includes contamination, harm to flora and fauna (either individual species or communities), damage to heritage items and adverse community impacts. +.

An environmental incident management process will be established as part of the CEMP and will be prepared in accordance with the TfNSW Environmental Incident Classification and Reporting Procedure, DMS-PR-105. The process will address the following:

- Emergency Services contact information to be made readily accessible through appropriate means to relevant workforce personnel and the contact information is to be maintained through the life of the Project.
- All applicable workforce personnel are to be made aware of their responsibilities in managing incidents and emergency preparedness and response.
- The process to define a classification system for incident and emergency types based on set criteria including legislative and regulatory requirements and potential or actual environmental impact and impact on property and infrastructure. Consideration is to include items such as the nature of on-site hazards (e.g. flammable liquids, storage tanks, compressed gasses) and the most likely type and scale of an incident and/or emergency situation.
- Incident and emergency notification and reporting requirements to relevant external parties, where required including, but not limited to TfNSW, the ER, NSW EPA, DPIE or EES, Local Government, Ministry of Health and SafeWork NSW. The process is to also include other stakeholders, where applicable such as owners or occupiers, impacted by the incident and/or emergency.
- An outline of appropriate escalation processes for incident types.
- Suitable personnel are to be nominated under the process that hold the authority to take immediate action to shut down any activity, or to affect any environmental control measure (including as directed by an authorised officer of the EPA).
- Information in the handling of hazardous materials and which is to be contained in the SDS file or similar means.
- Scenario-based drills for assessing the effectiveness in managing incident and emergency response situations are to be undertaken at a minimum every 12 months and as required. This frequency interval may need to be revised in accordance with project-specific CoAs.

The environmental incident management process will also include a pro-active component in addressing potential environmental incidents. This includes the observation of a range of activities including environmental and sustainability inspections at periodic intervals proportionate to risk, non-compliance events that don't necessarily trigger an incident and the observance of hold-points. This will include a requirement that good site practices be acknowledged and reported to encourage a best-practice culture within the environmental and sustainability field.

### 3.13 Environmental Representative

TfNSW will engage an independent Environmental Representative (ER) to provide oversight of environmental and planning performance and assist with achieving compliance with the Project



Approval, management plans, and relevant legislation and policy. The role and responsibilities of the ER will be consistent with DPIE's *Environmental Representative Protocol* (DPIE, 2018) and will undertake the following, along with any additional roles as required under the Project Approval:

- Review, provide comment on, endorse and/or approve (where required) any relevant environmental documentation to verify it is prepared in accordance with relevant environmental legislation, planning approval conditions, relevant standards and this CEMF
- Monitor, recommend improvements and report to TfNSW, Novo Rail and DPIE on the implementation and performance outcomes of the above-mentioned documentation and other relevant documentation
- Make written statements to DPIE regarding the approval and implementation of the above-mentioned documentation, or other relevant documentation required by DPIE
- Provide independent guidance and advice to TfNSW, Novo Rail and DPIE in relation to environmental risks and compliance issues and the interpretation of planning approval conditions
- Consider and recommend to TfNSW, Novo Rail and DPIE any improvements that may be made to work practices to avoid or minimise adverse impact to the environment and to the community
- Provide advice on environmental incidents, non-compliances and the Contractor's corrective and preventative actions
- Undertake regular site inspections including additional inspections for critical or high-risk construction activities, unexpected environmental impacts, incidents or emergencies,
- Ensure that environmental monitoring and auditing is undertaken in accordance with all relevant project requirements
- Be the principal point of advice for the DPIE in relation to all questions and complaints concerning the environmental performance of the project
- Provide monthly reporting to TfNSW and DPIE on the ER's activities and environmental performance and compliance of the Project.

### 3.14 Roles and Responsibilities

In relation to Roles and Responsibilities the CEMP will:

- Describe the relationship between the Contractor, TfNSW, DPIE, key regulatory stakeholders and the ER
- Describe the internal roles of the Contractor and TfNSW, and their responsibilities and relationships with external stakeholders including DPIE and the ER
- For each role that has environmental accountabilities or responsibilities, including key personnel, provide a tabulated description of the authority and roles of key personnel, lines of responsibility and communication, minimum skill level requirements and their interface with the overall project organisation structure
- Provide details of each specialist heritage, sustainability or planning consultant who is employed, including the scope of their work
- Provide an overview of the role and responsibilities of the ER and other regulatory stakeholders.

All sub-contractors will be required to operate in accordance with the project-specific EMS documentation.

### 3.15 Environmental Inspections and Auditing

Issue specific environmental monitoring will be undertaken as required by any approval, permit or licence conditions.

Environmental inspections will include:

- Surveillance of environmental mitigation measures by the Contractor
- Weekly inspections by the Contractor's Environmental Manager (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record
- Weekly inspections by the ER to identify the adequacy of environmental mitigation measures. This will be documented in a formal inspection record.
- Periodic site inspections by the TfNSW representative.

Internal environmental audits will be undertaken and will include:

- Compliance with any approval, permit or licence conditions
- Compliance with the CEMF, CEMP, SMP, sub-plans and procedures
- Community enquiry and complaint response
- Environmental training records
- Environmental monitoring and inspection results.

An Independent Environmental Audit Program will be prepared in accordance with Independent Audit: Post Approval Requirements (DPIE, 2020) and any Project Approval requirements. The Program will detail periodic audits on all environmental systems and requirements by independent auditor(s) as agreed with DPIE. Unless stipulated by the Project Approval, the first Independent Audit will take place within 12 weeks of the commencement of construction then subsequent Independent Audits will be at 26 week intervals, thereafter. .

### 3.16 Compliance Reporting

Corrective actions will be developed to rectify non-compliances and preventative actions in order to prevent a re-occurrence of the non-compliance. A register of non-compliances, corrective actions and preventative actions will be maintained.

TfNSW or the ER may raise non-compliances against environmental requirements.

A Compliance Monitoring and Reporting Program will detail the schedule of compliance reporting to be undertaken in accordance with the *Compliance Reporting; Post Approval Requirements* (DPIE, 2020) and Project Approval requirements. The compliance reports will include evidence and any outcome of any environmental monitoring and environmental surveillance activity including internal and external audits (refer to Section 3.14). Compliance reporting will be reviewed and endorsed by the ER and provided to DPIE.

### 3.17 Review and revision

The CEMP will detail the review and revision process as a part of the continual improvement of the Project's Environmental Management System. The CEMP will be reviewed and updated where necessary in the following circumstances:

- Non-compliance with Project Approvals
- Non-conformance, corrective and preventative actions
- Audit findings, internal or by the Independent Auditor
- Any project change that requires a review of the risk assessment
- Any approved Project Modifications
- Changes to legislation.

The updated CEMP and/or sub-plans will be prepared to the satisfaction of the ER. Where necessary based on the update required additional consultation with relevant stakeholders would be undertaken. DPIE would be informed of the update and provided an endorsed copy.

### **3.18 Environmental Records**

Appropriate records will be maintained of the following:

- site inspections, audits, monitoring, reviews or remedial actions
- documentation as required by performance conditions, approvals, licences and legislation
- modifications to site environmental documentation (e.g. CEMP, sub-plans and procedures)
- other records as required by this Construction Environmental Management Framework.

Records will be retained onsite for the duration of works and for a period of no less than seven (7) years. Records will be made available in a timely manner to TfNSW (or their representative) upon request.

Compliance reports detailing the outcome of any environmental surveillance activity including internal and external audits (refer to Section 3.14) will be prepared by the Contractor's Environmental Manager or delegate. These reports will be submitted to TfNSW and the ER at the frequency nominated above.

## 4. Stakeholder and Community Involvement

### 4.1 Overview

Throughout construction, the Contractor will work closely with stakeholders and the community to ensure they are well informed regarding the construction works.

Stakeholders and the community will be informed of significant events or changes that affect or may affect individual properties, residences and businesses. These will include:

- Significant milestones
- Changes to traffic conditions and access arrangements for road users and the affected public
- Construction operations which will have a direct impact on stakeholders and the community including noisy works, interruptions to utility services or construction work outside of normal work hours.

### 4.2 Community Liaison Management Plan

A Community Liaison Management Plan (CLMP) will be developed in accordance with *Defining Engagement Terms* (DPIE, 2020) and implemented. The CLMP will include:

- details of the community relations resources, including personnel, to be employed by the Contractor whilst carrying out the Contractor's Activities
- A comprehensive, project-specific analysis of issues to be managed prior to and during construction and Commissioning of the Works, including proposed strategies and tools to manage these issues
- A comprehensive stakeholder list, highlighting issues/interests and strategies for managing them
- An indicative program for the implementation of community liaison activities. This program should include key dates for the commencement and conclusion of construction activities, associated impacts to the community and the Contractor's proposed strategies for minimising impacts and informing the community
- Details of Contractor specific key messages to be used in information materials and when responding to enquiries and complaints
- Details of requirements of the project environmental assessment and the conditions of the Planning Approval for community and stakeholder consultation and proposed methodologies and timeframes for undertaking this consultation
- Policies and procedures for handling community complaints and enquiries
- Details of the Contractor's nominated 24 hours contact for management of complaints and enquiries
- Policies and procedures for incident management and reporting
- Policies and procedures for ensuring Subcontractors comply with these communication and community liaison requirements
- Details of activities which will be undertaken to monitor and evaluate the effectiveness of the community liaison program
- Analysis of other major projects/influences in the area with the potential to result in cumulative impacts to the community and strategies for managing these
- Details of procedures for obtaining approval from the Principal prior to planning and implementing any marketing or promotional activities.

A summary of the CLMP will also be prepared and uploaded onto the Project website.

### 4.3 Business and Property Consultation

The Contractor will identify in the Community Liaison Management Plan key issues relating to business impacts by locality with a particular focus on proactive consultation with affected businesses. Including:

- Identification of specific businesses which are sensitive to construction activity disturbances
- Summary of the commercial character of the locality, its general trading profile (daily and annually) and information gained from the business profiling such as:
  - Operating hours
  - Main delivery times
  - Reliance on foot traffic
  - Any signage or advertising that may be impacted
  - Customer origin
  - Other information specific to the business that will need to be considered in construction planning
- Define the roles and responsibilities in relation to the control and monitoring of business disturbances
- Identification of locality specific standard business mitigation measures which will be implemented
- Where relevant, maps, diagrams or sub-plans to illustrate measures which will be implemented
- Description of the monitoring, auditing and reporting procedures
- Procedure for reviewing performance and implementing corrective actions
- Description of the complaints handling process
- Procedure for community consultation and liaison.

### 4.4 Complaint Handling

Community liaison and complaints handling will be undertaken in accordance with TfNSW's Construction Complaints Management System and will include:

- The Contractor will manage complaints in a responsive manner so that stakeholders' concerns are managed effectively and promptly
- A verbal response will be provided to the complainant as soon as possible and within a maximum of two hours from the time of the complaint (unless the complainant requests otherwise). A detailed written response will then be provided, if required, to the complainant within 7 days.



## 5. General site works

### 5.1 Site Establishment

Three construction ancillary facilities are proposed for the construction of the Project as outlined below. The final arrangement and location(s) of ancillary facilities and site office compound may be subject to refinement as part of the confirmation of the construction methodology. The impacts of any such refinements would be subject to further assessment as part of the planning approvals process.

#### Ancillary facility 1

The Eveleigh Maintenance Centre would be utilised as site offices, a waste storage facility, designated stockpile area, designated area for fabrication activities and an administration centre for the Project. This would include the establishment of several site sheds and car parking facilities and stockpile area.

#### Ancillary facility 2

This area is currently owned by Sydney Trains and would be partly utilised as a site office compound and an administration centre for the Project. This would include the erection of several site sheds and car parking facilities. It would also be utilised as a construction laydown area and temporary waste storage facility. This area would be accessed from either Carriageworks Way or Little Eveleigh Street and would provide construction parking facilities and rail corridor access. It is anticipated that some components of the concourse would be assembled here prior to installation within the rail corridor.

#### Ancillary facility 3

A portion of Gibbons Street Reserve would be used as a construction ancillary facility, including as a laydown area, a temporary waste storage facility and a designated area for fabrication activities. The facility would be accessed from Gibbons Street. Due to the existing slope of the reserve it may be necessary to temporarily level part of the reserve to provide a safe work area. Up to two trees would also require removal, along with some tree trimming to establish this ancillary facility. This temporary levelling works would require approximately 200 tonnes of spoil to be removed.

Following completion of works at Redfern Station, the Gibbons Street Reserve would be returned to its current use (passive recreational) in consultation with City of Sydney Council.

The existing Sydney Trains carpark on Marian Street would be utilised for a site office compound, site laydown areas, and utilise the storage area underneath the existing carpark on Marian Street for site facilities and the storage of construction equipment and materials.

### 5.2 Pre-construction works

Site establishment and enabling works would include:

- clearing of ancillary facility/construction areas
- removal of hazardous materials (as required)
- installation of site offices including minor modifications as required, utility connections within the ancillary facility areas and temporary access ways to the site office location
- establishment of temporary waste and stockpile areas
- erection of hoarding and fencing including the integration of physical acoustic measures as required
- undertrack crossing pipes for concrete supply
- possession related works.

Site establishment and enabling works would occur over approximately eight-twelve weeks at the beginning of the construction program.

### 5.3 Piling and other Early Works

Piling works and other preliminary works such as installation of foundations, installation of overhead wiring structures and installation of hoarding are likely to occur early in the construction program. To ensure that these works are managed appropriately an Early Works Management Plan will be prepared and implemented. The Early Works Management Plan will include environmental mitigation measures applicable to the work activities and will be reviewed for adequacy and approved by the ER.

### 5.4 Archaeological Test, Excavation and Salvage Activities

Management plans are to be prepared to address activities associated with archaeological testing, excavation and salvage activities for areas of archaeological potential within the Project Area or impacted by the Project.

The above applicable plans will include environmental mitigation measures applicable to the work activities and will be incorporated into the Heritage Management Sub-plan.

### 5.5 Working Hours

Standard working hours are between 7am – 6pm on weekdays and 8am – 1pm on Saturdays.

Works which can be undertaken outside of standard construction hours without any further approval include:

- any works which do not cause noise emissions to be more than 5dBA higher than the Rating Background Level (RBL) at any residential receiver and/or do not exceed the noise objectives of other noise sensitive receivers, and subject to assessment under the OOHWP Protocol (OOHWP)
- out of hours work identified and assessed in the EIS or the approved OOHWP
- the delivery of plant, equipment and materials which is required outside these hours as requested by NSW Police or other authorities for safety reasons and with suitable notification to stakeholders as agreed by TfNSW and the ER
- emergency work to avoid loss of life, damage to external property, damage to utilities and infrastructure, prevent immediate harm to the environment, prevent contamination of land or damage to a heritage (indigenous or non-indigenous) item.

#### Out of Hours Work Protocol

Working in the rail environment requires work to be done out of standard working hours (or Out of Hours Work (OOHW)) for the safety of rail and construction workers and to minimise disruptions to customers, pedestrians and motorists. Some of the works would also need to be undertaken during rail possession periods (when trains are not running) to minimise disruption to rail operations and risk to rail worker safety. These shut downs generally occur during standard weekend possessions or overnight between the last and first trains. Examples of works that would be required in possessions and may occur inside or outside standard construction hours include overhead wiring works, provision of cabling for required services, concourse and lift installation and some work on platforms. To determine when work activities can be done, the Construction Contractor will consider the safety risk of activities within the rail corridor and the hierarchy outlined in the TfNSW CNVS:

1. Saturday afternoon periods between 1pm and 6pm (Period 1 Day)
2. Sunday and public holiday day periods between 8am and 6pm (Period 1 Day)
3. Weekday evening periods between 6pm and 10pm (Period 1 Evening)
4. Weekend evening periods between 6pm and 10pm (Saturdays Period 1 Evening/Sundays Period 2)
5. Weekend night periods between 10pm and 8am (Period 2)
6. Work during the weekday evening and night and scheduling the noisiest work first (between 6pm and 10pm) to minimise sleep disturbance impacts in the night period between 10pm and 7am (Period 1 Evening and Period 2)

7. All other times outside recommended standard hours.

Once the OOHW Period is determined based on working safely within the rail corridor and minimising disruption, a noise assessment is completed applying standard and site-specific mitigation measures. The results of the noise assessment may identify negligible, low, medium or high risk OOHW and trigger the need for additional mitigation measures for nearby sensitive receivers in accordance with the TfNSW CNVS. Depending on the exceedance above typical background noise levels additional mitigation could include, for example, specific notification, verification monitoring, respite periods, respite offers or alternate accommodation. All low, medium and high risk OOHW are notified at least 7 days prior to the works commencing and are approved by the ER.

As outlined in the CNVS, in cases where there is the need and justification to work more than 2 consecutive nights or 3 consecutive evenings, outside of rail possessions, the Construction Contractor may apply for Duration Reduction. Impacted receivers will be consulted with regard to the work, locations, timing and any available options and evidence of community support for the Duration Reduction must be provided as justification. A community engagement strategy must be agreed with and implemented in consultation with TfNSW Community Engagement Representatives and the ER.

Figure 5-1 summarises the full OOHW Protocol that will be detailed in the CEMP and CNVMP. The Construction Contractor will utilise TfNSW's online OOHW Tool to process applications. This allows for transparency and accountability and includes TfNSW review prior to ER approval.

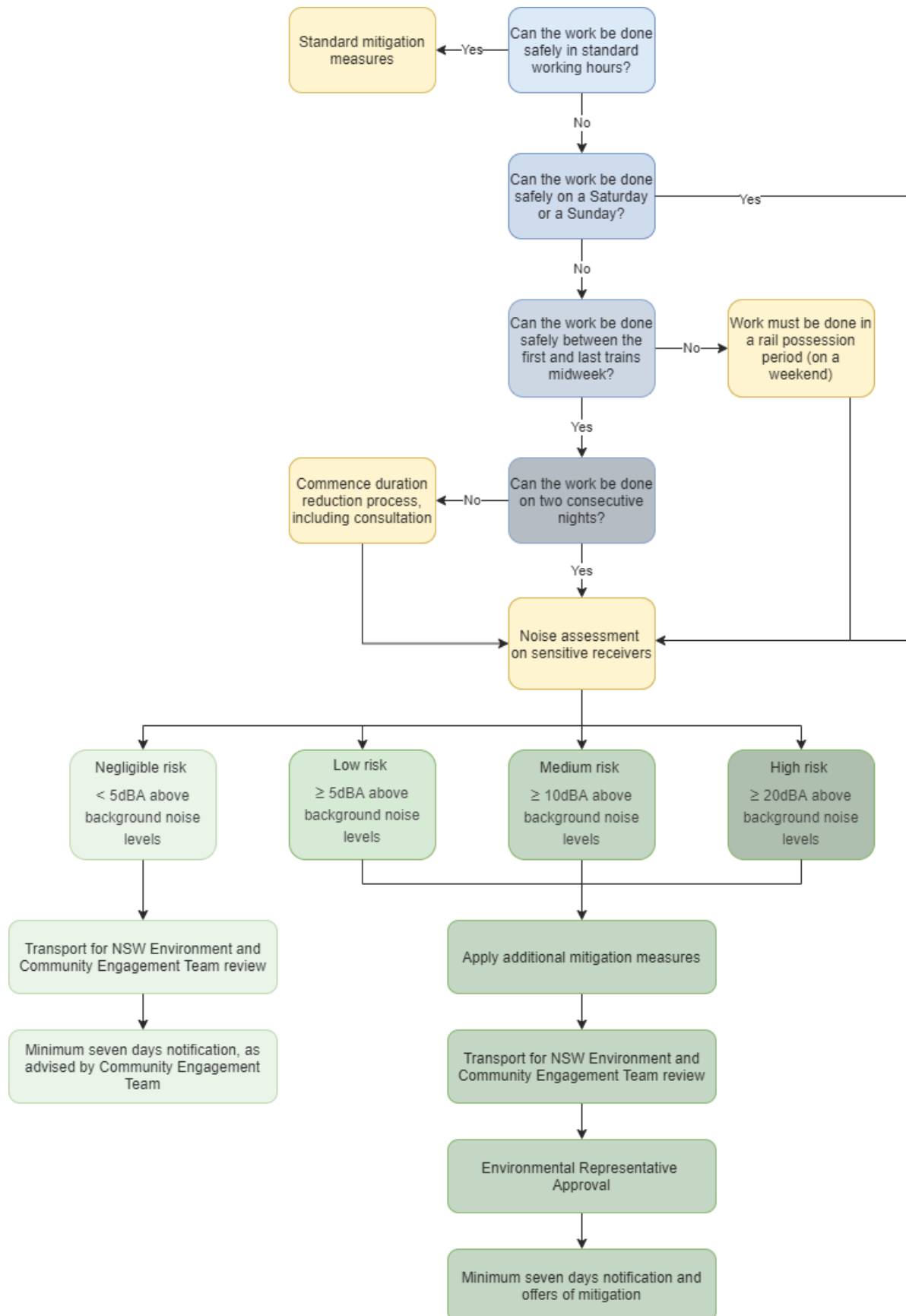


Figure 5-2 OOHW Protocol Flowchart

## 5.6 Site Layout

The following will be considered in the layout of site compounds and work areas:

- The location of noise intensive works and 24-hour activities in relation to noise sensitive receivers
- The location of access and egress points in relation to noise and light sensitive receivers
- The use of site buildings to shield noisy activities from receivers
- The use of noise barriers and / or acoustic sheds where feasible and reasonable for site compounds and work areas proposed to be regularly used outside of daytime hours
- Aim to minimise the requirement for reversing, especially of heavy vehicles.

The visual impact of ancillary facilities is addressed in Section 6.4.

## 5.7 Reinstatement

Mitigation measures for reinstatement will be produced in consultation with TfNSW, the community and stakeholders.

Mitigation measures required for reinstatement will be incorporated into the CEMP and will include as a minimum:

- All working areas and accesses will be cleared and cleaned at project completion
- At the completion of construction all plant, temporary buildings or vehicles not required for the subsequent stage of construction will be removed from the site
- All land, including roadways, footpaths, loading facilities or other land having been occupied temporarily will be returned to their pre-existing condition or better in consultation with City of Sydney Council or other relevant stakeholders.
- Reinstatement of community spaces, infrastructure and services will occur as soon as possible after completion of construction
- Specific mitigation measures for ancillary facilities, in particular the Gibbons Street ancillary facility.

## 5.8 Cumulative Impacts

The performance outcomes for the Project in relation to cumulative impacts are:

- The Project is coordinated with other projects being constructed in the area to minimise cumulative impacts.

Opportunities to further minimise construction impacts from the Project beyond those considered in this EIS would be undertaken during detailed design and construction planning, through the application of appropriate management and mitigation measures and through consultation with affected stakeholders.



## 6. Environmental Aspects

### 6.1 Construction Traffic Management

#### 6.1.1 Construction Traffic Management Performance Outcomes

The following traffic management performance outcomes will apply to construction of the Project:

- safe and efficient access routes are provided for pedestrians, cyclists and road users, including buses
- maintain access for all customers to Redfern Station, while the station is operational
- access to residences and commercial properties is maintained
- access for emergency vehicles, waste management services and deliveries is maintained
- the local community, relevant authorities and other proponents undertaking concurrent work close to the Project are consulted to minimise disruptions to road, active transport and public transport users
- the local community and relevant authorities are consulted regarding upcoming Project construction activities to minimise disruptions to road, active transport and public transport users the Project provides convenient, safe and direct access for customers to the station during operation.

#### 6.1.2 Construction Traffic Management Implementation

Traffic will be managed using the documentation outlined in Table 6-1:

**Table 6-1 Construction Traffic Management Implementation**

Management Plan / Requirement	Details
Construction Traffic Management Plan (CTMP)	<p>The Contractor will develop and implement a CTMP, and other documentation as detailed below, which will as a minimum:</p> <ul style="list-style-type: none"> <li>• Implement the traffic and transport mitigation measures as detailed in the EIS</li> <li>• Be developed in consultation with the relevant road authority and/or transport operator</li> <li>• Set out the overall traffic management resources, processes and procedures for the management of traffic and transport during construction of the works</li> <li>• Identify types and volumes of construction vehicles and associated route and time restrictions</li> <li>• Identify traffic generation from other infrastructure developments, impacts from construction traffic and haulage routes</li> <li>• Identify potential activities that could result in the disruption to traffic and transport networks, including pedestrian, cyclist and public transport networks and during special events</li> <li>• Comply with and address the requirements of RMS Traffic Control at Worksites Manual and AS 1742.3 <i>Manual of uniform traffic control devices Part 3: Traffic control for works on roads</i>, relevant Austroads Guides and RMS Supplements to Austroads and Australian Standards</li> </ul>

Management Plan / Requirement	Details
Traffic staging plans	<ul style="list-style-type: none"> <li>Include road design drawings showing traffic lane configurations for traffic passing through work areas during various construction stages, including details of road alignment and geometry, intersection layouts, provision for buses and cyclists, work areas and pedestrian areas, drainage signs and pavement markings</li> <li>Note: above included as per TCPs and staging diagrams.</li> </ul>
Traffic Control Plans (TCP)	<ul style="list-style-type: none"> <li>Set out the specific traffic and transport management arrangements to be implemented at specific locations during the construction of the works</li> </ul>
Pedestrian management plans	<ul style="list-style-type: none"> <li>A diagram showing the allocated travel paths for workers or pedestrians around or through a work area. A PMP may be combined with or superimposed on a TCP</li> <li>A diagram showing all signs and devices used to guide the workers or pedestrians</li> <li>Note: TCPs will address project-specific PMP requirements.</li> </ul>
Parking management plans	<ul style="list-style-type: none"> <li>Parking requirements and on and offsite parking arrangements and associated impacts</li> <li>Remote parking arrangements and associated access</li> <li>Communication and parking management measures</li> <li>Proposals for relocation of impacted users for kerbside use impacts during the construction period</li> <li>Note: Parking requirements are addressed under the TMP and prepared where required</li> </ul>
Consultation	<p>Consultation during preparation of management plans, and in relation to the approval of related licences for works, will be undertaken with:</p> <ul style="list-style-type: none"> <li>TfNSW</li> <li>Transport Management Centre (TMC)</li> <li>NSW Police</li> <li>City of Sydney Council</li> <li>Emergency services</li> <li>Bus operators</li> <li>Sydney Trains</li> <li>NSW TrainLink</li> <li>Potentially affected stakeholders</li> </ul>
Monitoring / Inspections	<p>Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program and will include:</p> <ul style="list-style-type: none"> <li>Road Safety Audits</li> <li>Road Condition Reporting</li> </ul>
Compliance	<p>The following compliance records will be kept by the Contractor:</p> <ul style="list-style-type: none"> <li>Records of all traffic licences or approvals</li> <li>Records of community enquiries and complaints, and the Contractor's response</li> </ul>

### 6.1.3 Construction Traffic Mitigation

Traffic mitigation measures to be considered during construction will include:

- Minimising heavy vehicle movements during peak traffic times
- Avoidance of local roads for heavy vehicle routes, where feasible
- Providing safe pedestrian and cyclist movements around the work areas.

## 6.2 Construction Noise and Vibration Management

### 6.2.1 Construction Noise and Vibration Management Performance Outcomes

The following noise and vibration management performance outcomes will apply to the construction of the Project:

- construction airborne and ground-borne noise and vibration is effectively managed to minimise impacts on acoustic amenity
- construction vibration is effectively managed to minimise impacts on the structural integrity of buildings and items
- specific notifications to the community are issued no later than seven days prior to construction works.

### 6.2.2 Construction Noise and Vibration Management Implementation

Construction noise and vibration will be managed using the documentation outlined in Table 6-2.

**Table 6-2 Construction Noise and Vibration Management Implementation**

Management Plan / Requirement	Details
Construction Noise and Vibration Management Plan (CNVMP)	<p>The Contractor will develop and implement a CNVMP consistent with the Interim Construction Noise Guidelines (Department of Environment and Climate Change, 2009) and CNVS. The CNVMP will include as a minimum:</p> <ul style="list-style-type: none"> <li>• Identification of work areas, site compounds and access points</li> <li>• Identification of sensitive receivers and relevant construction noise and vibration goals</li> <li>• Be consistent with, and include the requirements of the noise and vibration mitigation measures as detailed in, the environmental approval documentation</li> <li>• Details of construction activities and an indicative schedule for construction works, including the identification of key noise and/or vibration generating construction activities (based on representative construction scenarios) that have the potential to generate noise or vibration impacts on surrounding sensitive receivers, in particular residential areas</li> <li>• Identification of feasible and reasonable procedures and mitigation measures to ensure relevant vibrations criteria are achieved</li> <li>• Community consultation requirements and community notification provisions</li> <li>• Pre-construction compliance requirements and hold points</li> <li>• The responsibilities of key project personnel with respect to the implementation of the plan</li> <li>• Noise monitoring requirements</li> <li>• Compliance record generation and management</li> <li>• An Out of Hours Works Protocol</li> </ul>
Construction Noise and Vibration Impact Statements (CNVIS)	<p>Detailed Construction Noise and Vibration Impact Statements will be prepared for noise-intensive activities, to ensure the adequacy of the noise and vibration mitigation measures.</p> <p>Specifically, Construction Noise and Vibration Impact Statements will be prepared works proposed to be undertaken outside of standard construction hours.</p>

Management Plan / Requirement	Details
Consultation	Consultation during preparation of management plans will be undertaken with: <ul style="list-style-type: none"> <li>• City of Sydney Council</li> <li>• NSW EPA</li> </ul>
Monitoring / Inspections	Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program and will include: <ul style="list-style-type: none"> <li>• Land-use survey of sensitive receivers</li> <li>• Noise modelling and monitoring</li> <li>• Vibration monitoring, where required</li> <li>• Regular inspections of the noise mitigation measures</li> </ul>
Compliance	The following compliance records will be kept by the Contractor: <ul style="list-style-type: none"> <li>• Records of justification and assessments of out-of-hours work</li> <li>• Records of inspections undertaken</li> <li>• Records of noise and vibration monitoring results against appropriate NMLs and vibration criteria</li> <li>• Records of community enquiries and complaints, and the Contractor's response</li> </ul>

### 6.2.3 Construction Noise and Vibration Mitigation

Noise and vibration mitigation measures to be considered during construction will include:

- Construction hours will be in accordance with the working hours specified in Section 5.5
- Hoarding and enclosures will be implemented where required to minimise airborne noise impacts
- The layout of site compounds and work areas will aim to minimise airborne noise impacts to surrounding receivers.

## 6.3 Heritage Management

### 6.3.1 Heritage Management Performance Outcomes

The following heritage management performance outcomes will apply to construction of the Project:

- Heritage items are sensitively protected and managed during the construction of the Project
- Movable heritage items are identified, conserved and protected during construction
- Heritage fabric is conserved through the reuse of salvageable heritage fabric where possible
- A historical record of areas modified by the Project is maintained for future reference through archival recording
- Heritage interpretation is undertaken that communicates the heritage value of the site to visitors
- Potential archaeology within the Project area is protected or appropriately managed
- Heritage inventories are updated to reflect the Project design to ensure that records of heritage items are maintained
- No impacts to Aboriginal sites, objects and places identified in the assessment during construction
- If an unexpected find is encountered during construction, relevant procedures under TfNSW's *Unexpected Heritage Finds Guideline* (Transport for NSW, 2019e) are followed.

### 6.3.2 Heritage Management Implementation

Heritage will be managed using the documentation outlined in Table 6-3:

**Table 6-3 Heritage Management Implementation**

Management Plan / Requirement	Details
Heritage Management Plan (HMP)	<p>The Contractor will develop and implement an HMP which will include as a minimum:</p> <ul style="list-style-type: none"> <li>Identify initiatives that will be implemented for the enhancement of heritage values and minimisation of heritage impacts, including procedures and processes that will be used to implement and document heritage management initiatives</li> <li>The heritage mitigation measures as detailed in the environmental approval documentation</li> <li>The responsibilities of key project personnel with respect to the implementation of the plan</li> <li>Procedures for interpretation of heritage values uncovered through salvage or excavation during detailed design</li> <li>Procedures for undertaking salvage or excavation of heritage relics or sites (where relevant), consistent with and any recordings of heritage relics prior to works commencing that will affect them</li> <li>Details for the short and / or long-term management of artefacts or movable heritage</li> <li>Details of 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)</li> <li>Procedures for unexpected heritage finds, including procedures for dealing with human remains</li> <li>Heritage monitoring requirements</li> <li>Compliance record generation and management</li> </ul>
Consultation	<p>Consultation during preparation of management plans will be undertaken with:</p> <ul style="list-style-type: none"> <li>NSW Heritage Office</li> <li>City of Sydney Council</li> </ul>
Monitoring/Inspections	<p>Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program, including:</p> <p>Periodic inspections of the heritage mitigation measures</p>
Compliance	<p>Compliance records will be retained by the Contractor. These will include:</p> <ul style="list-style-type: none"> <li>Records of inspections undertaken Archival recordings undertaken of any heritage item</li> <li>Unexpected finds and stop work orders</li> <li>Records of any impacts avoided or minimised through design and/or construction methods</li> </ul>

### 6.3.3 Heritage Mitigation

Heritage mitigation measures to be considered during construction will include:

- Any heritage item not affected by the works will be retained and protected throughout construction
- Undertake archival recordings of all non-Aboriginal heritage items affected by the works prior to commencement of works
- Implement unexpected heritage find procedures for Aboriginal and non-Indigenous Aboriginal heritage items.

## 6.4 Visual Amenity Management

### 6.4.1 Visual Amenity Management Performance Outcomes

The following visual management performance outcomes will apply to the construction of the Project:

- minimal impacts to existing structures during construction
- construction sites and compounds are planned and managed to minimise adverse visual effects
- the obtrusive effects of lighting are minimised during construction
- additional tree removal and trimming of vegetation is avoided where possible to minimise changes in landscape character.

### 6.4.2 Visual Amenity Management Implementation

Visual amenity will be managed using the documentation outlined in Table 6-4:

**Table 6-4 Visual Amenity Management Implementation**

Management Plan / Requirement	Details
Visual Amenity ERAP	<p>The Contractor will develop and implement a ERAP which will include as a minimum:</p> <ul style="list-style-type: none"> <li>• The visual mitigation measures as detailed in the environmental approval documentation for construction</li> <li>• Input from an experienced Landscape or Urban Designer</li> <li>• The maintenance of outward facing elements of site hoarding or noise barriers, including the removal of graffiti and weeds</li> <li>• Apply the principles of <i>Australian Standard 4282-1997 Control of the obtrusive effects of outdoor lighting</i> and relevant safety design requirements and detail mitigation measures to minimise lighting impacts on sensitive receivers for all permanent, temporary and mobile light sources</li> <li>• Identify the processes and procedures that will be used for the incorporation of the principles of Crime Prevention Through Environmental Design (CPTED) in the design and construction of any temporary site facilities</li> <li>• Compliance record generation and management</li> </ul>
Consultation	<p>Consultation during preparation of management plans will be undertaken with:</p> <ul style="list-style-type: none"> <li>• City of Sydney Council</li> <li>• Potentially affected stakeholders</li> </ul>
Monitoring/Inspections	<p>Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including:</p> <ul style="list-style-type: none"> <li>• Periodic inspections of the condition of any site hoarding, and the position and direction of any lighting</li> </ul>
Compliance	<p>The Contractor will retain compliance records of any inspections undertaken in relation to visual and landscape measures</p>



### 6.4.3 Visual Amenity Mitigation

Visual amenity mitigation measures to be considered during construction will include:

- Wherever feasible and reasonable, vegetation around the perimeter of the construction sites will be maintained
- Temporary site lighting, for security purposes or night works will be installed and operated in accordance with *AS4282:1997 Control of the Obtrusive Effect of Outdoor Lighting*
- Artwork, graphics and images to enhance the visual appearance of temporary works in high visibility locations
- Project information to raise awareness on benefits and explain the proposed works
- Community information, including contact numbers for enquiries / complaints
- Where relevant, signage and information to mitigate impacts on local businesses which may be obscured
- Relevant safety and environmental control measures, including signage with relevant safety and site information would be installed
- The design of all temporary works will require TfNSW approval in relation to urban design and visual impacts and TfNSW will stipulate the design of hoarding artwork, including NSW Government logos and branding
- Construction hoardings, scaffolding and acoustic sheds will be regularly inspected and kept clean and free of dust build up. Graffiti on construction hoardings, scaffolding or acoustic sheds will be removed or painted over promptly in line with the following timeframes:
  - Offensive graffiti must be cleaned or covered within 24 hours
  - Highly visible yet non-offensive graffiti must be cleaned or covered within one week
  - graffiti that is neither offensive nor highly visible must be cleared or covered during normal operations within
- The principles of Crime Prevention Through Environmental Design will be applied to all works, including temporary works, that have a public interface.

## 6.5 Soil and Water Management

### 6.5.1 Soil and Water Management Performance Outcomes

The following soil and water management performance outcomes will apply to construction:

- risks to human health and ecological receivers are minimised through effective management of soil and contaminated materials.
- stormwater drainage within the Project area is maintained during construction so as not to cause localised flooding or drainage issues as a result of Project works
- adverse impacts to stormwater quality during construction are avoided.

## 6.5.2 Soil and Water Implementation

Surface water will be managed using the documentation outlined in Table 6-5:

**Table 6-5 Soil and Water Management Implementation**

Management Plan / Requirement	Details
Soil and Water ERAP	<p>The Contractor will develop and implement a Soil and Water ERAP which will include as a minimum:</p> <ul style="list-style-type: none"> <li>• The surface water mitigation measures as detailed in the environmental approval documentation</li> <li>• Details of construction activities and their locations, which have the potential to impact on watercourses, storage facilities, stormwater flows and groundwater</li> <li>• Surface water and ground water impact assessment criteria consistent with the principles of the Australian and New Zealand Environment Conservation Council (ANZECC) guidelines</li> <li>• Management measures to be used to minimise surface and groundwater impacts, including identification of water treatment measures and discharge points; erosion and sediment control measures and the consideration of flood events</li> <li>• Management measures for contaminated material (soils, water and building materials) and a contingency plan to be implemented in the case of unanticipated discovery of contaminated material, including asbestos, during construction</li> <li>• A description of how the effectiveness of these actions and measures will be monitored during the proposed works, clearly indicating how often this monitoring will be undertaken, the locations where monitoring will take place, how the results of the monitoring will be recorded and reported, and, if any exceedance of the criteria is detected how any non-compliance can be rectified</li> <li>• The responsibilities of key project personnel with respect to the implementation of the plan</li> <li>• Procedures for the development and implementation of Progressive Erosion and Sediment Control Plans or similar</li> <li>• Compliance record generation and management</li> </ul>
Erosion and Sediment Control Plans (ESCPs)	<p>The Contractor will develop and implement Erosion and Sediment Control Plans (ESCPs) for all active worksites in accordance with <i>Managing Urban Stormwater: Soils &amp; Construction Volume 1</i> (Landcom, 2004) (known as the “Blue Book”). The ESCPs will be approved by the Contractor’s Environmental Manager (or delegate) prior to any works commencing. Copies of the approved ESCP will be held by the relevant Contractor personnel including the Engineer and the Site Foreman.</p> <p>ESCPs will detail all required erosion and sediment control measures for the particular site at the particular point in time and be progressively updated to reflect the current site conditions. Any amendments to the ESCP will be approved by the Contractor’s Environmental Manager (or delegate).</p>
Consultation	<p>Consultation during preparation of management plans will be undertaken with:</p> <ul style="list-style-type: none"> <li>• City of Sydney Council</li> </ul>

Management Plan / Requirement	Details
Monitoring/ Inspections	Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including: <ul style="list-style-type: none"> <li>Regular inspections of the soil and water mitigation measures</li> <li>Additional inspections will be undertaken prior to and following significant rainfall events.</li> <li>All water will be tested (and treated if required) prior to discharge from the site. No water will be discharged from the site without written approval of the Contractor's Environmental Manager (or delegate). This is to form a HOLD POINT.</li> </ul>
Compliance	The following compliance records will be kept by the Contractor: <ul style="list-style-type: none"> <li>Copies of current ESCPs or equivalent for all active construction sites</li> <li>Records of inspections undertaken</li> <li>Records of testing of any water prior to discharge</li> <li>Records of the release of the hold point to discharge water from the construction site to the receiving environment</li> </ul>

### 6.5.3 Soil and Water Mitigation

Surface water mitigation measures to be considered during construction include:

- Clean water will be diverted around disturbed site areas and stockpiles
- Control measures will be installed downstream of works, stockpiles and other disturbed areas
- Erosion and sediment control measures will be installed as required
- Exposed surfaces will be minimised, and stabilised as soon feasible and reasonable upon completion of construction
- Dangerous good and hazardous materials storage will be within bunded areas with a capacity of 110 per cent of the maximum single stored volume
- Spill kits will be provided at site compounds and main work areas.

## 6.6 Water Resource Management

### 6.6.1 Water Resource Management Performance Outcomes

The following water resource management Performance Outcomes will apply to construction:

- Minimise demand for, and use of, potable water
- Maximise opportunities for water re-use from captured stormwater, wastewater and groundwater.

### 6.6.2 Water Resource Implementation

Water resource will be managed using the documentation outlined in Table 6-6:

**Table 6-6 Water Resource Management Implementation**

Management Plan / Requirement	Details
Water resources implementation	The Contractor will implement water resource management through the Sustainability Management Plan (Section 3.2)
Consultation	Consultation during preparation of management plans will be undertaken with potentially affected stakeholders.
Monitoring/ Inspections	Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including: <ul style="list-style-type: none"> <li>Monitoring of potable water use.</li> </ul>

Management Plan / Requirement	Details
Compliance	The following compliance records will be kept by the Contractor: <ul style="list-style-type: none"> <li>Records of water supply and reuse</li> </ul>

### 6.6.3 Water Resource Mitigation

Water resource mitigation measures to be considered during construction include:

- Water efficient controls, fixtures and fittings in temporary facilities
- Using water from recycled water networks, if available
- Using water efficient construction methods and equipment.

## 6.7 Air Quality Management

### 6.7.1 Air Quality Management Performance Outcomes

The following air quality management performance outcomes will apply to the construction of the Project:

- during construction, dust is managed to minimise the release beyond the site boundaries so that dust complaints are avoided
- during construction, tracking or spilling of soil/spoil from the Project onto offsite areas is minimised, and clean up offsite road surfaces at the end of each day is undertaken so that they are free of visible, loose soil/spoil material (which may be washed away in runoff or otherwise cause complaints)
- dust impacts from soil waste stockpiles are prevented by removing these stockpiles as soon as practicable by an appropriately licenced contractor.

### 6.7.2 Air Quality Implementation

Air quality will be managed using the documentation outlined in Table 6-7:

**Table 6-7 Air Quality Management Implementation**

Management Plan / Requirement	Details
Air Quality ERAP	The Contractor will develop and implement an Air Quality ERAP or similar which will include as a minimum: <ul style="list-style-type: none"> <li>The air quality mitigation measures as detailed in the environmental approval documentation</li> <li>Site plans or maps indicating locations of sensitive receivers and key air quality / dust controls</li> <li>The responsibilities of key project personnel with respect to the implementation of the plan</li> <li>Air quality and dust monitoring requirements</li> <li>Compliance record generation and management</li> </ul>
Consultation	Consultation during preparation of management plans will be undertaken with potentially affected stakeholders
Monitoring/ Inspections	Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including: <ul style="list-style-type: none"> <li>Periodic inspections of the air quality mitigation measures</li> <li>Monitoring emissions from plant and construction vehicles to ensure they have appropriate emission controls and are being maintained correctly</li> </ul>

Management Plan / Requirement	Details
Compliance	<p>The following compliance records will be kept by the Contractor:</p> <ul style="list-style-type: none"> <li>Records of any management measures implemented as a result of adverse, windy weather conditions</li> <li>Records of inspections undertaken</li> </ul>

### 6.7.3 Air Quality Mitigation

Examples of air quality mitigation measures include:

- Plant and equipment will be serviced and maintained in good working order to reduce unnecessary emissions from exhaust fumes
- Water suppression will be used for active earthwork areas, to reduce wind-blown dust emissions

## 6.8 Flora and Fauna Management

### 6.8.1 Flora and Fauna Management Performance outcomes

The following flora and fauna management performance outcomes will apply to the construction of the Project:

- flora and fauna habitat is retained/impacts avoided, or enhanced where possible
- impacts to threatened ecological communities or endangered species are offset in accordance with the requirements of the TfNSW *Vegetation Offset Guide* (TfNSW, 2019b)
- weeds and plant pathogens are managed in accordance with TfNSW's *Weed Management and Disposal Guideline* (TfNSW, 2019f) and the *Biosecurity Act 2015*.

### 6.8.2 Flora and Fauna Implementation

Flora and fauna will be managed using the documentation outlined in Table 6-8.

**Table 6-8** Flora and Fauna Management Implementation

Management Plan / Requirement	Details
Flora and Fauna ERAP	The Contractor will develop and implement an Flora and Fauna ERAP which will include as a minimum: The flora and fauna mitigation measures as detailed in the environmental approval documentation.
Consultation	Consultation during preparation of management plans will be undertaken with potentially affected stakeholders
Monitoring/ Inspections	Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including: Regular inspections will include checking of ecological mitigation measures.
Compliance	<p>The following compliance records will be kept by the Contractor:</p> <ul style="list-style-type: none"> <li>Records of inspections undertaken</li> <li>Records of any additional ecology or arborist reporting undertaken</li> </ul>

### 6.8.3 Flora and Fauna Mitigation

Flora and fauna mitigation measures to be considered during construction include:

- Vegetation to be retained will be fenced off prior to works to prevent damage or accidental over clearing
- Weed management is to be undertaken in areas affected by construction prior to any clearing works in accordance with the *Biosecurity Act 2015*.

## 6.9 Waste Management

### 6.9.1 Waste Management Performance Outcomes

The following waste performance outcomes will apply to construction of the Project:

- waste from construction and operation of the Project is classified in accordance with the Waste Classification Guidelines (NSW EPA, 2014a)
- waste types once classified are reviewed against appropriate guidelines to manage waste appropriately
- contaminated and asbestos contaminated wastes are safely disposed of in accordance with their relevant waste classification.
- Minimise waste throughout the project life-cycle
- Waste management strategies will be implemented in accordance with the *Waste Avoidance and Resource Recovery Act 2001* management hierarchy as follows:
  - Avoidance of unnecessary resource consumption
  - Resource recovery (including reuse, reprocessing, recycling and energy recovery)
  - Disposal.

Targets for the recovery, recycling or reuse of construction waste will be provided by the Contractor.

### 6.9.2 Waste Implementation

Waste will be managed using the documentation outlined in Table 6-9:

**Table 6-9 Waste Management Implementation**

Management Plan / Requirement	Details
Waste Management ERAP	<p>The Contractor will develop and implement a Waste Management ERAP which will include as a minimum:</p> <ul style="list-style-type: none"> <li>• The waste management and recycling mitigation measures as detailed in the environmental approval documentation</li> <li>• The responsibilities of key project personnel with respect to the implementation of the plan</li> <li>• Waste management and recycling monitoring requirements</li> <li>• A procedure for the assessment, classification, management and disposal of waste in accordance with the Waste Classification Guidelines (NSW EPA, 2014)</li> <li>• Compliance record generation and management</li> </ul>
Consultation	Consultation during preparation of management plans will be undertaken with potentially affected stakeholders
Monitoring/ Inspections	<p>Monitoring and inspections will be in accordance with the Project's Monitoring and Assurance Program including:</p> <ul style="list-style-type: none"> <li>• Weekly inspections will include checking on the waste storage facilities on site</li> <li>• All waste removed from the site will be appropriately tracked from 'cradle to grave' using waste tracking dockets</li> </ul>
Compliance	<p>The Contractor will report all necessary waste and purchasing information to TfNSW as required for TfNSW to fulfil their Government Resource Efficiency Policy (GREP) reporting requirements. Compliance records will be retained by the Contractors in relation to waste management including records of inspections and waste dockets for all waste removed from the site</p>



### **6.9.3 Waste Mitigation**

Waste mitigation measures to be considered during construction include:

- All waste materials removed from the sites will be directed to an appropriately licensed waste management facility
- The use of raw materials (noise hoarding, site fencing, etc.) will be reused or shared, between sites and between construction contractors where feasible and reasonable
- Recyclable wastes, including paper at site offices, will be stored separately from other wastes.

# Appendix A

## TfNSW Environment and Sustainability Policy



Transport  
for NSW

# Environment and Sustainability Policy

Transport is essential to the economic and social development of NSW. It provides access to jobs, housing, goods and services. It provides for the movement of people in their daily lives to improve their quality of life.

**Transport for NSW, together with its key agencies NSW Trains, Sydney Trains, Roads and Maritime Services and State Transit Authority are committed to delivering transport services, projects, operations and programs in a manner that balances economic, environmental and social issues to ensure a sustainable transport system for NSW. We work towards achieving this by:**

- Minimising impacts on the environment, whether through transport operations, infrastructure delivery, maintenance or corporate activities
- Procuring, delivering and promoting sustainable transport options that promote value for money
- Complying with relevant legislation
- Developing, expanding and managing the transport network in a sustainable and climate change resilient way.

**We will continuously improve our performance in line with this Environment and Sustainability Policy by:**

- Implementing sound governance practices to set, apply and monitor the policy across the portfolio
- Setting objectives and targets to improve management and performance in line with best practice
- Reporting on our performance
- Raising the awareness and capacity of our staff to build the policy into their day-to-day business
- Forming constructive partnerships with government, industry and the community on environment and sustainability issues
- Contributing to and influencing the strategic environment and sustainability agenda of the NSW Government.

The Environment and Sustainability Policy flows from our obligations under the *Transport Administration Act* 1988 for “the delivery of transport services in an environmentally sustainable manner” and is reflected in our Corporate Plan “Connections - Towards 2017”.

I commend the policy to all within the Transport cluster agencies.

**Tim Reardon**  
Secretary  
August 2015

# Appendix B

## DPIE EMP Preparation Checklist

## Appendix B     DPIE EMP Preparation Checklist

The *EMP Guideline for Infrastructure Project* (DPIE, 2020) includes an EMP preparation checklist. The following checklist shows how the CEMF addresses the requirements of the Guideline and any residual items that will be covered by CEMP, sub-plans or ERAPs.

Requirement (EMP Guideline Reference)	CEMF Reference	CEMP, sub-plan or ERAP
Document preparation and endorsement		
Has the EMP been prepared in consultation with all relevant stakeholders as per the requirements of the conditions of consent? (Section 4.1)	N	Y
Have the views of the relevant stakeholders been taken into consideration? Have appropriate amendments been made to the EMP and does the EMP clearly identify the location of any changes? (Section 4.1)	N	Y
Has the EMP been internally approved by an authorised representative of the proponent or contractor? (Section 4.2)	As per EIS internal approvals	Y
Version and content		
Does the EMP describe the proponent's Environmental Management System (EMS) (if any), and identify how the EMP relates to other documents required by the conditions of consent? (Section 3.5.1)	Section 3.1	Y
Does the EMP include the required general content and version control information? (Section 3.1)	As per EIS internal approvals	Y
Does the EMP have an introduction that describes the project, scope of works, site location and any staging or timing considerations? (Section 3.2)	As per EIS description. Section 1.4	Y
Does the EMP reference the project description? (Section 3.3)	As per EIS description. Section 1.4	Y
Does the EMP reference a Community and Stakeholder Engagement Plan (or similar) or include community and stakeholder engagement actions (if required)? (Section 3.4)	Section 4	Y
Have all other relevant approvals been identified? Has appropriate information been provided regarding how each approval is relevant? (Section 4)	N	Y
Has the environmental management structure and responsibilities been included? (Section 3.5.2)	Section 3.14	Y
Does the EMP include processes for training of project personnel and identify how training and awareness needs will be identified? (Section 3.5.3)	Section 3.11	Y
Does the EMP clearly identify the relevant legal and compliance requirements that relate to the EMP? (Section 3.5.3)	Section 2	Y
Does the EMP include all the conditions of consent to be addressed by the EMP and identify where in the EMP each requirement has been addressed? (Section 3.5.13)	N	Y
Have all relevant guidelines, policies and standards been identified, including details of how they are relevant? (Section 3.5)	Section 2	Y
Is the process that will be adopted to identify and analyse the environmental risks included? (Section 3.5.5)	Section 3.4	Y
Have all the environmental management measures in the EIA been directly reproduced into the EMP? (Section 3.5.7)	Section 6	Y
Have any additional environmental management measures been included in the EMP? (Section 3.5.7)	N	Y

Requirement (EMP Guideline Reference)	CEMF Reference	CEMP, sub-plan or ERAP
Have environmental management measures been written in committed language? (Section 3.5.7)	Section 6	Y
Have project environmental management measures, including hold points, been identified and included? (Section 3.5.6)	Section 3.7, Section 6 and Appendix C	Y
Are relevant details of environmental monitoring that will be carried out included? (Section 3.5.8)	Section 3.7 and Appendix C	Y
Have the components of any environmental monitoring programs been incorporated? (Section 3.5.8)	N	Y
Are environmental inspections included? (Section 3.5.9)	Section 3.15	Y
Does the EMP document all relevant compliance monitoring and reporting requirements for the project? (Section 3.5.12 and 3.5.13)	Section 3.7 and Appendix C	Y
Does the EMP describe the types of plans or maps (such as environmental control maps) that will be used to assist with the management of environmental matters on site? (Section 3.5.10)	Section 3.5, 3.6, 5 and Section 6.	Y
Does the EMP list environmental management documents? (Section 3.5.11)	Section 3.17	Y
Is an auditing program referenced? (Section 3.5.13)	Section 3.15	Y
Does the EMP include the incident notification and reporting protocols that comply with the relevant conditions of consent? (Section 3.5.15)	Section 3.12	Y
Does the EMP identify the project role/position that is responsible for deciding whether an occurrence is an incident? (Section 3.5.15)	Section 3.14	Y
Does the EMP describe a corrective and preventative action process that addresses the requirements? (Section 3.5.16)	Section 3.16	Y
Does the EMP include details of a review and revision process that complies with the requirements? (Section 3.6)	Section 3.17	Y



# Appendix C

## Environmental Monitoring Assurance Program

## Appendix C Environmental Monitoring Assurance Program

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
Environmental Noise (Work activities during standard work construction hours)	CEMF documentation including applicable mitigation measures and performance outcomes  TfNSW Noise & Vibration Management Strategy V4 DMS-ST-157  TfNSW on-line noise protocol (PEGA)  CEMP, Sub-plan(s) and ECM(s)	Implementation of noise mitigation measures	Contractor	As required through project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Environmental Noise (Work activities outside standard work construction hours)  Predicted noise calculation levels: <5dB(A) above RBL (Period 1) <5dB(A) above RBL (Period 2)	CEMF documentation including applicable mitigation measures and performance outcomes  TfNSW Noise & Vibration Management Strategy V4 DMS-ST-157  TfNSW on-line noise protocol (PEGA)  CEMP, Sub-plan(s) and ECM(s)	Prepare Out of Hours Application prior to work activities  Implementation of mitigation measures as per Application	TfNSW	As required through project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
Environmental Noise (Work activities outside standard work construction hours) Predicted noise calculation levels: ≥5 dB(A) above RBL (Period 1) ≥5 dB(A) above RBL (Period 2)	CEMF documentation including applicable mitigation measures and performance outcomes TfNSW Noise & Vibration Management Strategy V4 DMS-ST-157 TfNSW on-line noise protocol (PEGA) CEMF mitigation measures and performance outcomes CEMP, Sub-plan(s) and ECM(s)	Prepare Out of Hours Application prior to work activities Implementation of mitigation measures as per Application	ER	As required through project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Vibration (human comfort)	CEMF documentation including applicable mitigation measures and performance outcomes TfNSW Noise Management Strategy V4 DMS-ST-157 Technical guideline (DEC, 2006) (for human exposure)	Conduct vibration monitoring in instances where valid complaints regarding human comfort have been received and assessed	Contractor	As required through project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Vibration management for cosmetic damage (monitoring)	TfNSW Noise Management Strategy V4 DMS-ST-157 BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2"	Conduct visual inspections and dilapidation surveys of potentially impacted assets prior to works	Contractor	Prior to commencement of works impacting upon applicable properties	Notification from ER to DPIE through monthly periodic reporting activities

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
	German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures				
Vibration management for cosmetic damage (notification)	<p>CEMF documentation including applicable mitigation measures and performance outcomes</p> <p>TfNSW Noise Management Strategy V4 DMS-ST-157</p> <p>BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2"</p> <p>German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).</p>	<p>Undertake notification to owners and occupiers of properties at risk of exceeding the screening criteria for cosmetic damage</p> <p>If the potential exceedance is to occur more than once or extend over a period of 24 hours, owners and occupiers are to be provided a schedule of potential exceedances on a monthly basis for the duration of the potential exceedances, unless otherwise agreed by the owner and occupier.</p> <p>These properties must be identified and considered in the Noise and Vibration Sub-plan.</p>	Contractor	Notification prior to commencement of works of applicable properties	Notification from ER to DPIE through monthly periodic reporting activities
Vibration management for vibration sensitive and special structures (monitoring)	<p>CEMF documentation including applicable mitigation measures and performance outcomes</p> <p>TfNSW Noise Management Strategy V4 DMS-ST-157</p> <p>BS 7385 Part 2-1993 "Evaluation and measurement for vibration in buildings Part 2"</p>	<p>Seek the advice of a heritage and/or acoustic specialist on methods and locations for installing equipment used for vibration, movement and noise monitoring at heritage-listed structures.</p> <p>Conduct vibration testing before and during vibration generating activities that have the potential to impact on heritage items to identify minimum working distances to prevent cosmetic damage.</p>	Contractor	As required through project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
	German Standard DIN 4150-3: Structural Vibration- effects of vibration on structures (for structural damage).	<p>Where exceedances occur, cease works for applicable works and review the construction methodology and if necessary, implement additional mitigation measures.</p> <p>Below add to “Mitigation measures under CEMF” Modelling and monitoring demonstrates no exceedances of vibration goals for structural damage to buildings and structures (Construction phase)</p> <p>No physical damage caused to any buildings or structures by vibration (Construction phase)</p>			
Heritage management  Heritage Finds	<p>CEMF documentation including applicable mitigation measures and performance outcomes</p> <p>Heritage Act 1977</p> <p>Historical Archaeological Record Design (HARD) Methodology</p> <p>Project Heritage Management Plan</p> <p>Communications Interface Protocol</p>	<p>Observe ‘HOLD-POINT’, cease immediately to prevent further disturbance.</p> <p>Do not interfere with potential relics, cordon off area and notify supervisor for further actioning, including immediate notification to EA and Proponent</p> <p>Implementation of Heritage Management Plan and Communications Interface Protocol</p> <p>Notification to Project Archaeologist and/or Heritage Architect where heritage is exposed for assessment of significance</p> <p>Implement mitigation measures on advice provided by heritage specialists</p>	Contractor	Where applicable during the Project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
Heritage management  Unexpected Heritage Finds and Human Remains Procedure	CEMF documentation including applicable mitigation measures and performance outcomes  National Parks and Wildlife Act 1974  Project Heritage Management Plan  Planning, Environment & Sustainability – Unexpected Heritage Finds Guideline - DMS-SD-115	Observe 'HOLD-POINT', cease immediately to prevent further disturbance.  Do not interfere with potential relics, cordon off area and notify supervisor for further actioning, including immediate notification to EA and Proponent  Implementation of Unexpected Heritage Finds Guideline -DMS-SD-115  Note: Human remains that are found unexpectedly during the carrying out of works may be under the jurisdiction of the NSW State Coroner and must be reported to the NSW Police immediately.	Contractor	Where applicable during the Project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Air quality	CEMF documentation including applicable mitigation measures and performance outcomes  Planning, Environment & Sustainability – Air Quality Management Guideline - DMS-SD-107	No receipt of legitimate complaints recorded on the Project's Complaints Register  Conduct Weekly Environmental and Sustainability Site Inspection(s)	Contractor	Construction phase	Notification from ER to DPIE through monthly periodic reporting activities



Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
Vegetation removal (assessed vegetation)	Vegetation Management (Protection and Removal) Guideline, DMS-SD-111/ Applicable CoAs under EIS	Vegetation identified and assessed under the Final Determination Report (EIS).  Qualified Arborist with a background and experience in ecology conduct a visual pre-check habitat inspection prior to de-vegetation to ensure no evidence of fauna, nesting, hatchlings, etc  Novo Rail to conduct a visual check in conjunction with Project Arborist	Contractor	Where applicable during the Project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Vegetation removal (non-assessed vegetation)	Arborist report (where applicable)  Vegetation Management (Protection and Removal) Guideline, DMS-SD-111/  TfNSW endorsement of Removal or Trimming of Vegetation Application – DMS-FT-078	Preparation and submission of Removal or Trimming of Vegetation Application – DMS-FT-078  Vegetation not identified nor assessed under the Final Determination Report (EIS)  Local native species and/or holds heritage value  Qualified Arborist with a background and experience in ecology conduct a visual pre-check habitat inspection prior to de-vegetation to ensure no evidence of fauna, nesting, hatchlings, etc.  Novo Rail to conduct a visual check in conjunction with Project Arborist.	TfNSW	Where applicable during the Project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
<p>Unexpected Contaminated Land and Asbestos Finds</p> <p>Undertaking of excavation works in proximity to potentially contaminated land.</p>	<p>Unexpected Contaminated Land and Asbestos Finds Procedure/Plan or similar</p> <p>Guidelines on the Duty to Report Contamination under the Contaminated Land Management Act 1997</p> <p>NEPM (Assessment of Site Contamination) – updated 2013</p>	<p>Procedure must be prepared before the commencement of construction and implemented as required through the life of the project.</p> <p>Implementation of unexpected contaminated land or asbestos (or suspected contaminated land or asbestos) procedure and/or plan or similar in instances of an unexpected finds scenario, i.e. during excavation/construction work activities</p> <p>Immediate notification of find to Novo Rail Environmental representative for communication to Environmental Representative, Senior Project Engineer, Safety Manager, Senior Project Manager and TfNSW Representative</p>	Contractor	Where applicable during the Project life-cycle	Notification from ER to DPIE through monthly periodic reporting activities
Waste management – waste classification	<p>Protection of the Environment Operations Act 1997</p> <p>Protection of the Environment Operations (Waste) Regulation 2014</p> <p>EPA Waste Classification Guidelines – (PART 1; PART 4)</p>	<p>Waste classification undertaken for required materials to ensure lawful transport and disposal at appropriate receiving facilities</p> <p>Observe HOLD Point at site where milky blue or green colouring is observed in the water and sulphurous (rotten egg smell)</p> <p>Conduct assessment for potential acid sulfate soil (PASS)</p> <p>Where PASS is exposed, output from the assessment is to be incorporated in the detailed design and construction methodology stage to ensure appropriate management measures are in place</p>	Contractor	Project life-cycle (as required)	-

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
		Note: Potential acid sulfate soil (PASS) unlikely to be located within the Redfern Project area			
Water quality (discharge of waters)	CEMF documentation including applicable mitigation measures and performance outcomes  Planning, Environment & Sustainability – Water Discharge and Reuse Guideline - DMS-SD-024  Planning, Environment & Sustainability – Discharge or Reuse Water Approval - DMS-FT-207	Calibrated probe / meter  Site water discharged to grassed areas or similar only and meet following parameters: pH 6.5 - 8.5; no visible oil and grease; discharge waters to land within 1 hour of inspection & probe test  <u>*No discharge permitted to local waters</u>	TfNSW	Project life-cycle (as required)	-
Erosion and sediment control	CEMF documentation including applicable mitigation measures and performance outcomes  Landcom: Managing Urban Stormwater: Soils & Construction (2004)  Planning, Environment & Sustainability – Water Discharge and Reuse Guideline - DMS-SD-024  Planning, Environment & Sustainability – Discharge or Reuse Water Approval - DMS-FT-207	All reasonably practicable erosion and sediment controls must be installed and appropriately maintained to minimise water pollution.  Weekly Environmental Site Inspection(s) and as required including <b>before and after rainfall events.</b>	Contractor	Project life-cycle (as required)	-

Item	Process	Acceptance Criteria	Responsibility Review and approval	Frequency and timing	Consultation with DPIE
Heavy vehicle movement within local road network	CEMF documentation including applicable mitigation measures and performance outcomes	Qualified surveyor  Conduct visual inspections and road dilapidation surveys of potentially impacted local road network in proximity to project construction site	Contractor	Prior and post Construction works	-