

Moorebank Precinct East - Stage 2 Proposal

Preliminary Construction Environmental Management Plan



SIMTA

SYDNEY INTERMODAL TERMINAL ALLIANCE

Part 4, Division 4.1, State Significant
Development

MOOREBANK PRECINCT EAST – STAGE 2

Preliminary Construction Environmental Management Plan

Author Ketan Patel 

Checker Claire Vahtra 

Approver Claire Vahtra 

Report No AA009017- No.1
Date November 2016

This report has been prepared for Sydney Intermodal Terminal Alliance in accordance with the terms and conditions of appointment for Concept Plan (MP 10_0193) Modification dated 22/06/2016. Arcadis Australia Pacific Pty Limited (ABN 76 104 485 289) cannot accept any responsibility for any use of or reliance on the contents of this report by any third party.

REVISIONS

Revision	Date	Description	Prepared by	Approved by
A	31 October 2016	First Draft	K. Patel	W. Owers
B	23 November 2016	Final	K. Patel	C. Vahtra

CONTENTS

1 INTRODUCTION	3
1.1 Background	3
1.2 Purpose and Scope.....	3
1.3 Alignment with other Plans	4
1.4 Consultation	5
1.5 Certification and Approval	5
1.6 Distribution	5
1.7 Revision	5
2 SITE AND PROJECT DESCRIPTION	6
2.1	6
2.2 Site description	6
2.2.1 Regional context.....	6
2.2.2 Local context	6
2.3 Overview of the Proposal	7
2.4 Construction Overview	10
2.4.1 Construction activities	11
2.4.2 Plant and equipment	14
2.4.3 Construction compounds.....	15
2.4.4 Construction hours	18
3 PLANNING	19
3.1 Approvals, Permits, Licensing	19
3.2 Legal and Other Requirements	19
3.3 Aspects and Impacts	61
3.3.1 Aspects and Impacts Register.....	61
3.4 Environmental Policy	63
3.5 Objectives and Targets	64
4 IMPLEMENTATION AND OPERATION	65
4.1 Environmental Management System Documentation	66
4.1.1 Construction Environmental Management Plan	66
4.1.2 Environmental management sub plans and strategies.....	66
4.1.3 Progressive Erosion and Sediment Control Plans.....	67
4.1.4 Procedures, Forms and Other Documents.....	67
4.2 Resources, Roles, Responsibilities and Authority	68
4.3 Sub-Contractor Management	71

5 COMPETENCY, TRAINING AND AWARENESS.....	72
6 COMMUNICATION AND RECORDS	73
6.1 Internal Stakeholders.....	73
6.2 External Stakeholders.....	73
6.3 Community Consultation.....	74
6.3.1 Complaints and Enquiries	75
6.3.2 Working Hours	75
7 INCIDENTS AND EMERGENCIES.....	76
7.1 Pollution Incident Response Management Plan.....	76
8 INSPECTIONS, MONITORING AND AUDITING.....	77
8.1 Inspections	77
8.2 Monitoring.....	77
8.3 Auditing.....	78
8.4 Reporting	78
8.4.1 Compliance Tracking Program.....	78
8.4.2 MPW EPBC Approval Reporting	78
8.4.3 POEO Act Reporting	78
8.5 Non-Conformance, Corrective and Preventative Actions.....	79
9 REVIEW AND IMPROVEMENT.....	80
10 DOCUMENTATION	81
10.1 Document Control	81
10.2 Records.....	81

TABLES

Table 2-1 Indicative construction program (based on a 24 month construction period)	10
Table 2-2 Construction activities to be undertaken within each construction works period	11
Table 2-3 Indicative construction plant and equipment required for construction of the Proposal.....	14
Table 2-4 Construction hours for activities associated with bulk earthworks and the Moorebank Avenue upgrade	18
Table 3-1 - Final Compilation of Mitigation Measures	20
Table 3-2 - MPE EPBC Approval	48
Table 3-3 – Concept Plan Revised Statement of Commitments	53
Table 3-4 - Criteria for evaluating likelihood.....	61
Table 3-5 - Criteria for evaluating consequence	62
Table 3-6 - Risk analysis categories and criteria for risk ranking.....	63
Table 4-1 - Construction sub plans.....	66
Table 4-2 - Roles and Responsibilities	68

FIGURES

Figure 1 Overview of the Proposal 9
Figure 2 Overview of the construction layout for the Proposal..... 17
Figure 3 Indicative CEMP documentation structure 65
Figure 4 Continuous improvement 80

Key terms relevant to the Proposal

Term	Definition
General terms	
The Moorebank Precinct	Refers to the whole Moorebank intermodal precinct, i.e. the MPE site and the MPW site
Moorebank Precinct West (MPW) Project (formerly the MIC Project)	The MPW Intermodal Terminal Facility as approved under the MPW Concept Plan Approval (SSD_5066) and the MPW EPBC Approval (No. 2011/6086).
Moorebank Precinct West (MPW) site (formerly the MIC site)	The site which is the subject of the MPW Concept Plan Approval, MPW EPBC Approval and MPW Planning Proposal. The MPW site does not include the rail link as referenced in the MPW Concept Plan Approval or MPE Concept Plan Approval.
Moorebank Precinct East (MPE) Concept Plan Approval (formerly the SIMTA Concept Plan Approval)	MPE Concept Plan Approval (SSD_0193) granted by the NSW Department of Planning and Environment on 29 September 2014 for the development of former defence land at Moorebank to be developed in three stages; a rail link connecting the site to the Southern Sydney Freight Line, an intermodal terminal, warehousing and distribution facilities and a freight village.
Moorebank Precinct East (MPE) Project (formerly the SIMTA Project)	The MPE Intermodal Terminal Facility, including a rail link and warehouse and distribution facilities at Moorebank (eastern side of Moorebank Avenue) as approved by the Concept Plan Approval (MP 10_0913) and the MPE Stage 1 Approval (14_6766).
Moorebank Precinct East (MPE) Site (formerly the SIMTA Site)	Including the former DSND site and the land owned by SIMTA which is subject to the Concept Plan Approval. The MPE site does not include the rail corridor, which relates to the land on which the rail link is to be constructed.
Statement of Commitments (SoC)	Recommendations provided in the specialist consultant reports prepared as part of the MPE Concept Plan application to mitigate environmental impacts, monitor environmental performance and/or achieve a positive environmentally sustainable outcome in respect of the MPE Project. The Statement of Commitments have been proposed by SIMTA as the Proponent of the MPE Concept Plan Approval.
MPE Stage 1 Project-specific terms	
Rail Corridor	Area defined as the 'Rail Corridor' within the MPE Concept Plan Approval.
Rail Link	The rail link from the South Sydney Freight Line to the MPE IMEX Terminal, including the area on either side to be impacted by the construction works included in MPE Stage 1.
MPE Stage 1	Stage 1 (14-6766) of the MPE Concept Plan Approval for the development of the MPE Intermodal Terminal Facility, including the rail link at Moorebank. This reference also includes associated conditions of approval and environmental management measures which form part of the documentation for the approval.

Term	Definition
MPE Stage 1 site	Includes the MPE Stage 1 site and the Rail Corridor, i.e. the area for which approval (construction and operation) was sought within the MPE Stage 1 Proposal EIS.
MPE Stage 2 specific terms	
MPE Stage 2 Proposal/ the Proposal	The subject of this EIS; being Stage 2 of the MPE Concept Plan Approval including the construction and operation of 300,000m ² of warehousing and distribution facilities on the MPE site and the Moorebank Avenue upgrade within the Moorebank Precinct.
MPE Stage 2 site	The area within the MPE site which would be disturbed by the MPE Stage 2 Proposal (including the operational area and construction area). The MPE Stage 2 site includes the former DSND site and the land owned by SIMTA which is subject to the MPE Concept Plan Approval. The MPE site does not include the rail corridor, which relates to the land on which the rail link is to be constructed.
The Moorebank Avenue site	The extent of construction works to facilitate the construction of the Moorebank Avenue upgrade.
The Moorebank Avenue upgrade	Raising of the vertical alignment of Moorebank Avenue for 1.5 kilometres of its length by about two metres, from the northern boundary of the MPE site to approximately 120 metres south of the MPE site. The Moorebank Avenue upgrade also includes upgrades to intersections, ancillary works and the construction of an on-site detention basin to the west of Moorebank Avenue within the MPW site.
Construction area	Extent of construction works, namely areas to be disturbed during the construction of the MPE Stage 2 Proposal (the Proposal).
Operational area	Extent of operational activities for the operation of the MPE Stage 2 Proposal (the Proposal).

1 INTRODUCTION

1.1 Background

Concept Plan Approval (MP 10_0193) for an intermodal terminal (IMT) facility at Moorebank, NSW (the Moorebank Precinct East Project (MPE Project) (formerly the SIMTA Project)) was received on 29 September 2014 from the NSW Department of Planning and Environment (DP&E). The Concept Plan for the MPE Project involves the development of an IMT, including a rail link to the Southern Sydney Freight Line (SSFL) within the Rail Corridor, warehouse and distribution facilities with ancillary offices, a freight village (ancillary site and operational services), stormwater, landscaping, servicing, associated works on the eastern side of Moorebank Avenue, Moorebank, and construction or operation of any part of the project, which is subject to separate approval(s) under the *Environmental Planning and Assessment Act 1979* (EP&A Act).

This Environmental Impact Statement (EIS) is seeking approval, under Part 4, Division 4.1 of the EP&A Act, for the construction and operation of Stage 2 of the MPE Project (herein referred to as the Proposal) under the Concept Plan Approval for the MPE Project, being the construction and operation of warehouse and distribution facilities.

This EIS has been prepared to address:

The Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7628) for the Proposal, issued by NSW DP&E on 27 May 2016 (Appendix A).

The relevant requirements of the Concept Plan Approval MP 10_0913 dated 29 September 2014 (as modified) (Appendix A).

The relevant requirements of the approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (No. 2011/6229, granted in March 2014 by the Commonwealth Department of the Environment (DoE)) (as relevant) (Appendix A).

This EIS also gives consideration to the MPE Stage 1 Project (SSD 14-6766) including the mitigation measures and conditions of consent as relevant to this Proposal.

This EIS has been prepared to provide a complete assessment of the potential environmental impacts associated with the construction and operation of the Proposal. This EIS proposes measures to mitigate these issues and reduce any unreasonable impacts on the environment and surrounding community.

1.2 Purpose and Scope

This report supports the Environmental Impact Statement (EIS) for the Proposal (refer to Section 2 below for an overview of the Proposal) and has been prepared as part of a State Significant Development (SSD) Application for which approval is sought under Part 4, Division 4.1 of the EP&A Act.

This report has been prepared to address:

- The Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7628) for the Proposal, issued by NSW DP&E on 27 May 2016.
- The relevant requirements of Concept Plan Approval MP 10_0913 dated 29 September 2014 (as modified).

- The relevant requirements of the approval under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) (No. 2011/6229, granted in March 2014 by the Commonwealth Department of the Environment (DoE)) (as relevant).

The Secretary's Environmental Assessment Requirements (SEARs) (SSD 16-7628) require a Preliminary Construction Environmental Management Plan (PCEMP), inclusive of a Construction Traffic Management Plan (CTMP), be provided as part of the EIS submission for the Proposal.

This PCEMP aims to provide a structured approach to the development of the Construction Environmental Management Plan (CEMP) and management of environmental issues during the construction of the Project. The CEMP for construction of the Proposal must be prepared in accordance with:

- *The Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004).
- *AS/NZS ISO14001: 2004, 'Environmental Management Systems - Requirements with Guidance for Use'*.

Implementing the CEMP effectively will ensure that the Proposal team meets regulatory and policy requirements in a systematic manner and continually improves its performance.

The objectives of the CEMP would be to:

- Describe the Proposal package of works in detail, including activities to be undertaken and relative timing.
- Provide specific mitigation measures and controls that can be applied on-site to avoid or minimise negative environmental impacts.
- Provide specific mechanisms for compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation.
- Describe the environmental management related roles and responsibilities of personnel.
- State the objectives and targets for issues that are important to the environmental performance of the Proposal.
- Outline the monitoring regime to check the adequacy of controls as they are implemented during construction.

1.3 Alignment with other Plans

This CEMP is the overarching management plan for a suite of environmental management documents for the Proposal. It provides a structured and systematic approach to environmental management. The primary purpose of the system of documentation is to:

- Ensure compliance with all applicable environmental laws, specifications, obligations and approvals.
- Minimise environmental impacts.

The CEMP forms part of the overall Project Management Plan structure for construction of the Proposal.

Construction contractor to include a figure detailing the Project Management Plan structure for the project.

1.4 Consultation

The construction contractor will be responsible for consultation with the community throughout the construction phase of the Proposal. A community information and awareness strategy must be developed and incorporated into the CEMP by the construction contractor prior to the commencement of construction.

1.5 Certification and Approval

The CEMP will require approval of the Minister of the Department of the Environment and Energy (DoEE) prior to commencement of construction, in accordance with the MPE EPBC Approval.

The CEMP for construction of the Proposal will require approval by the Department of Planning and Environment (DP&E) prior to commencement of construction. The CEMP must be approved by the Superintendent prior to submission to DoEE and DP&E. To allow adequate time for review, submission to DP&E would be required no later than one month prior to commencement of construction, or as otherwise agreed.

The sub-plans prepared for the Proposal would also would require approval by the Superintendent, the DP&E and DoEE prior to commencement of construction. Further explanation and details of these documents are provided in Section 4.1.2.

1.6 Distribution

The latest version of the CEMP must be made available to all construction personnel and sub-contractors.

The document is uncontrolled when printed. One controlled hard copy of the CEMP and supporting documentation is to be maintained by the construction contractor and be held at the main compound for the relevant package of works.

Registered copies would be distributed to the following personnel, responsible for each package of works:

- Superintendent.
- Construction Environmental Manager.
- Construction Manager.
- Construction Health and Safety Manager.
- Construction Project Manager.

1.7 Revision

A document review process must be implemented to ensure that the CEMP is updated appropriately for the specific works occurring on-site. This includes continual improvement reviews (see Figure 9-1), where necessary.

If the review process identifies any issues within the documents that are either redundant or in need of updating, the Construction Environmental Manager is responsible for preparing the revised documentation.

The revised document would be reviewed by the Principal's Representative and certified by the Construction Contractor. The Construction Environmental Manager can approve any minor changes to the CEMP.

If significant changes are made and the Construction Environmental Manager deems it necessary, the amended CEMP would be forwarded to the Secretary and DoEE for approval.

2 SITE AND PROJECT DESCRIPTION

2.1 Site description

2.1.1 Regional context

The MPE site, including the Proposal site, is located approximately 27 km south-west of the Sydney Central Business District (CBD) and approximately 26 km west of Port Botany. The MPE site is situated within the Liverpool Local Government Area (LGA), in Sydney's South West subregion, approximately 2.5 km from the Liverpool City Centre.

The MPE site is located approximately 800 m south of the intersection of Moorebank Avenue and the M5 Motorway. The M5 Motorway provides the main road link between the MPE site, and the key employment and industrial areas within Sydney's West and South-Western subregions, the Sydney orbital network and the National Road Network. The M5 connects with the M7 Motorway to the west, providing access to the Greater Metropolitan Region and NSW road network. Similarly the M5 Motorway is the principal connection to Sydney's north and north-east via the Hume Highway. The regional context of the Proposal is shown on Figure 1.

2.1.2 Local context

The Proposal site is located approximately 2.5 km south of the Liverpool City Centre, 800 m south of the Moorebank Avenue/M5 Motorway interchange and one kilometre to the east of the SSFL providing convenient access to and from the site for rail freight (via a dedicated freight rail line) and for trucks via the Sydney Motorway Network.

The land surrounding the Proposal site comprises:

- The MPW site, formerly the School of Military Engineering (SME), on the western side of Moorebank Avenue directly adjacent to the MPE site (subject to the MPW Concept Plan Approval), which is owned by the Commonwealth;
- The East Hills Rail Corridor to the south of the MPE site, which is owned and operated by Sydney Trains;
- The Holsworthy Military Reserve, to the south of the East Hills Rail Corridor, which is owned by the Commonwealth; The Boot Land, to the immediate east of the MPE site between the eastern site boundary and the Wattle Grove residential area, which is owned by the Commonwealth.
- The southern Boot Land, to the immediate south of the MPE site between the southern site boundary and the East Hills Rail Corridor, which is owned by the Commonwealth.

Glenfield Waste Services, south-west of the Proposal is proposing to develop a Materials Recycling Facility on land owned by the Glenfield Waste Services Group within the boundary of the current landfill site at Glenfield. The facility is proposed to recycle a maximum of 450,000 tonnes of material per year. The Glenfield Waste Services Proposal is the subject of a DA (SSD_6249) under Part 4, Division 4.1 of the EP&A Act.

A number of residential suburbs are located in proximity to the Proposal site including Wattle Grove, Moorebank, Casula, Glenfield.

The closest industrial precinct to the Proposal is at Moorebank, comprising around 200 hectares of industrial development. This area includes (but is not limited to) the Yulong and ABB sites to the south of the M5 Motorway and the Goodman MFive Business Park and Miscellaneous industrial and commercial development to the north of the M5 Motorway. The majority of this development is located to the north of the M5

Motorway between Newbridge Road, the Georges River and Anzac Creek. The Moorebank Industrial Area supports a range of industrial and commercial uses, including freight and logistics, heavy and light manufacturing, offices and business park developments.

There are other areas of industrial development near the Proposal at Warwick Farm to the north, Chipping Norton to the north-east, Prestons to the west and Glenfield and Ingleburn to the south-west.

2.2 Overview of the Proposal

The Proposal involves the construction and operation of Stage 2 of the MPE Project, comprising warehousing and distribution facilities on the MPE site and upgrades to approximately 1.4 kilometres of Moorebank Avenue between the northern MPE site boundary and 120 metres south of the southern MPE site boundary.

Key components of the Proposal include:

- Warehousing comprising approximately 300,000m² GFA, additional ancillary offices and the ancillary freight village
- Establishment of an internal road network, and connection of the Proposal to the surrounding public road network

Ancillary supporting infrastructure within the Proposal site, including:

- Stormwater, drainage and flooding infrastructure
- Utilities relocation and installation
- Vegetation clearing, remediation, earthworks, signage and landscaping
- Subdivision of the MPE Stage 2 site

The Moorebank Avenue upgrade would be comprised of the following key components:

- Modifications to the existing lane configuration, including some widening
- Earthworks, including construction of embankments and tie-ins to existing Moorebank Avenue road level at the Proposal's southern and northern extents
- Raking of the existing pavement and installation of new road pavement
- Establishment of temporary drainage infrastructure, including temporary basins and / or swales
- Raising the vertical alignment by about two metres from the existing levels, including kerbs, gutters and a sealed shoulder
- Signalling and intersection works
- Upgrading existing intersections along Moorebank Avenue, including:
 - Moorebank Avenue / MPE Stage 2 access
 - Moorebank Avenue / MPE Stage 1 northern access
 - Moorebank Avenue / MPE Stage 2 central access
 - MPW Northern Access / MPE Stage 2 southern emergency access

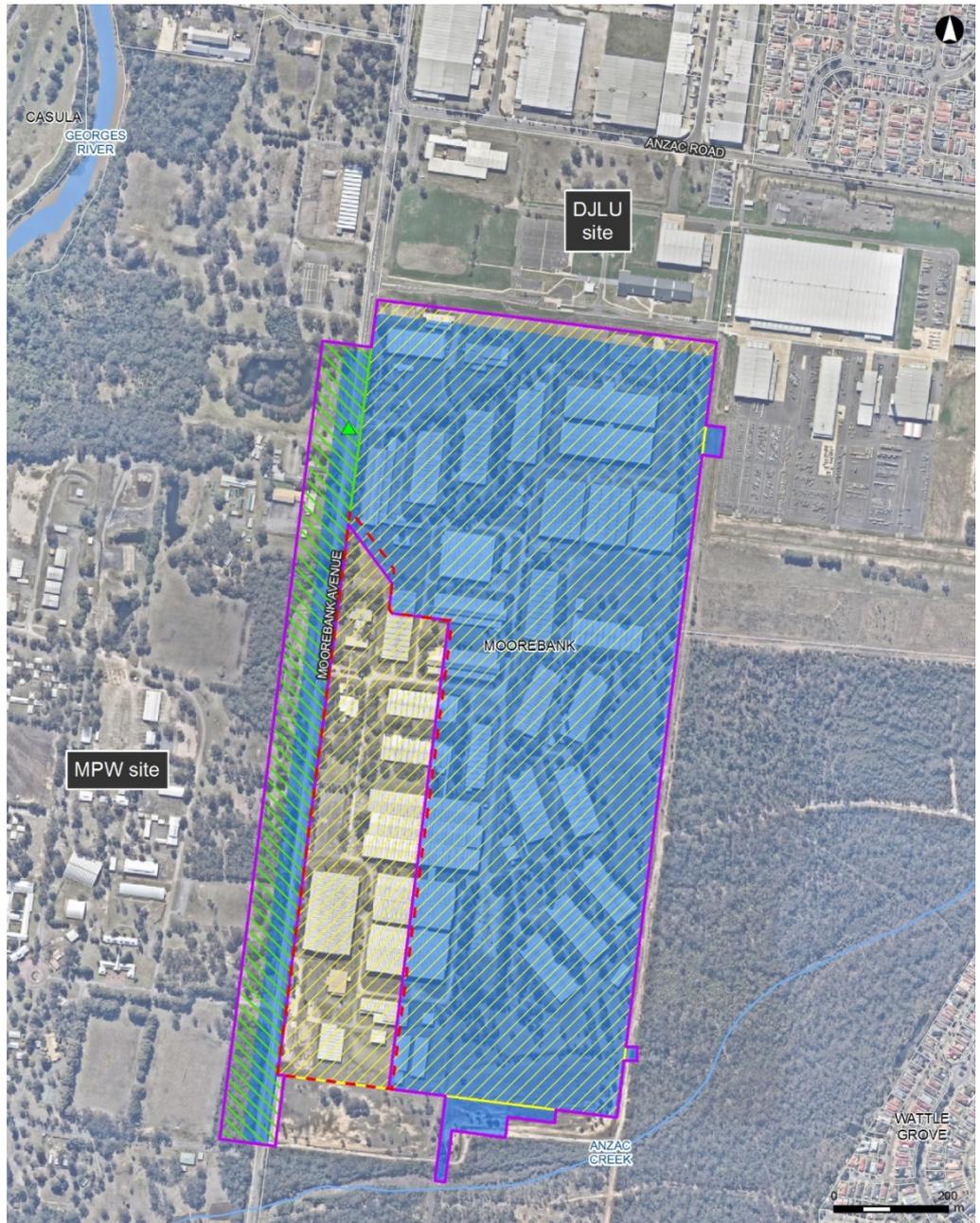
The Proposal would interact with the MPE Stage 1 Project (SSD_6766) via the transfer of containers between the MPE Stage 1 IMT and the Proposal's warehousing and distribution facilities. This transfer of freight would be via a fleet of heavy vehicles capable of being loaded with containers and owned by SIMTA. The fleet of vehicles would be stored and used on the MPE Stage 2 site, but registered and suitable for on-road use. The Proposal is expected to operate 24 hours a day, seven days per week.

An overview of the Proposal is shown in Figure 1. To facilitate operation of the Proposal, the following construction activities would be carried out across and surrounding the Proposal site (area on which the Proposal is to be developed):

- Vegetation clearance
- Remediation works
- Demolition of existing buildings and infrastructure on the Proposal site
- Earthworks and levelling of the Proposal site, including within the terminal hardstand
- Drainage and utilities installation
- Establishment of hardstand across the Proposal site, including the terminal hardstand
- Construction of a temporary diversion road to allow for traffic management along the Moorebank Avenue site during construction (including temporary signalised intersections adjacent to the existing intersections) (the Moorebank Avenue Diversion Road)
- Construction of warehouses and distribution facilities, ancillary offices and the ancillary freight village
- Construction works associated with signage, landscaping, stormwater and drainage works.

The Proposal would operate 24 hours a day, 7 days a week.

The footprint and operational layout of the Proposal are shown on Figure 1. More information relating to the construction and operation of the Proposal is provided in Section 3 and Section 4 of this report, and in Chapter 4 of the MPE Stage 2 EIS.



LEGEND

- MPE site
- MPE Stage 1 operational area
- MPE Stage 2 operational area
- MPE Stage 2 construction area
- Moorebank Avenue Upgrade
- Site access
- Lot boundary
- Watercourse

ARCADIS AUSTRALIA PACIFIC PTY LTD
 ABN 76 104 485 299
 Level 5, 141 Walker St | North Sydney NSW 2060
 P: +61 (0) 2 8907 9000 | F: +61 (0) 2 8907 9001

Scale: 1:10,000 @ A4



Date: 3/11/2016 Path: F:\AA009017L-GIS\A_Current\B_Maps\EIS\AA009017_MPES2_EIS_009_ProposalOverview_r2v2.mxd
 Created by: CC
 QA by: CV

Figure 1 Overview of the Proposal

2.3 Construction Overview

Construction of the Proposal is proposed to take between 24 and 36 months, commencing in the final quarter of 2017, with the completion of construction in the third quarter of 2019 (should construction take 24 months). The final construction program will depend on the market demand for warehouses to be constructed on the MPE Stage 2 site.

The indicative construction program (based on a 24 month program) is shown in Table 2-1. The construction works have been divided into seven 'works periods' which are interrelated and would potentially overlap. Subject to confirmation from the construction contractor, the order and staging of these construction works periods may change.

Table 2-1 Indicative construction program (based on a 24 month construction period)

Construction works period	2017				2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Works period A – Pre-construction activities												
Works period B - Site Preparation activities												
Works Period C - Construction of the Moorebank Avenue diversion road												
Works period D - Pavement and intersection works along Moorebank Avenue												
Works period E – Bulk earthworks, drainage and utilities												
Works period F - Construction and internal fit-out of warehousing												
Works period G – Miscellaneous construction and finishing works												

2.3.1 Construction activities

A summary of the indicative construction works and associated activities proposed to be undertaken during each of these works periods is provided in Table 2-2.

Table 2-2 Construction activities to be undertaken within each construction works period

Construction works period	Activity
Works period A – Pre-construction activities	<ul style="list-style-type: none"> • Establishment of site access points • Importation of fill for site preparation activities • Installation of site fencing • Remediation, where required.
Works period B - Site preparation activities	<ul style="list-style-type: none"> • Demolition of existing structures • Clearing of vegetation • Raising and levelling of land (to final operational levels) within which the Main Warehousing Compound would be located • Temporary works, including installation of construction environmental management measures (e.g. erosion and sedimentation controls) • Establishment of construction compound fencing and hoardings • Installation of site offices and amenities • Construction of hardstands for staff parking and laydown areas • Establishment of temporary batch plant and materials crushing plant • Construction of access roads, site entry and exit points and security • Establishment of site haulage roads. • Establishment of construction compound(s)
Works period C: Construction of the Moorebank Avenue diversion road	<ul style="list-style-type: none"> • Stripping of topsoil within footprint of temporary diversion road • Installation of temporary drainage • Placement of fill and temporary road pavement (e.g. gravel) • Construction of interface between temporary diversion road and existing Moorebank Avenue • Installation of temporary road signage, street lighting and signalling • Transfer of traffic onto temporary diversion road from Moorebank Avenue.

Construction works period	Activity
Works period D – Bulk earthworks, drainage and utilities	<ul style="list-style-type: none"> • Removal of existing pavement and stripping of topsoil within Moorebank Avenue • Importation, stockpiling and placement of approximately 600,000 m³ of imported clean fill • Installation of on-site detention (OSD) and drainage infrastructure within the MPE Stage 2 site • Construction of retaining walls • Creation of a road formation by general earthworks (by constructing fill embankments) • Bulk earthworks and raising of the Proposal site to final level, including the terminal hardstand • Utilities relocation and installation • Establishment of hardstand areas. • Internal existing road network modifications to enable continued operations of the site during construction
Works period E – Pavement works along Moorebank Avenue	<ul style="list-style-type: none"> • Placement of select layer of earthworks material on top of the road formation • Placing and compacting the pavement later (concrete, or concrete and asphalt) over the select layer (consisting of a sub-base and base) and potential sealing with bitumen • Traffic switching from diversion road onto final, raised Moorebank Avenue • Removal of construction traffic management and progressive opening of the internal road and warehouse access roads to traffic • Removal of road surface, road signage, street lighting and signalling from temporary diversion road • Commissioning of Moorebank Avenue.
Works period F - Warehouse construction and internal fit-out	<ul style="list-style-type: none"> • Foundation and floor slab installation • Erection of framework and structural walls • Installation of roof • Internal fit-out of warehouses (racking and associated services). •

Construction works period	Activity
Works period G – Miscellaneous construction and finishing works	<ul style="list-style-type: none"> • Pavement construction (internal transfer roads and perimeter road), including forming of new kerbs, gutters, medians (where required) and other structures • Line marking, lighting and sign posting • Installation of road furniture, including traffic signs and pavement markers. • Miscellaneous structural construction • Finishing works, including landscaping and general site rehabilitation, where required. • Commissioning of the Proposal • Decommissioning/Demobilisation of the Proposal site, including removal of construction compound(s) and construction environmental controls.

2.3.2 Plant and equipment

A range of plant and equipment would be required for the construction of the Proposal. A summary of the indicative plant and equipment likely to be utilised is provided in Table 2-3.

Table 2-3 Indicative construction plant and equipment required for construction of the Proposal

Equipment	Construction works period						
	Works period A – Pre-construction activities	Works period B - Site Preparation activities	Works period C: Construction of the Moorebank Avenue diversion road	Works period E - Road and intersection works to facilitate the raising of Moorebank Avenue	Works period D – Bulk earthworks, drainage and utilities	Works period F - Construction and internal fit-out of warehousing	Works period G – Miscellaneous construction and finishing works
Loaders		✓			✓	✓	✓
Static and vibratory rollers, and high energy impact compaction	✓	✓	✓	✓	✓	✓	
Mobile cranes	✓	✓			✓	✓	
Excavators	✓	✓	✓	✓	✓	✓	
Excavators with hammers		✓			✓		
Backhoes		✓			✓	✓	✓
825 Compactor			✓	✓			
Crushing plant		✓			✓		
Batch plant					✓	✓	
Concrete agitators (or similar)		✓			✓	✓	✓
Concrete pumps		✓			✓	✓	✓
Concrete saws					✓	✓	✓
Air compressors					✓	✓	✓
Jackhammers						✓	✓
Dozers		✓	✓	✓	✓		
Mulchers		✓					

Equipment	Construction works period						
	Works period A – Pre-construction activities	Works period B - Site Preparation activities	Works period C: Construction of the Moorebank Avenue diversion road	Works period E - Road and intersection works to facilitate the raising of Moorebank Avenue	Works period D – Bulk earthworks, drainage and utilities	Works period F - Construction and internal fit-out of warehousing	Works period G – Miscellaneous construction and finishing works
20-40 tonne articulated tipper trucks	✓	✓			✓		
Scrapers		✓			✓		
Graders	✓	✓	✓	✓	✓	✓	
Water trucks	✓	✓	✓	✓	✓	✓	✓
Piling rigs					✓	✓	
Forklifts					✓	✓	✓
Small earthmoving equipment	✓				✓	✓	✓
Welder					✓	✓	✓
Road profiler			✓	✓			
Rubber Roller			✓	✓			

2.3.3 Construction compounds

Temporary construction compounds would be required to support construction of the Proposal. The locations of these compounds are indicative and subject to confirmation by the construction contractor, once appointed.

It is envisaged that construction of the Proposal would require the use of two construction compounds:

- The Warehousing Compound, within the MPE site
- The Moorebank Avenue Compound, within the MPW site and immediately west of Moorebank Avenue.

The location and indicative layout of the construction compounds are shown in Figure 2.

The Main Warehousing Compound and Moorebank Avenue Compound are described in more detail in below respectively.

2.3.3.1 Main Warehousing Compound

The main construction compound for the Proposal (herein referred to as the Warehousing Compound) would be located within land proposed to be used as the Stage 1 Proposal's main IMT compound.

It is expected that some additional satellite compounds would be required during the construction of each individual warehouse on the Proposal site; however, the Warehousing Compound would be used for the majority of construction works.

The Warehousing Compound would include:

- A site office(s)
- Staff amenities
- Car parking
- Storage and laydown areas
- Materials testing facilities
- Material crushing facilities
- A concrete batching plant.

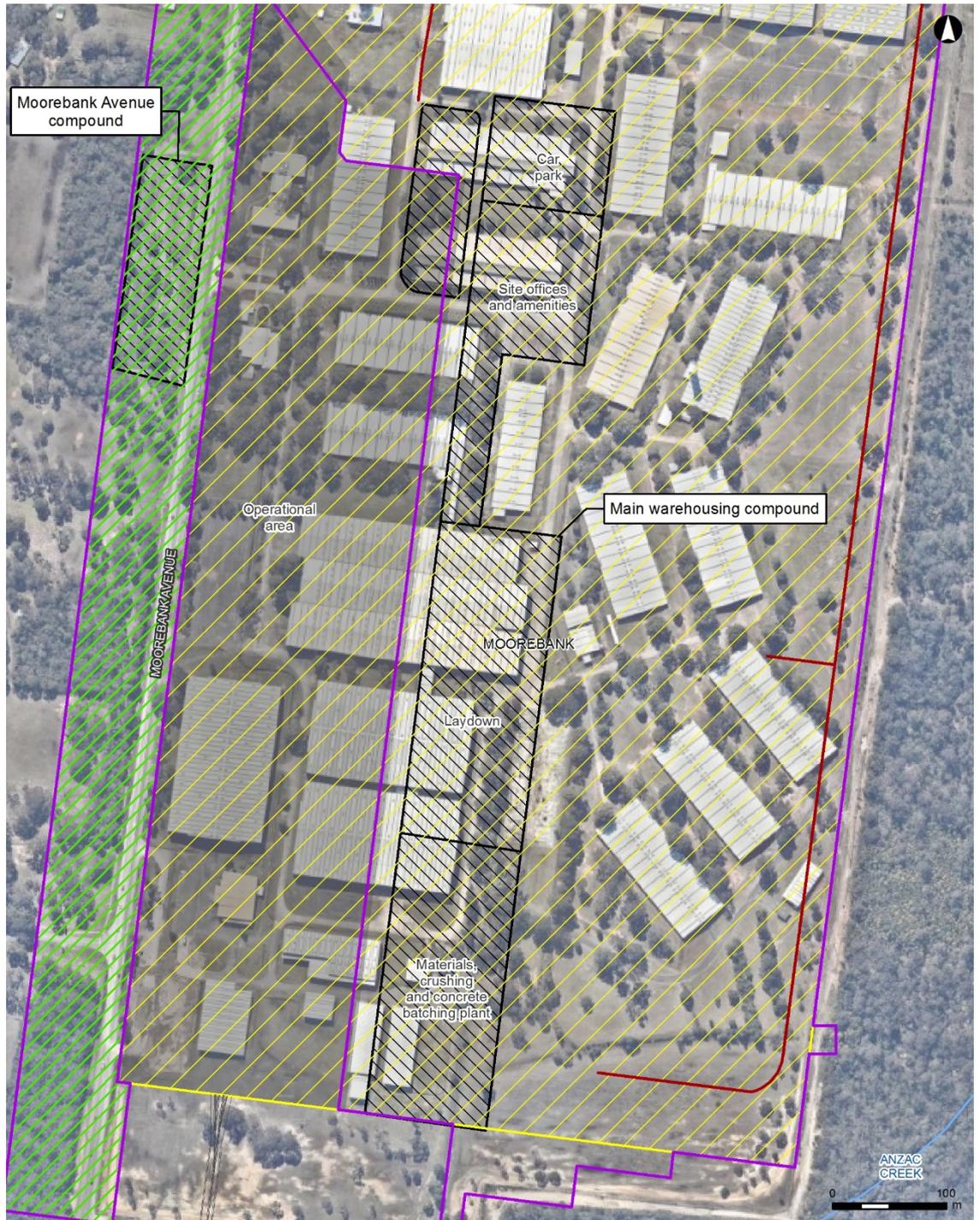
The indicative layout of the Warehousing Compound is shown on Figure 2.

2.3.3.2 Moorebank Avenue Compound

The Moorebank Avenue Compound would be located on the western side of Moorebank Avenue, in an existing area of hardstand within the MPW site. This area was previously used as a staff car park and as such, is characterised by large areas of level paved / hardstand surfaces and narrow garden beds that support a small number of trees.

The Moorebank Avenue Compound would include, site offices, car parking, and equipment storage and laydown areas, with some materials such as pre-cast culverts being temporarily stored within the compound area on occasion. The entrance to this compound would be generally at the location of the existing intersection off Moorebank Avenue.

No stockpiles are proposed to be located within the Moorebank Avenue Compound. Some materials such as pre-cast culverts may be temporarily stored within the compound area on occasion. The location of the Moorebank Avenue Compound is shown on Figure 2.



LEGEND

-  MPE site
-  MPE Stage 2 construction area
-  MPE Stage 2 construction compound
-  Moorebank Avenue Upgrade
-  MPE Stage 1 operational area
-  Internal haul road
-  Rail link (Stage 1 Proposal)
-  Watercourse

ARCADIS AUSTRALIA PACIFIC PTY LTD
 ABN 75 104 465 299
 Level 5, 141 Walker St | North Sydney NSW 2060
 P: +61 (0)2 8907 9000 | F: +61 (0)2 8907 9001

Scale: 1:5,000 @ A4

ARCADIS

SIMTA



Date: 3/11/2016 Path: F:\AA009017L-GISA_Current\B_Maps\EIS\AA009017_MPE\2_EIS_013_ConstructionLayout_r1v1.mxd
 Created by: CC
 QA by: CV

Figure 2 Overview of the construction layout for the Proposal

2.3.4 Construction hours

Construction works would generally be undertaken during standard daytime construction working hours, being:

- 7 am to 6 pm Monday to Friday
- 8 am to 1 pm Saturday
- No works on Sunday or Public Holidays.

Bulk earthworks activities and construction works to facilitate the Moorebank Avenue upgrade during peak construction periods may be undertaken outside of standard construction hours, but not during the night-time (i.e. 10pm to 7am).

The proposed construction hours for activities associated with bulk earthworks and construction of the Moorebank Avenue upgrade are summarised in Table 2-4.

Table 2-4 Construction hours for activities associated with bulk earthworks and the Moorebank Avenue upgrade

Construction activity	Construction hours	
	Weekdays	Saturdays
Material Delivery	6am-10pm	7am-6pm
Direct placement	7am-10pm	8am -6pm
Stockpiling	7am-6pm	7am-6pm
Crushing	7am-6pm	8am-1pm
Moorebank Avenue upgrade	6am – 10pm	7am – 6pm

Some additional construction works would be undertaken outside of standard daytime construction working hours, subject to consultation with the relevant authorities and in accordance with the *Interim Construction Noise Guidelines* (DECC, 2009), including:

- Any works which would not result in audible noise emissions at any nearby sensitive receptors.
- The delivery of oversized plant and/or structures that police or other authorities determine require special arrangements to transport along public roads
- Emergency work to avoid the loss of lives, property and/or to prevent environmental harm
- Maintenance and repair of public infrastructure where disruption to essential services and/or consideration of worker safety do not allow work within standard construction hours.
- Public infrastructure works that shorten the length of the project and are supported by noise-sensitive receivers.
- Construction works where it can be demonstrated and justified that these works are required to be undertaken outside of standard construction hours.
- Any other work as approved through the Construction Noise and Vibration Management Plan.

3 PLANNING

3.1 Approvals, Permits, Licensing

A register of approval requirements for each package of works must be developed and included in the CEMP. The register would be maintained by the Construction Environmental Manager and appropriate on-site personnel and be reviewed prior to commencement of, and during, each stage of construction.

Works for the Proposal must be undertaken in accordance with the following planning approvals and licences:

- Concept Plan Approval (MP10_0193) granted in September 2014.
- MPE EPBC Approval (No. 2011/6229) granted under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) in mid-2016.
- Environment Protection Licences (EPL) under the Protection of the Environment Operations Act 1997 (POEO Act) for 'crushing, grinding or separating'.
- Mitigation measures identified in the Proposal EIS.

3.2 Legal and Other Requirements

A register of legal and other requirements for the package of works must be developed and included as an appendix to the CEMP. The register should be in the form of a checklist and be reviewed at regular intervals.

Any changes made to the legal requirements register must be communicated to the wider team where necessary.

The construction contractor is to include a table which addresses relevant construction Conditions of Approval and how these will be managed. A summary of the conditions is provided in Table 3.1 and Table 3.2. A full list of the MPE Conditions of Approval can be found in Appendix A of the EIS.

The construction contractor to review legal requirements and develop legal requirement register based on the construction methodologies adopted.

Table 3-1 - Final Compilation of Mitigation Measures

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
0.	General environmental management				
0A	<p>Pre-construction works would be undertaken subject to the preparation of an Environmental Work Method Statement (EWMS) or equivalent. Pre-construction works include the following:</p> <ul style="list-style-type: none"> • works within Works period A (preconstruction activities), including: <ul style="list-style-type: none"> – Establishment of site access points – Importation of fill for site preparation activities – Installation of site fencing – Remediation, where required. • survey; acquisitions; or building/ road dilapidation surveys; fencing; investigative drilling, excavation or salvage • clearing any native vegetation within the Proposal site, with the exception of the southern and eastern swales located outside of the SIMTA site • establishment of site compounds and construction facilities • installation of environmental mitigation measures • utilities adjustment and relocation that do not present a significant risk to the environment, as determined by the Environmental Representative • other activities determined by the Environmental Representative to have minimal environmental impact 	Pre-Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> all works as described in Works period A in Section 4 of this EIS 				
0B	<p>The Construction Environmental Management Plan (CEMP), or equivalent, for the Proposal would be based on the PCEMP (Appendix G of this EIS), and include the following preliminary management plans:</p> <ul style="list-style-type: none"> Preliminary Construction Traffic Management Plan (PCTMP) (Appendix K of this EIS) Air Quality Management Plan (AQMP) (Appendix M of this EIS) Erosion and Sediment Control Plans (ESCPs) and Bulk Earthworks Plans (Appendix P of this EIS). <p>As a minimum, the CEMP would include the following sub-plans:</p> <ul style="list-style-type: none"> Construction Traffic Management Plan (CTMP) Construction Noise and Vibration Management Plan (CNVMP), prepared in accordance with the <i>Interim Construction Noise Guideline</i> Construction Air Quality Management Plan Flora and Fauna Management Plan A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan Contamination Management Plan Flood Emergency Response and Evacuation Plan UXO, EO, and EOW Management Plan Asbestos Management Plan 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> Heritage (Indigenous and Non-Indigenous) Management Plan/s Bushfire Management Strategy Community Information and Awareness Strategy. 				
0C	<p>The Operational Environmental Management Plan (OEMP), or equivalent, for the Proposal would be based on the following preliminary management plans:</p> <ul style="list-style-type: none"> Preliminary Operational Traffic Management Plan (POTMP) (Appendix K of this EIS) Air Quality Management Plan (Appendix M of this EIS) Stormwater Drainage Design Drawings (Appendix P of this EIS) <p>As a minimum the OEMP would include the following sub-plans:</p> <ul style="list-style-type: none"> Operational Traffic Management Plan (OTMP) Operational Noise and Vibration Management plan (ONVMP) Air Quality Management Plan Flora and Fauna Management Plan Flooding and Emergency Response Plan Emergency Response Plan in accordance with the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B) Operational Hazard and Risk Management Plan Bushfire Management Strategy Community Information and Awareness Strategy. 	Operation	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
0D	The construction and/or operation of the Proposal may be delivered in a number of stages. If construction and/or operation is to be delivered in stages a Staging Report would be provided to the Secretary prior to commencement of the initial stage of construction and updated prior to the commencement of each stage as that stage is identified.	Construction and Operation	Y	Y	Y
1.	Traffic and Transport				
1A	<p>A Construction Traffic Management Plan (CTMP) would be prepared, based on the PCTMP prepared as part of this EIS (refer to Appendix K of this EIS). It is intended that the PCTMP would be further progressed and integrated into the CEMP for the Proposal for implementation by the construction contractor for the duration of construction. The CTMP would detail the management controls to be implemented to avoid, minimise and mitigate impacts of construction of the Proposal to traffic performance on the surrounding road network, pedestrian and cyclist access, and the amenity of the surrounding environment and would include the following key initiatives:</p> <ul style="list-style-type: none"> • Review of speed restrictions along Moorebank Avenue and additional signposting of speed limitations to reinforce reduced speed limits during construction of the Proposal • Restriction of haulage routes through signage and education to ensure, where possible, that construction vehicles do not travel through nearby residential areas to access the Proposal site, in particular Moorebank (Anzac Road) or the Wattle Grove residential areas • Inform local residents (in conjunction with the Community Information and Awareness Strategy) of the proposed construction activities and road access restrictions that the construction traffic must adhere to and establish 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<p>communication protocols for community feedback on issues relating to construction vehicle driver behaviour and construction related matters</p> <ul style="list-style-type: none"> • Installation of specific warning signs on approach to, and at entrances to, the construction site to warn existing road users of entering and exiting construction traffic • Establishing pedestrian exclusion zones and walking routes/crossing points which integrate within the existing pedestrian network • Distribution of day warning notices to advise local road users of scheduled construction activities and associated traffic movements. • Installation of appropriate traffic controls and warning signs for areas identified where potential safety risk issues exist • The promotion of car-pooling for construction staff and other shared transport initiatives during the construction phase • Management and coordination of the transportation of materials to maximise vehicle loads and therefore minimise vehicle movements • Monitoring of traffic on Moorebank Avenue during peak periods to ensure that queuing at intersections does not impact on other road users • Reducing, where reasonable and feasible, the volumes of construction vehicles travelling during peak periods, especially if the increase in traffic generated by construction activities impedes on the operation of Moorebank Avenue 				
1B	A road Safety Audit on Cambridge Avenue to be undertaken prior to the commencement of the construction of the Proposal to identify the traffic safety risks and determine appropriate mitigations.	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
1C	<p>Moorebank Avenue would be upgraded for approximately 1.4 kilometres from approximately 95 metres south of the northern boundary of the MPE site to approximately 120 metres south of the southern MPE site boundary. The following intersections would also be upgraded as part of the Proposal:</p> <ul style="list-style-type: none"> • Moorebank Avenue / MPE Stage 2 • Moorebank Avenue / MPE Stage 1 northern access • Moorebank Avenue / MPE Stage 1 central access • Moorebank Avenue / MPE Stage 1 southern emergency access. <p>The funding of these upgrades would be clarified through discussions with SIMTA, Roads and Maritime and Transport for NSW.</p>	Construction and Operation	Y	Y	Y
1D	<p>A Preliminary Operational Traffic Management Plan (POTMP) has been prepared as part of this EIS (refer to Appendix K of this EIS). It is intended that the POTMP would be further progressed and integrated into the OEMP for the Proposal. Specifically, the following key aspects would be addressed in the OTMP:</p> <ul style="list-style-type: none"> • Heavy vehicle route management • Safety and amenity of road users and public • Congestion management on Moorebank Avenue • Road user delay management • Information signage, distance information and advance warning • Driver code of conduct 	Operation	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Incident management • Traffic monitoring. 				
1E	Bicycle and end of trip facilities would be provided in accordance with the <i>City of Sydney Section 3 – General Provisions</i> .	Operation	Y	Y	Y
1F	Consultation would be undertaken with relevant bus provider(s) regarding the potential to extend the 901 bus service (or equivalent) and additional regular service bus stops with the aim of maximising public transport accessibility to, from and within the Proposal site.	Operation	Y	Y	Y
2.	Noise and Vibration				
2A	<p>A Construction Noise and Vibration Management Plan (CNVMP), or equivalent, would be prepared for the Proposal in accordance with the <i>Interim Construction Noise Guideline</i> (DECC, 2009) (or equivalent), and will include the following:</p> <ul style="list-style-type: none"> • Identification of nearby residences and other sensitive land uses • Description of approved hours of work • Description and identification of construction activities, including work areas, equipment and duration • Description of what work practices (generic and specific) will be applied to minimise noise and vibration • Consider the selection of plant and processes with reduced noise emissions • A complaints handling process • Noise and vibration monitoring procedures 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Overview of community consultation required for identified high impact works • Induction and training will be provided to relevant staff and sub- contractors outlining their responsibilities with regard to noise • Procedure for approval of any works undertaken outside of the following hours: <ul style="list-style-type: none"> - Standard hours of 07:00 am to 18:00 pm Monday to Friday, and 08:00am to 13:00 pm Saturday, - Out of hours (OOH) work periods of OOH Period 1 is 6:00am – 7:00am weekdays; OOH Period 2 is 6:00pm – 10:00pm weekdays; OOH Period 3 is 7:00am – 8:00am Saturday; and OOH Period 4 is 1:00pm – 6:00pm Saturday. 				
2B	<p>Any works undertaken outside of the hours prescribed in mitigation measure 2A would be undertaken in consultation with relevant authorities. Works outside these hours that may be permitted would include:</p> <ul style="list-style-type: none"> • Any works which would not result in audible noise emissions at any nearby sensitive receptors. • The delivery of oversized plant and/or structures that police or other authorities determine require special arrangements to transport along public roads • Emergency work to avoid the loss of lives, property and/or to prevent environmental harm 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> Maintenance and repair of public infrastructure where disruption to essential services and/or consideration of worker safety do not allow work within standard construction hours. Public infrastructure works that shorten the length of the project and are supported by noise-sensitive receivers. Construction works where it can be demonstrated and justified that these works are required to be undertaken outside of standard construction hours. Any other work as approved through the CNVMP. 				
2D	In the event of any noise or vibration related complaint or adverse comment from the community, noise and ground vibration levels (as relevant) would be investigated. Remedial action would be implemented where feasible and reasonable. The procedures for managing complaints would be provided within the Community Information and Awareness Strategy.	Construction and operation	Y	Y	Y
2E	An Operational Noise Management Plan (ONMP) would be prepared which includes a framework for regular monitoring of operational noise. Monitoring would begin at the commencement of the operation of the Proposal and would be conducted on an annual basis for up to 2 years (after commencement of operations of the Proposal).	Operation	Y	Y	N
3.	Air Quality				
3A	The Air Quality Management Plan (Ramboll, 2016), included within Appendix O of this EIS, would be further progressed and incorporated into the CEMP for the Proposal. Specifically, the following key aspects would be addressed in the CEMP:	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> Procedures for controlling/managing dust Roles, responsibilities and reporting requirements Contingency measures for dust control where standard measures are deemed ineffective. 				
3B	<p>The Air Quality Management Plan (Ramboll, 2016), included within Appendix O of this EIS would be further progressed and integrated into the OEMP for the Proposal. In accordance with the Air Quality Management Plan the following key aspects would be addressed in the OEMP:</p> <ul style="list-style-type: none"> Implementation and communication of anti-idling policy for trucks Complaints line for the community to report on excessive idling and smoky vehicles Procedures to reject excessively smoky trucks visiting the site based on visual inspection. 	Operation	Y	Y	N
4.	Biodiversity				
4A	<p>A Construction Flora and Fauna Management Plan (CFFMP) would be prepared as part of the CEMP for the Proposal. Native vegetation clearing for southern and eastern swales located outside of the MPE site would not occur until the Flora and Fauna Management Plan is approved. This would include the following:</p> <ul style="list-style-type: none"> Clear identification of vegetation exclusion zones 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Site induction procedure, including briefings regarding the local threatened flora and local fauna of the site and protocols to be undertaken if they are encountered • A pre-start up check for sheltering native fauna of all infrastructure, plant and equipment and/or during relocation of stored construction materials • Application of speed limits in areas adjacent to native vegetation 				
4B	The threatened plant populations identified to the south of the Proposal site would be protected by a minimum 10 metre buffer between the edge of the area of occupied habitat and the Proposal site.	Construction	Y	Y	Y
4C	Potential bat roosting locations in buildings to be demolished would be checked, as far as is practicable, by a qualified ecologist or wildlife carer for presence of bats prior to demolition. Any bats found would be relocated.	Construction	Y	Y	N
4D	<p>A two-stage approach would be undertaken to clearing:</p> <ul style="list-style-type: none"> • Remove non-hollow bearing trees at least 48 hours before habitat trees are removed. • Hollow bearing trees are to be knocked with an excavator bucket or other machinery to encourage fauna to evacuate the tree immediately prior to felling. • Felled trees must be left for a short period of time on the ground to give any fauna trapped in the trees an opportunity to escape before further processing of the trees. • Felled hollow bearing trees must be inspected by an ecologist as soon as possible (not longer than 2 hours after felling). 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
4E	Directional lighting will be used where lighting is required in construction areas to avoid impact on fauna.	Construction	Y	Y	Y
4F	Should any animal be injured, the relevant local wildlife rescue agency (e.g. WIRES) and/or veterinary surgery would be contacted as soon as practical. Until the animal can be cared for by a suitably qualified animal handler, if possible minimise stress to the animal and reduce the risk of further injury by: <ul style="list-style-type: none"> • Handling fauna with care and as little as possible. • Covering larger animals with a towel or blanket and placing in a large cardboard box. • Placing small animals in a cotton bag, tied at the top. • Keeping the animal in a quiet, warm, ventilated and dark location. 	Pre-construction, construction and operation	Y	Y	Y
4G	A Flora and Fauna Management Plan would be prepared as part of the OEMP for the Proposal. This FFMP would focus on minimising impacts on biodiversity values on the adjacent Boot Land.	Operation	Y	Y	N
5.	Stormwater and Flooding				
5A	A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP), or equivalent, would be incorporated into the CEMP for the construction of the Proposal. The SWMP and ESCPs would be developed in accordance with the principles and requirements of Managing Urban Stormwater – Soils & Construction Volume 1 ('Blue Book') (Landcom, 2004) and Volume 2 (DECC 2008). and consider the Preliminary ESCPs (Appendix P of this EIS). The following aspects would be addressed within the SWMP and ESCPs:	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Construction traffic restricted to delineated access tracks, and maintained until construction complete • Appropriate sediment and erosion controls to be implemented prior to soil disturbance • Stormwater management to avoid flow over exposed soils which may result in erosion and impacts to water quality • Location of stockpiles outside of flow paths on appropriate impermeable surfaces as well as outside of riparian corridors • Inspection of all permanent and temporary erosion and sedimentation control works prior to and post rainfall events and prior to closure of the construction area • Wheel wash or rumble grid systems installed at exit points to minimise dirt on roads. 				
5B	<p>To minimise potential flood impacts as a result of construction of the Proposal, the following measures would be implemented and documented in the SWMP:</p> <ul style="list-style-type: none"> • The existing site catchment and sub-catchment boundaries would be maintained as far as practicable • To the extent practicable, site imperviousness and grades should be limited to the extent of existing imperviousness and grades under existing development conditions. 	Construction	Y	Y	Y
5C	A Flood Emergency Response and Evacuation Plan, or equivalent, would be prepared and implemented for the construction phase of the Proposal to allow	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	work sites to be safely evacuated and secured in advance of flooding occurring at the Proposal site.				
5D	<p>Stormwater quality improvement devices management measures would be designed and installed on site as presented in the Stormwater and Flooding Environmental Assessment (Appendix P of this EIS), including:</p> <ul style="list-style-type: none"> • Gross Pollutant Traps (GPTs) at Section 6.2.1 • Rain gardens in the base of the OSD channels, as shown in Figure 6-1 of Appendix P of this EIS. Stormwater quality improvement devices would be designed to meet the performance targets identified in Georges River Estuary CZMP. 	Detailed design and Construction	Y	Y	Y
5E	<p>A water quality monitoring program for the operational phase of the Proposal would be prepared as part of the OEMP for the Proposal and would detail:</p> <ul style="list-style-type: none"> • The frequency and duration of sampling • Background water quality conditions • Sampling methodology • Reporting requirements <p>Water quality monitoring would be undertaken for both Anzac Creek and the Georges River and would include the following parameters:</p> <ul style="list-style-type: none"> • Total suspended solids • Total phosphorous • Total nitrogen 	Operation	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> Oils and grease. 				
5F	A Flood Emergency Response Plan (FERP) would be developed for operational phase of the Proposal. The FERP would take into consideration, site flooding and broader flood emergency response plans for the Georges River and Anzac Creek floodplains and Moorebank area. The FERP would also include the identification of an area of safe refuge within the Proposal site that would allow people to wait until hazardous flows have receded and safe evacuation is possible.	Operation	Y	Y	N
6.	Geology, Soils and Land Contamination				
6A	Excavated material would be reused on site where possible. Any excavated material that requires disposal would be subject to waste classification under the <i>Waste Classification Guidelines 2014</i> (NSW EPA, 2014) and would be disposed of at an appropriate licensed facility.	Construction	Y	Y	Y
6B	The construction contractor would progress the Bulk Earthworks strategy (to be included within the CEMP) which would outline the volumes of imported and exported material, any buffer areas, temporary soil stockpiling areas and fencing of excavations, as required.	Construction	Y	Y	Y
6C	<p>A Contamination Management Plan (CMP) (or equivalent) would be prepared and included within the CEMP for the Proposal. The CMP would be prepared in consideration of the outcomes of the Environmental Management Plan (GHD, 2016) and Site Audit Statement and Site Audit Report (JBS&G, 2016) and would contain procedures on the following:</p> <ul style="list-style-type: none"> Handling, stockpiling and assessing potentially contaminated materials encountered during the development works. 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • A management tracking system for excavated potentially contaminated materials to ensure the proper management material movements at the Proposal site, particularly during excavation • Assessment, classification and disposal of waste in accordance with relevant legislation • A contingency plan for unexpected contaminated materials (unexpected finds protocol), such as materials that are odorous, stained or containing anthropogenic materials, that may be encountered during construction. 				
6D	A site-wide UXO, EO, and EOW Management Plan (or equivalent) would be developed for the Proposal site. This plan would be included within the CEMP and address the unexpected discovery of UXO, EO or EOW during construction.	Construction	Y	Y	Y
6E	An Emergency Response Plan would be prepared and implemented. The plan would meet the requirements of Clause 153C of the POEO Act and the POEO (General) Regulation (Cl. 98B) and specify the procedure to be followed in the event of a spill, including the notification requirements and use of absorbent material to contain the spill. A spill kit would be provided on the Proposal site at all times.	Operation	Y	Y	N
7.	Hazard and risk				
7A	Hazards associated with operation of the Proposal would be identified through a Hazard and Operability Study (HAZOP), which would be undertaken as part of the detailed design.	Detail design	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
7B	<p>The following measures would be included in the CEMP (or equivalent) to minimise hazards and risks:</p> <ul style="list-style-type: none"> • Construction works, including the storage, handling and use of hazardous construction materials would be undertaken in accordance with the provisions of the <i>Work Health and Safety Act 2011</i> and <i>Work Health and Safety Regulation 2011</i>. • All demolition activities would be undertaken in accordance with <i>Australian Standard AS2601-1991 – Demolition of Structures</i> • Safe operational access and egress for emergency service personnel and workers will be provided at all times, and specified in the CEMP. • Regular maintenance and inspection of all environmental and safety protection controls would be undertaken. 	Construction	Y	Y	Y
7C	<p>An Asbestos Management Plan would be prepared for the Proposal in accordance with the <i>Code of Practice: How to Manage and Control of Asbestos in the Workplace</i> (WorkCover NSW, 2011). The plan would include, but not be limited to:</p> <ul style="list-style-type: none"> • Identification of potential (suspected or confirmed) asbestos areas • an outline of how asbestos risks would be controlled • the identification of each person with responsibilities and details of their responsibilities under this plan • Reference the asbestos register and risk assessment, which would also be prepared prior to construction being undertaken. 	Construction	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
7D	<p>All asbestos removal works, including the demolition of the eight structures identified as containing asbestos (refer to Table 18-4) will be undertaken in accordance with the Environmental Management Plan (GHD, 2016) and the following:</p> <ul style="list-style-type: none"> • The <i>Code of Practice for the Safe Removal of Asbestos</i> (NOHSC, 2005) • <i>Code of Practice: How to Safely Remove Asbestos</i> (WorkCover NSW, 2011)¹ <p>Asbestos removal would be carried out by an appropriately licensed asbestos removalist. The licencing requirements for asbestos removal as specified in the <i>Code of Practice How to Safely Remove Asbestos</i> (WorkCover NSW, 2011) are provided in Table 18-9.</p>	Construction	Y	Y	N
7E	Dangerous goods entering or leaving the Stage 2 site must be notified in advance in accordance with the International Maritime Organisation (IMO) and regulations pertaining to the International Convention for the Safety of Life at Sea (SOLAS).	Operation	Y	Y	N
7F	Handling of dangerous goods including unpacking from containers and storage within warehouses on the Stage 2 site would be undertaken in accordance with the <i>Storage and Handling of Dangerous Goods Code of Practice</i> (WorkCover NSW, 2005).	Operation	Y	Y	N
7G	Staff involved in the transport and handling of dangerous goods within the Proposal site would receive training regarding the contents of the dangerous	Operation	Y	Y	N

¹ Excavation or disturbance of those areas of the Proposal site where potential for asbestos to be present within the soil is discussed and mitigated in Chapter 13 (Soils, Geology and Contamination).

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	goods provisions and their roles and responsibilities. All training would be recorded and maintained in accordance with the appropriate competent authority (SafeWork NSW).				
7H	Design, installation and maintenance of gas reticulation infrastructure would be undertaken in accordance with <i>Australian Standard AS 2944-1 (2007): Plastic pipes and fittings for gas reticulation – Polyamide pipes</i> and <i>Australian Standard AS 2944-2 (2007): plastic pipes and fittings for gas reticulation – Polyamide fittings</i> .	Operation	Y	Y	Y
7I	Storage of flammable/combustible liquids within the Proposal site would be carried out in accordance with <i>Australian Standard AS 1940: The Storage and Handling of Flammable and Combustible Liquids</i> . Secondary containment measures would be implemented in a location away from waterways and drainage paths/infrastructure.	Operation	Y	Y	N
7J	An Operational Hazard and Risk Management Plan would be developed for the Proposal site and be implemented as part of the OEMP for the Proposal. This plan would be reviewed regularly and updated should goods entering the site change. As a minimum, the plan would adopt the requirements of the Code of Practice for Storage and Handling of Dangerous Goods (WorkCover NSW, 2005).	Operation	Y	Y	N
7K	Appropriate testing, alarm systems and work, health and safety (WHS) precautions would be implemented for the safety of personnel and infrastructure.	Operation	Y	Y	N
7L	No hazardous or regulated wastes would be disposed of on site.	Operation	Y	Y	N
8.	Visual Amenity, urban design and landscape				

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
8A	<p>The following mitigation measures would be implemented, where reasonable and feasible, to minimise the visual impacts of the Proposal:</p> <ul style="list-style-type: none"> Existing vegetation around the perimeter of construction sites would be retained The early implementation of landscape planting would be considered in order to provide visual screening during the construction of the Proposal Elements within construction sites would be located to minimise visual impacts, e.g. setting back large equipment from site boundaries Construction lighting, on both ancillary facilities and plant and equipment, would be designed and located to minimise the effects of light spill on surrounding sensitive receivers, including residential areas and the proposed conservation area Design of site hoardings would consider the use of artwork or project information Regular maintenance would be undertaken of site hoardings and perimeter areas including the prompt removal of graffiti Re-vegetation/landscaping would be undertaken progressively Where required for construction works, cut-off and directed lighting would be used and lighting location considered to ensure glare and light spill are minimised. 	Construction	Y	Y	Y
8B	<p>The following mitigation measures would be implemented, where reasonable and feasible, for the landscaping of the Proposal:</p>	Operation	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Use of native shrubs and ground covers to form a screening barrier when mature. • A landscaping corridor of screening vegetation to provide informal street character along Moorebank Avenue. • Use of local species as understory planting to support and enhance local habitat values • Use of seeds collected within the local area for planting to reinforce the genetic integrity of the region, where possible. 				
8C	Light for the Proposal would be designed to minimise any direct light spill and would comply with the requirements of <i>Australian Standard AS4282-1997-Control of the Obtrusive Effects of Outdoor Lighting</i> .	Detailed design and operation	Y	Y	Y
9.	Indigenous Heritage				
9A	An exclusion zone would be provided around previously identified MPE Isolated Artefacts 2, 3 and 4 (refer to Figure 16-2) to avoid potential disturbance of these artefacts during construction of the Proposal.	Construction	Y	N	N
9B	<p>Management of Aboriginal heritage would be included in the CEMP for the Proposal. Information within the CEMP would include:</p> <ul style="list-style-type: none"> • A summary of the findings of the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of this EIS) • Guidance on unexpected archaeological and cultural finds (including human remains). 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
9C	All relevant personnel and contractors involved in the design and construction of the Proposal would be advised of the relevant heritage considerations, legislative requirements and recommendations in the Aboriginal Heritage Impact Assessment Report (provided at Appendix S of this EIS).	Detailed design and Construction	Y	Y	Y
10.	Non-Indigenous Heritage				
10A	A Heritage Management Plan in adherence to NSW Heritage Council guidelines would be prepared as part of the CEMP for the Proposal.	Construction	Y	Y	N
10B	Archaeological monitoring and recording would be conducted at PADs V and W, which have the potential to contain archaeological remains of local significance. Monitoring and recording would be undertaken by a suitably qualified archaeologist, who would assess the likely significance of any archaeological deposits encountered, and provide advice regarding appropriate further action. If highly significant remains were identified during monitoring, it would be appropriate to conduct further monitoring for additional sites of former structures or test excavations.	Construction	Y	N	Y
10C	A Heritage Interpretation Strategy should be prepared prior to the commencement of construction, outlining appropriate interpretive measure for the Proposal site in the context of the MPE site as a whole.	Construction	Y	Y	N
10D	If unexpected finds are located during works an archaeological consultant would be engaged to assess the significance of the finds and the NSW Heritage Council notified.	Construction	Y	Y	Y
11.	Greenhouse Gas				

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
11A	Energy efficiency design aspects would be investigated, where practicable as part of the detailed design process in order to reduce energy and fuel consumption.	Detailed design	Y	Y	N
11B	Project planning would be undertaken to ensure that the site vehicle movements and construction activities are efficient, to avoid double handling of materials and unnecessary fuel use where possible.	Construction	Y	Y	Y
11C	Fuel efficiency of the construction plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used.	Construction	Y	Y	Y
11D	Consideration will be given to material substitution where reasonable and feasible to reduce embodied energy of construction materials.	Detailed design and Construction	Y	Y	Y
11E	Where possible locally sourced materials will be used to reduce GHG emissions associated with transport during construction.	Construction	Y	Y	Y
11F	Waste would be diverted from landfill, including diversion of spoil, construction and demolition waste, and commercial and industrial waste, where reasonable and feasible. The management of waste would be considered as part of the preparation of the CEMP for the Proposal, detailing the appropriate procedures for waste management.	Construction	Y	Y	Y
11G	Fuel efficiency of the operation plant/equipment will be assessed prior to selection, and where practical, equipment with the highest fuel efficiency and which uses lower GHG intensive fuel (e.g. biodiesel) will be used during operation.	Operation	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
11H	Implement adaptation measures to address medium and high rated risks detailed in the climate change risk assessment presented in the Greenhouse Gas (GHG) and Climate Change Risk Assessment (Appendix V of this EIS).	Detailed design Operation	Y	Y	N
12.	Waste				
12A	<p>Measures to mitigate the effect of the construction waste streams would be incorporated into the Proposal's CEMP, including the following information:</p> <ul style="list-style-type: none"> • Avoidance and reuse of material will have priority over recycling • Recycling will have priority over disposal • Earth excavated from the site will be used for fill material and landscaping where feasible • If possible concrete components will be crushed and reused onsite, with the remainder sent to a recycling facility • Waste generation will be minimised by ordering the correct quantity of materials • Selection of materials which maximise recycled content, while having low embodied water and energy use • Selection of materials which maximise durability and lifespan. <p>The following procedures and protocols will be considered within the CEMP regarding waste management:</p> <ul style="list-style-type: none"> • Characterisation of construction waste streams • Management of any identified hazardous waste streams 	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> • Procedures to manage construction waste streams, including handling, storage, classification, quantification, identification and tracking • Mitigation measures for avoidance and minimisation of waste materials • Procedures and targets for reuse and recycling of waste materials. • Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for construction waste management. 				
12B	<p>Measures to mitigate the effect of the operational waste streams would be incorporated into the Proposal's OEMP, including the following information:</p> <ul style="list-style-type: none"> • Addressing waste management requirements and goals in staff inductions • Providing staff access to documentation outlining the facility's waste management requirements • Appropriate areas shall be provided for the storage of waste and recyclable material including: <ul style="list-style-type: none"> – Locating recycling bins in kitchen areas beside general waste bins to prevent contamination of recycling – Positioning paper recycling bins close to printer / photocopying equipment – Establishing bays or containers for recyclable waste generated through de-stuffing – Minimising general waste bins at desks but providing adequate container and paper recycling to encourage sorting of recyclables 	Operation	Y	Y	N

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> – Ensuring warehouse tenants are providing adequate bin storage for the expected quantity of waste • Standard signage on how to use the waste management system and what materials are acceptable in the recycling will be posted in all waste collection and storage areas • Waste management planning incorporating principles of the waste hierarchy • All domestic waste shall be collected regularly and disposed of at licensed facilities • By ensuring bins are placed in the correct location and access ways are clear waste collection vehicles will be able to service the development efficiently and effectively • An education programme and on-going monitoring will to be implemented for training personnel to properly sort and transport waste into the right components and destinations • Sewage waste will be discharged to Sydney Water sewerage infrastructure in accordance with Sydney Water requirements • Trade waste will be discharged to the sewer through a trade waste agreement with Sydney Water • Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for operational waste management. 				
13.	Bushfire				
13A	A bushfire management strategy, or equivalent, will be prepared as part of the CEMP for the Proposal. The strategy will include:	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
	<ul style="list-style-type: none"> Emergency response plans and procedures Restrictions on activities (namely hot works) that cannot be undertaken on total fire ban days within areas of high Bushfire Hazard Rating, unless otherwise advised by the NSW Rural Fire Service. All construction site offices and temporary buildings will be located outside buffer areas to ensure minimum setbacks of 10 m. All construction site offices will be accessible via access roads suitable for firefighting appliances similar to NSW Rural Fire Service category 1 tankers. 				
13B	A bushfire management strategy, or equivalent, would be prepared as part of the OEMP for the Proposal. In particular, the strategy would ensure management of landscaped areas within the Stage 2 site would be undertaken to maintain minimum dry fuel loads.	Operation	Y	Y	N
14.	Property and infrastructure				
14A	As relevant, further assessment of services demand, infrastructure requirements and augmentation works, in consultation with relevant infrastructure and service providers would be undertaken.	Detailed design	Y	Y	Y
15.	Socio-economic				
15A	A community information and awareness strategy would be included in the CEMP and would outline measures to maintain communication with the community and all relevant stakeholders throughout the construction process of the Proposal.	Construction	Y	Y	Y

No.	Mitigation measures	Implementation stage	Applicability		
			Warehousing	Freight village	Moorebank Avenue
15B	The Operational Environmental Management Plan (OEMP) would include measures to engage with stakeholders and to manage and respond to feedback received during the operation of the Proposal.	Operation	Y	Y	N

Table 3-2 - MPE EPBC Approval²

No.	Condition	Implementation Phase	Addressed
Protection of EPBC flora and fauna and the environment on Commonwealth land			
1	<p>For the better protection of the GHFF, the person taking the action must:</p> <p>a) not clear more than 11 hectares of GHFF foraging habitat;</p> <p>b) engage a suitably qualified expert to undertake a pre-clearance survey(s) to confirm the absence of GHFF roosting camps within the rail easement, no more than 48 hours prior to the clearance of potential GHFF roosting habitat; and</p> <p>c) notify the Department in writing of the results of pre-clearance surveys.</p> <p>If the GHFF is detected roosting on site, all native vegetation clearance activities must halt until the person taking the action has complied with any directions the Minister may wish to issue regarding timing of construction or methods for dispersal of the GHFF.</p>	Construction	CEMP
3	<p>For the better protection of <i>Hibbertia</i> sp. Bankstown, the person taking the action must engage a suitably qualified expert to undertake a targeted search for individuals of <i>Hibbertia</i> sp. Bankstown within all areas of potential habitat during the species' flowering period.</p>	Construction	CEMP
4	<p>For the better protection of Bynoe's Wattle, the person taking the action must engage a suitably qualified expert to undertake a field habitat assessment that targets the ecological requirements of Bynoe's Wattle, in all areas</p>	Construction	CEMP

² Table 3-3 outlines the MPE EPBC Approval conditions relevant to MPE Stage 2 (the MPE Project) construction only. Commonwealth mitigation measures are outlined as Annexure A to the EPBC approval conditions.

No.	Condition	Implementation Phase	Addressed
	<p>of Castlereagh Scribbly Gum Woodland likely to be cleared as a result of the proposed action. If the assessment determines there is potential for the species to occur on site, then a suitably qualified expert must undertake a targeted search for individuals of Bynoe's Wattle within all areas of potential habitat identified by the habitat assessment during the species' flowering period.</p>		
5	<p>For the better protection of EPBC listed flora and the environment on Commonwealth land, the person taking the action must engage a suitably qualified expert to prepare a Flora and Fauna Management Plan (FFMP) for the approval of the Minister. The FFMP must include (but need not be limited to):</p> <ul style="list-style-type: none"> a) details on the timing of native vegetation clearance works; b) detailed maps of the rail link easement and construction zone showing: <ul style="list-style-type: none"> i. permanent infrastructure and temporary works; ii. no-go areas; and iii. physical barriers used for the protection of native vegetation on Commonwealth land, and of EPBC Act listed Nodding Geebung and Small-flower Grevillea. c) measures to minimise the extent of native vegetation clearing upon Commonwealth land and the clearing of Nodding Geebung and Small-flower Grevillea; d) provisions to ensure no more than 17 individuals of Nodding Geebung and 634 stems of Small-flower Grevillea are cleared; e) the results of targeted surveys for Hibbertia sp. Bankstown and Bynoe's Wattle (including the number of individuals recorded) and what measures will be implemented to avoid, mitigate and manage impacts to these species, if individuals are found on site; 	Construction	CEMP

No.	Condition	Implementation Phase	Addressed
	<p>f) measures which allow terrestrial fauna to disperse naturally ahead of clearing activities, and minimise the risk of injury to individuals;</p> <p>g) actions to maintain or enhance the long-term viability of native vegetation adjoining the rail easement in particular, adjoining populations of Nodding Geebung and Smallflower Grevillea;</p> <p>h) measures to safeguard flora and fauna from the threat of weeds, fire, pathogens and unauthorised access, including (but not limited to) the commitments outlined in section 7.4.1 of the EIS (and summarised at Annexure A);</p> <p>i) ongoing monitoring to inform the adaptive management of native vegetation adjoining the rail easement.</p> <p>Native vegetation clearance must not occur until the FFMP has been approved. The FFMP must be implemented once approved.</p>		

Construction Environment Management Plan

7	<p>For the better protection of Commonwealth land, the person taking the action must engage a suitably qualified expert(s) to prepare a Construction Environment Management Plan (CEMP), for the approval of the Minister. The CEMP must include in relation to construction of the proposed facility:</p> <p>a) details on the timing of construction works (accompanied by current and detailed maps);</p> <p>b) identification and quantification of all potential impacts associated with noise, vibration, air quality, traffic, light spill, hydrological changes, contamination, and indigenous heritage (including cumulative impacts associated with the DoPs proposed intermodal) upon Commonwealth land. Consideration must be given to people and communities at SME, DNSDC, Defence housing, and the environment more generally in neighbouring bushland areas. Of note, the air quality assessment must quantify fill emissions arising from air pollutant sources for which there are established national air quality standards;</p> <p>c) the results of further investigations with regard to land contamination and indigenous heritage impacts (specifically, PADs two and three). If adverse impacts are identified, details on how such matters will be</p>	Construction	CEMP
---	--	--------------	------

No.	Condition	Implementation Phase	Addressed
	<p>managed / mitigated must also be provided. Evidence of ongoing consultation with RAPs regarding further investigations for indigenous heritage objects/places must be provided;</p> <p>d) refined details (including implementation timeframes) for the mitigation measures outlined in the EIS (sections 7.4.2, 7.4.3, 7.4.6, 7.4.7, 7.4.8 and 7.4.9) and summarised at Annexure A;</p> <p>e) a commitment to ensure no lights are installed above the height of 40 metres or, the maximum approved height of the intermodal warehouse buildings (whichever is less);</p> <p>f) identification of the trigger values and criteria for all matters mentioned in condition 7(b) (excluding light spill, land contamination and indigenous heritage) that will be adopted for monitoring and managing potential impacts to Commonwealth land;</p> <p>g) details of a comprehensive monitoring program (including locations, frequency and duration) for:</p> <ul style="list-style-type: none"> i.. validating the anticipated impacts associated with condition 7(b); and ii. determining the effectiveness of proposed mitigation/management measures; <p>h) provisions to revise the approved CEMP in response to monitoring associated with condition 7(g) including, details of response / contingency mechanisms to address any exceedances of the relevant trigger values;</p> <p>i) evidence of consultation with Defence regarding the adequacy of proposed mitigation measures in particular, those measures to mitigate potential light spill impacts upon residential dwellings within SME outside of standard construction hours; and</p> <p>j) details of a complaints handling procedure;</p> <p>Commencement of the action may not occur until the CEMP has been approved. The CEMP must be implemented once approved.</p>		
	<p>Administrative Conditions</p>		
11	<p>Within one month after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.</p>	Construction	CEMP
12	<p>The person taking the action must maintain accurate records substantiating all activities associated with or relevant to the conditions of approval, including measures taken to implement any management plan or</p>	Construction	CEMP

No.	Condition	Implementation Phase	Addressed
	agreement required by this approval, and make them available upon request to the Department . Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act , or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.		
13	Within three months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with each of the conditions of this approval, including implementation of any management plans or agreements as specified in the conditions. Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the Department at the same time as the compliance report is published.	Construction	CEMP
14	Upon the direction of the Minister, the person taking the action must ensure that an independent audit of compliance with the conditions of approval is conducted and a report submitted to the Minister. The independent auditor must be approved by the Minister prior to the commencement of the audit. Audit criteria must be agreed to by the Minister and the audit report must address the criteria to the satisfaction of the Minister.	Construction	CEMP
15	If the Minister believes that it is necessary or convenient for the better protection of Listed Threatened species or the environment on Commonwealth land to do so, the Minister may request that the person taking the action make specified revisions to any management plan, as specified in the conditions and submit the revised management plan for the Minister's written approval. The person taking the action must comply with any such request. The revised approved management plan must be implemented. Unless the Minister has approved the revised management plan, then the person taking the action must continue to implement the management plan originally approved, as specified in the conditions.	Construction	CEMP
17	Unless otherwise agreed to in writing by the Minister, the person taking the action must publish all management plans referred to in these conditions of approval on their website. Each management plan must be published on the website within one month of being approved.	Construction	CEMP

Table 3-3 – Concept Plan Revised Statement of Commitments³

Subject	Condition	Implementation Phase	Addressed
Development and Staging	<p>The Proponent commits to carrying out the development of the Principal Intermodal Terminal Facility generally in accordance with the following plans and documents:</p> <ul style="list-style-type: none"> • Land Use Plan, prepared by Reid Campbell • Indicative Staging Plan, prepared by Reid Campbell 	Construction	CEMP
	<p>Details of consultation with the relevant agencies, including Transport for NSW, Railcorp/Sydney Trains, ARTC, Crown Lands Office, NSW Office of Water, NSW Fisheries and others, as required. The Proponent commits to including the following information with the detailed planning application(s) for the warehouse buildings:</p> <ul style="list-style-type: none"> • Details of the building massing and internal layouts. • Siting and design of buildings in consideration of potential noise impacts from the intermodal terminal facility • Perspective images that clearly show the proposed building treatments 	Construction	CEMP
Transport and Access	<p>The Proponent commits to developing a Construction Traffic Management Plan to minimise the potential impacts of the construction stage(s), including:</p> <ul style="list-style-type: none"> • Heavy vehicle access routes • Location of construction worker parking • Mitigation measures to avoid any unacceptable impacts on the surrounding land uses. 	Construction	Construction Traffic and Access Management Plan

³ Table 3-3 outlines the approval conditions relevant to the construction of the Proposal only

Subject	Condition	Implementation Phase	Addressed
	<ul style="list-style-type: none"> Mitigation measures to avoid any unacceptable impacts on regular bus services and school bus services operating on roads within the vicinity of the site and pedestrian and cyclist access. 		
Noise and Vibration	<p>Prior to undertaking demolition and construction on site, a Construction Noise and Vibration Management Plan should be prepared based on details of the proposed construction methodology, activities and equipment This should identify potential noise and vibration impacts and reasonable and feasible noise mitigation measures (such as those identified in this report) that may be implemented to minimise any potential impacts, including engineering and management controls.</p>	Construction	Construction Noise and Vibration Management Plan
	<p>All construction activities will have regard to the standard hours of 7:00am to 6:00pm Monday to Friday and 8:00am to 1:00pm Saturday (with approval from relevant authorities). Any works undertaken outside of these hours will be undertaken in consultation with relevant authorities. Works outside these hours that may be permitted will include:</p> <ul style="list-style-type: none"> Any works which do not cause noise emissions to be audible at any nearby sensitive receptors. The delivery of materials which is required outside of these hours as requested by Police or other authorities for safety reasons. Local residents, commercial and industrial premises will be informed of the timing and duration of approved works in accordance with the notification provisions outlined in the CNMP. Emergency work to avoid the loss of lives, property and/or to prevent environmental harm. Any other work as approved through the CNMP Process 	Construction	Construction Noise and Vibration Management Plan
Biodiversity	<p>The Proponent will undertake further detailed assessment to establish the potential biodiversity impacts of the proposed rail link and measures to mitigate its potential impacts. The investigations shall incorporate the mitigation measures listed within Section 5 of the Flora and Fauna Assessment and as summarised below:</p> <p>Avoid Impacts</p> <ul style="list-style-type: none"> Site establishment, earthworks and rail construction <p>Mitigate Impacts</p>	Construction	Construction Flora and Fauna Management Plan

Subject	Condition	Implementation Phase	Addressed
	<ul style="list-style-type: none"> • Soil disturbance related to site establishment, earthworks and rail construction • Vegetation clearance for rail construction, access and maintenance tracks • Construction in riparian areas/in proximity to watercourse • Construction of pavement, slabs and building structures • Hot works (including vegetation clearing requiring heat producing equipment) • Alteration to air quality and noise environments • Operation of the Principal proposal 		
Hazards and Risk	<p>Asbestos</p> <ul style="list-style-type: none"> • The Proponent will develop an asbestos management plan for the Principal proposal containing a risk assessment undertaken in accordance with Code of Practice for the Management and Control of Asbestos in the Workplace (NOHSC,200s). • Where the management plan recommends the removal of asbestos from site all works will be undertaken in accordance with the Code of Practice for the Safe Removal of Asbestos (NOHSC, 2005), including the development of an asbestos removal control plan and an emergency plan. 	Construction	Asbestos Management Plan
	<p>Spills</p> <p>The Proponent commits to the preparation of a Construction and Operational Management Plan prior to the commencement of site operations for control/mitigation and management of any spillage/leaks etc.</p>	Construction	Pollution Incident Response Management Plan
	<p>Unexploded Ordnance</p> <p>The Proponent commits to undertaking and remediation (where necessary) prior to the commencement of construction.</p>	Construction	Contamination Management Plan

Subject	Condition	Implementation Phase	Addressed
	<p>Bushfire Management</p> <p>The Proponent commits to the development of a Bushfire Management Plan for both the construction and operational phases of the Principal proposal that aligns with the requirements of the local RFS Bushfire Management Committee operational plans of management.</p>	Construction	CEMP
Contamination	<p>The following tasks will be undertaken in association with the detailed planning applications for the staged redevelopment of the Principal site:</p> <ul style="list-style-type: none"> a. Confirming what, if any, actions were taken in regards to the Milsearch (2002) recommendations and the associated low risk ordnance issues. b. Undertaking further investigations in the areas of environmental concern likely to be impacted upon by the proposed development. These investigations will be based on the detailed design of the proposed development to identify the extent of contamination, and what, if any, remediation activities are needed. The remediation of areas of the site (if any) would be best matched to the development of the site and considered as part of the future design. c. Developing a Contamination Management Plan with detailed procedures on: <ul style="list-style-type: none"> • Handling, stockpiling and assessing potentially contaminated materials encountered during the development works; • Landfill gas management during the excavation, handling, and stockpiling of waste materials, if excavation is required during the development, in the area of the Glenfield Quarry and Landfill; • Assessment, classification and disposal of waste in accordance with relevant legislation; and • A contingency plan for unexpected contaminated materials, such as materials that is odorous, stained or containing anthropogenic materials, that may be encountered during site works. 	Construction	Contamination Management Plan
Stormwater and Flooding	<p>The Proponent will incorporate stormwater quantity and quality management measures into the detailed applications in accordance with the objectives and performance standards outlined in the Stormwater and Flooding Environmental Assessment report and including:</p>	Construction	Soil and Water Management Plan

Subject	Condition	Implementation Phase	Addressed
	<ul style="list-style-type: none"> a. Preparation of a Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan (ESCP) for both the construction and operation phases. b. Implementation of management plan strategies prior to commencement of the staged construction phase c. Monitoring and review performance of sediment and water control structures during construction and operation phases 		
	<p>The Proponent will prepare and update a flood emergency response plan as necessary to address the staged development of the site. Details are to be provided prior to the construction of each of the three major stages of the development.</p>	Construction	Flood Emergency Response Plan
Air Quality	<p>The Proponent will undertake an air quality monitoring programme during the initial phases of both construction and operation of the Principal site in accordance with the Air Quality Impact Assessment and including:</p> <ul style="list-style-type: none"> • Nuisance Dust • Air Emissions - PM10 and Nitrogen Dioxide 	Construction	Construction Air Quality Management Plan
	<p>The Proponent commits to the preparation of a Construction Environmental Management Plan prior to the construction of each stage to provide air quality and dust management/ mitigation procedures to be adopted during each of the construction phases of the development.</p>	Construction	Construction Air Quality Management Plan
	<p>The Proponent commits to the preparation of a Greenhouse Gas Management Plan for the three major stages of the development in accordance with the provisions of the Greenhouse Gas Assessment.</p>	Construction	Greenhouse Gas Management Plan
Indigenous Heritage	<p>The Proponent commits to the implementation of the following General Mitigation Measures in the Aboriginal Cultural Heritage Assessment and Including:</p>	Construction	Heritage Management Plan

Subject	Condition	Implementation Phase	Addressed
	<ul style="list-style-type: none"> In the event that previously undiscovered Aboriginal objects, sites or places (or potential Aboriginal objects, sites or places) are discovered during construction, all works in the vicinity of the find should cease and the Principal should determine the subsequent course of action in consultation with a heritage professional, relevant Registered Aboriginal Parties and/or the relevant State government agency as appropriate. Should suspected human skeletal material be identified, all works should cease and the NSW Police and the NSW Coroner's office contacted. Should the burial prove to be archaeological of Aboriginal origin, consultation with a heritage professional, relevant RAPs and/or the relevant State government agency, should be undertaken by the Principal. 		
Utilities	Protect and relocate (where required) the existing services passing through the site, including stormwater, sewer, water, telecommunications and electricity.	Construction	CEMP
	Control of performance of hotworks on total fire ban days during construction and operation, particularly within any defined asset protection zones.	Construction	Safety Management Plan
Climate Change Risk	<p>Where applicable the Proponent will implement the Ecological Sustainable Development initiatives across the construction, operation and decommissioning stages of the Principal proposal including:</p> <ul style="list-style-type: none"> Site Management Policies and Strategies Materials selection and energy and water demand management On-site renewable energy generation 	Construction	CEMP
	<p>The following principles will be achieved during the design development and construction phase of the proposal:</p> <ul style="list-style-type: none"> Precautionary principles Inter-generation equality 	Construction	CEMP

Subject	Condition	Implementation Phase	Addressed
Waste Management	<ul style="list-style-type: none"> • Conservation of biological and ecological integrity • Improved valuation, pricing and incentive mechanisms 		
	<p>The Proponent commits to undertaking waste management in the demolition, construction and operational phases of the development as listed below:</p> <p>Demolition</p> <ul style="list-style-type: none"> a. Re-use of material will have priority over recycling b. Recycling will have priority over disposal c. Selection of reputable waste removal contractors who will guarantee that recyclable material will be recycled and will provide any relevant certificates d. Vegetation removed shall be either preserved for use in the new development, or mulched for inclusion in landscaping activities. The remainder will be sent to a composting facility e. Excavated earth will be used for infill and landscaping where feasible, the remainder will be sent to a recycling facility f. Asphalt will be re-used by transferring it to a batching plant or using it as a base layer for access roads g. Concrete components will where possible be crushed and reused on site, the remainder will be sent to a recycling facility h. Fuel and oil storage from demolition machinery will be secured and managed responsibly within compound sites during works, and removed upon completion of works i. Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements. 	Construction	Waste Management Plan

Subject	Condition	Implementation Phase	Addressed
Waste Management	Construction		
	a. Reduce potential waste by ordering the correct quantities of materials		
	b. Coordinate and sequence trades people to minimise waste		
	c. Prefabricate materials where possible		
	d. Use modular construction and basic designs to reduce the need for off-cuts		
	e. Reuse formwork		
	f. Reuse or recycle materials from the demolition phase		
	g. Separate off-cuts to facilitate reuse, resale or efficient recycling		Construction
	h. Minimise site disturbance and limit unnecessary excavation		
	i. Select landscaping which reduces green waste		
	j. Select waste removal contractors to guarantee that recyclable waste is recycled.		
	k. Engage with the supply chain to supply products and materials that use minimal packaging		
	l. Set up schemes with suppliers to take back packaging materials m. Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.		

3.3 Aspects and Impacts

During development of the CEMP the construction contractor shall establish, implement and maintain a procedure(s):

- a. to identify the environmental aspects of the proposed construction activities
- b. to determine those aspects that have or can have significant impact(s) on the environment (i.e. significant environmental aspects).

This information must be captured in the form of an Aspects and Impacts Register.

3.3.1 Aspects and Impacts Register

The construction contractor will be required to develop an Aspects and Impacts Register for each works package for the Proposal. The register will identify all construction activities with the potential to cause environmental harm and to assign a risk ranking based on the likelihood and consequence of the incident occurring.

A risk management approach will be used as a guideline to determine the severity and likelihood of specific activities' impact on the environment and prioritise its significance. This process considers potential regulatory and legal risks as well as taking into consideration the concerns of community and other key stakeholders.

The risk assessment objectives are to:

- Identify activities/aspects, events or outcomes that have the potential to adversely affect the local environment and/or human health/property.
- Qualitatively evaluate and categorise each risk item.
- Identify appropriate mitigation measures to manage risk issues to an acceptable level.
- Qualitatively evaluate residual risk remaining after implementation of mitigation measures.
- Risk assessments for the Proposal should be based on AS/NZS ISO 31000:2009, the Australian standard for risk assessments. Risk category is determined on the basis of consideration of the likelihood of an impact occurring and the consequences of the impact occurring. The criteria for evaluating likelihood and consequence are identified in Table 3.3 and Table 3.4 respectively.

Table 3-4 - Criteria for evaluating likelihood

Level	Descriptor	Description	Frequency of Occurrence
A	Almost Certain	Expected to occur in the course of most normal circumstances	Once per month
B	Likely	Could occur in the course of most normal circumstances	Between once a month and once a year
C	Possible	May occur in the course of normal circumstances	Between once a year and once in five years
D	Unlikely	Is possible, but not likely to occur in the course of normal circumstances	Between once in five years and once in 20 years
E	Rare	May occur in exceptional circumstances	Once in more than 20 years

Table 3-5 - Criteria for evaluating consequence

Level	Category	Safety	Financial	Environmental	Community
1	Not Significant	No medical control	<\$250,000	Release to the environment immediately contained. No impact on native vegetation/fauna species.	No community or stakeholder complaints
2	Minor	Lost time injury occurs or medical control required	≥ \$250,000 but less than \$2,000,000	Release to environment contained with internal assistance. Short term impact on PCT vegetation/fauna habitat – no threatened species or community impacted.	Several community or stakeholder complaints. Complaints rectified within adequate timeframes.
3	Moderate	Serious injury occurs	≥ \$2M but less than \$10M	Release to the environment contained with external assistance. Impact to PCT vegetation/fauna habitat requiring action to correct OR minor impact on threatened species or communities.	Multiple and sustained community or stakeholder complaints. Complaints addressed after an interval. Limited media coverage of issues raised.
4	Major	Single fatality occurs	≥ \$10M but less than \$50M	Pollution event with short –term detrimental effect. Short term impact on threatened species or communities requiring action to correct.	Widespread community and stakeholder concern. Sustained failure to address complaints. Extensive media coverage.
5	Severe	Multiple but localised fatalities occur	≥ \$50M	Pollution event with long-term detrimental effect. Long term impact on threatened species or communities requiring	Ongoing and widespread community and stakeholder concern,

Level	Category	Safety	Financial	Environmental	Community
				action to correct; possibly requiring the provision of offsets.	culminating in litigation. Inability to address complaints. Extensive and sustained negative media coverage.

Table 3-6 - Risk analysis categories and criteria for risk ranking

Likelihood	Consequence				
	1 – Not significant	2 – Minor	3 – Moderate	4 – Major	5 – Severe
A – Almost certain	Moderate	Moderate	High	Very High	Very High
B – Likely	Low	Moderate	High	Very High	Very High
C – Possible	Low	Low	Moderate	High	High
D – Improbable	Low	Low	Low	Moderate	Moderate
E - Rare	Low	Low	Low	Low	Moderate

Mitigation measures must be developed to manage identified environmental risks; the residual risk must be assessed and managed in accordance with the project conditions of approval and revised environmental mitigation measures (refer Appendix A of the EIS). All environmental and planning approval requirements associated with the construction activity should also be identified within the risk register.

The register must be reviewed regularly as construction activities change or after significant incident on site. The construction contractor to develop an Aspects and Impacts Register.

3.4 Environmental Policy

All construction works for the Proposal would be undertaken in accordance with the construction contractor's environmental policy. The policy must demonstrate the commitment to continual improvement in environmental performance and compliance with applicable legal requirements.

3.5 Objectives and Targets

Project specific, environmental objectives and targets are to be established to assist in the assessment of environmental performance. These objectives and targets would be developed with due consideration of key issues identified through the risk assessment process. The objectives and targets are to be consistent with the construction contractor's environmental policy and will assist in monitoring whether the commitments of the policy are being met. These targets are to be incorporated into relevant environmental management sub-plans.

The performance of the Project against the objectives and targets will be documented at least on an annual basis as part of the management review.

The construction contractor to develop environmental objectives and targets, consistent with their environmental policy and report against compliance with these targets and objectives.

4 IMPLEMENTATION AND OPERATION

The CEMP is the overarching document within the construction contractors Environmental Management System (EMS) and is one of a suite of documents developed during construction to manage environmental impacts of the Proposal. It must provide a structured and systematic approach to environmental management.

The primary purpose of the suite of documentation is to:

- Ensure compliance with all applicable environmental laws, obligations and approvals.
- To minimise environmental impacts.

Figure 3 below illustrates an indicative suite of documents that may be adopted within the CEMP by the construction contractor.

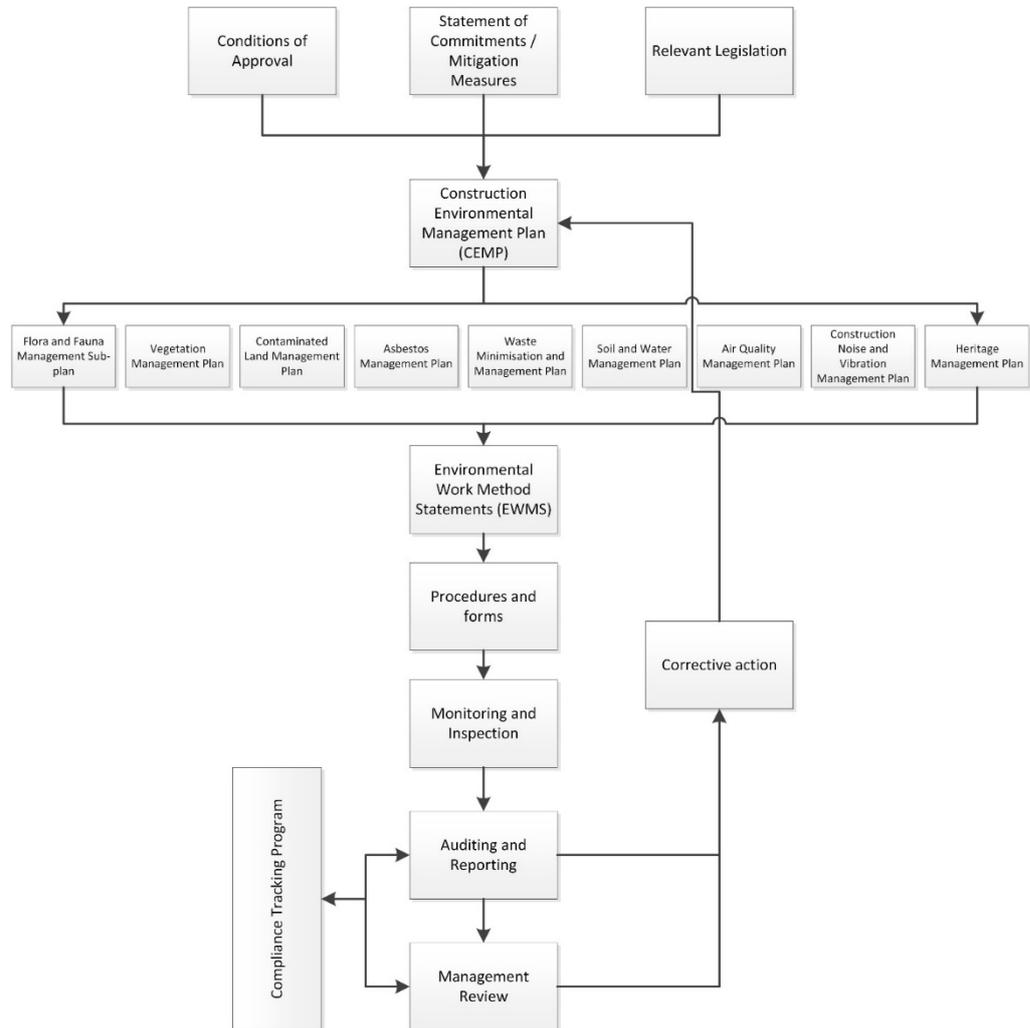


Figure 3 Indicative CEMP documentation structure

4.1 Environmental Management System Documentation

4.1.1 Construction Environmental Management Plan

The CEMP must provide the system to manage and control the environmental aspects of the Proposal during construction. The strategies defined in the CEMP and associated sub-plans should be developed with consideration of the approval requirements, safeguards and mitigation measures presented in the environmental assessment documents and all relevant legislation. The CEMP must establish the system for implementation, monitoring and continuous improvement to minimise impacts from the Proposal on the environment.

The CEMP must be consistent with:

- *The Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004).
- *AS/NZS ISO14001: 2004, 'Environmental Management Systems - Requirements with Guidance for Use'*.

As required, the CEMP must be provided to the DP&E and DoEE for approval prior to commencement of construction.

4.1.2 Environmental management sub plans and strategies

Environmental management sub plans support the CEMP. These documents are prepared to classify requirements and processes that are applied to specific impacts of the activities that would be identified in accordance with Section 3.3. They address requirements of the measures identified in the environmental assessment documentation and any conditions of approval relating to the Proposal.

Additional environmental strategies may be developed as required throughout the various stages of construction of the Proposal and aim to guide the management of potential environmental factors onsite. These strategies and measures would be incorporated into the sub-plans as appropriate.

Table 4-1 lists the various sub-plans and strategies that may be required by the Commonwealth and State departments for the Proposal as per the mitigation measures (Table 3-1). This list is not exhaustive and is subject to amendment by the construction contractor and Conditions of Approval issued by the DP&E.

Table 4-1 - Construction sub plans

Sub-Plan Name
Construction Traffic Management Plan (CTMP)
Construction Noise and Vibration Management Plan (CNVMP), prepared in accordance with the <i>Interim Construction Noise Guideline</i>
Construction Air Quality Management Plan
Flora and Fauna Management Plan
A Soil and Water Management Plan (SWMP) and Erosion and Sediment Control Plan
Contamination Management Plan
Flood Emergency Response and Evacuation Plan
UXO, EO, and EOW Management Plan
Asbestos Management Plan
Heritage (Indigenous and Non-Indigenous) Management Plan/s

Sub-Plan Name

Bushfire Management Strategy

Community Information and Awareness Strategy.

4.1.3 Progressive Erosion and Sediment Control Plans

The SWMP will contain further detail on the development of Erosion and Sediment Control Plans (ESCP's) and all erosion, sediment and pollution controls to be employed on site during construction.

Progressive ESCP's must be prepared for each stage of works relating to the Proposal and catchment that is disturbed during construction.

The ESCP's must consider the following, where necessary:

- The method of vegetation removal in intermittent watercourses, leaving grasses and small understorey species undisturbed wherever possible
- Erosion and sediment control measures required before clearing and grubbing of the site
- Appropriate controls before the removal of topsoil and commencement of earthworks for the formation
- Other water quality structures shown on the drawings; and the use of energy dissipaters to reduce discharge velocities at all sediment basins to velocities that are appropriate to the receiving stream / creek conditions
- How upstream water will be managed and diverted around disturbed areas so it is not polluted by the construction activities
- Scour protection measures for haul roads and access tracks where necessary
- The methods for stabilising temporary drains
- The methods to minimise erosion and sedimentation during construction of embankments and other earthworks
- The methods of constructing batters to assist the retention of topsoil on sloped land
- Temporary sediment trapping measures in median areas at regular intervals
- The methods of maintenance of erosion and sediment control basins including measures to restore the capacity of sediment basins
- The details of the inspection and maintenance program for all erosion and sediment controls to ensure that no disturbed area is left without adequate means for containment and treatment of contaminated water and
- Measures to minimise erosion and control sedimentation from stockpiles.

4.1.4 Procedures, Forms and Other Documents

The CEMP must document the requirements for environmental management system procedures, forms and other documents, provide instructions and records related to both environmental and non-environmental activities during construction of each stage of the Proposal.

Project specific procedures (PSPs) would be developed in accordance with the requirements of the Proposal. Where applicable, existing Construction Contractor procedures and work instructions will be applied or amended for use on the Proposal.

PSPs to be developed for all high risk activities and environmental monitoring including:

- Working in or adjacent to waterways.
- Temporary waterway crossings.
- Site compound establishment.
- Public road accesses and managing mud tracking.
- Batch plant establishment and operation.
- Managing runoff from curing processes.
- Clearing and grubbing.
- Sediment basin design, construction and management.
- Dewatering.
- Contaminated soil management.
- Piling.

[Construction contractor to include additional activities following the environmental risk review].

4.2 Resources, Roles, Responsibilities and Authority

This section of the CEMP must be completed by the construction contractor to identify the key project team and the order of authority and accountability.

Table 4-2 summarises the anticipated roles and responsibilities during construction.

Table 4-2 - Roles and Responsibilities

Role	Responsibility
Superintendent	<p>Reviewing the CEMP and sub-plans to ensure that it meets all relevant regulatory and Project requirements.</p> <p>Reviewing the Construction Contractor's environmental monitoring reports and compliance documentation to confirm that the CEMP and sub-plans are being implemented.</p> <p>Stop work immediately if an activity is witnessed that may cause unacceptable environmental impact.</p>
Independent Environmental Representative (Secretary's Delegate)	<p>The Environmental Representative is independent of the design and construction personnel, who is also approved by the Secretary.</p> <p>The Environment Representative has the following responsibilities:</p> <ul style="list-style-type: none"> • Be the principal point of advice in relation to the environmental performance; • Monitor the implementation of environmental management plans and monitoring programs required under this approval and advise the Applicant upon the achievement of these plans/programs; • Has responsibility for considering, and advising the Applicant on, matters specified in the conditions of approval, and other licences and approvals related to the environmental performance and impacts of the project;

Role	Responsibility
	<ul style="list-style-type: none"> • Ensure that environmental auditing is undertaken in accordance with the Applicant's Environmental Management System(s); • Has the authority to approve/reject minor amendments to the Construction Environment Management Plan; • Has the authority and independence to require reasonable steps be taken to avoid or minimise unintended or adverse environmental impacts; • Be consulted in responding to the community concerning the environmental performance of the project where the resolution of points of conflict between the Applicant and the community is required.
Construction Project Manager	<p>Ensuring the requirements of the CEMP are fully implemented, and in particular, that environmental requirements are not secondary to other construction requirements.</p> <p>Liaising with relevant government authorities as required and to obtain necessary approvals.</p> <p>Participating and providing guidance in the regular review of the CEMP and supporting documentation.</p> <p>Providing adequate resources (personnel, financial and technological) to ensure effective development, implementation and maintenance of the CEMP.</p> <p>Ensuring that all personnel receive appropriate induction training, including details of the environmental and community requirements.</p> <p>Ensuring that complaints are investigated to ensure effective resolution.</p> <p>Stop work immediately if an activity is witnessed where an unacceptable environmental impact is likely to occur.</p>
Construction Manager	<p>Planning construction works in a manner that avoids or minimises impact to environment.</p> <p>Ensuring the requirements of the CEMP are fully implemented.</p> <p>Ensuring construction personnel manage construction works in accordance with statutory and approval requirements.</p> <p>Ensuring environmental management procedures and mitigation measures are implemented.</p> <p>Ensuring all project personnel attend an induction prior to commencing works.</p> <p>Liaising with relevant government authorities as required.</p> <p>Stop work immediately if an unacceptable impact on the environment is likely to occur.</p>
Construction Environment Manager	<p>Overall responsibility for the implementation of environmental matters on the project.</p> <p>Development, implementation, monitoring and updating of the CEMP and sub plans in accordance with ISO14001.</p> <p>Report to Construction Contractor and other senior managers on the performance and implementation of the CEMP</p>

Role	Responsibility
	<p>Ensure management reviews of the CEMP are undertaken annually, documented and actions implemented.</p> <p>Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented.</p> <p>Identify where environmental measures are not meeting the targets set and where improvement can be achieved.</p> <p>Ensure environmental protocols are in place and managed.</p> <p>Ensure environmental compliance.</p> <p>Obtain and update all environmental licences, approvals and permits as required.</p> <p>Lead liaison with appropriate approval authorities.</p> <p>Manage environmental document control, reporting, inductions and training.</p> <p>Manage environmental reporting within the project team and regulatory authorities.</p> <p>Preparing reports on an annual basis outlining the project works undertaken and the achievements that have been met, as well as identifying those areas where improvements were made.</p> <p>Oversee site monitoring, inspections and audits.</p> <p>Manage all subcontractors and consultants with regards to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents.</p> <p>Develop and facilitate induction, toolbox talks and other training programs regarding environmental requirements for all site personnel.</p> <p>Notify relevant authorities in the event of an environmental incident and manage close-out of these.</p> <p>Stop activities where there is an actual or immediate risk of harm to the environment, or to prevent environmental non-conformities, and advise the Construction Contractor.</p> <p>Resolve environment-related complaints.</p>
<p>Construction Site Supervisor</p>	<p>Monitor and supervise works to ensure they are in accordance with this CEMP.</p> <p>Identify and report Environmental Incidents.</p> <p>Conduct daily site inspections.</p> <p>Implement and monitor environmental site controls.</p> <p>Stop works if they are likely to result in an environmental non-conformance or incident.</p>
<p>Construction Community Liaison Representative</p>	<p>Assist the Environment Manager in consulting regulatory agencies.</p> <p>Communicate initiatives and potential environmental impacts to the surrounding community.</p> <p>Work collaboratively with the Environment Manager to resolve environmental complaints.</p>

Role	Responsibility
	Respond to community complaints and enquiries in a timely manner.
Wider Project Team (including sub-contractors)	<p>Comply with the relevant requirements of the CEMP, or other environmental management guidance as instructed by a member of the project's management team.</p> <p>Participate in the mandatory Project/site induction program.</p> <p>Report identifiable environmental incidents to the foreman immediately.</p> <p>Undertake remedial action where possible to ensure environmental controls are maintained in good working order.</p> <p>Stop activities where there is an actual or immediate risk of harm to the environment and advise the construction contractor, Construction Manager, or Construction Environmental Manager immediately.</p>

4.3 Sub-Contractor Management

All sub-contractors are required to attend relevant project and/or site inductions where the requirements and obligations of the CEMP are communicated. A record of all sub-contractors inducted would be maintained as part of the project induction. Environmental requirements and responsibilities would be delegated to sub-contractors as required.

All sub-contractors would be required to work in accordance with the approved CEMP.

5 COMPETENCY, TRAINING AND AWARENESS

To ensure that the CEMP is effectively implemented, each level of management will be responsible for ensuring that all personnel reporting to them are aware of the requirements of the CEMP.

The construction contractor will be responsible for the preparation, delivery and implementation of the following, to be included within the CEMP:

Environmental induction:

All personnel (including sub-contractors) must attend a compulsory site induction that includes an environmental component prior to commencement of works on-site to ensure all personnel involved in the Proposal are aware of the requirements of the CEMP applicable to their package of works, and to ensure the implementation of environmental management measures.

A record of all environment inductions would be maintained and kept on-site. The Construction Environmental Manager may authorise amendments to the induction at any time.

Other forms of environmental communication and training:

Within the CEMP the construction contractor must consider other forms of environmental training and communication, which may include:

- Toolbox talks
- Project meetings
- Environment meetings
- Pre-start meetings
- Sub-contractor meetings

6 COMMUNICATION AND RECORDS

6.1 Internal Stakeholders

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

The construction contractor will meet regularly to discuss any issues with environmental management on-site, any amendments to plans that might be required or any new / changes to construction activities.

Toolbox talks will be delivered relating to relevant environmental information associated with construction activities on a weekly basis.

The construction contractor will seek feedback concerning environmental performance from on-site personnel regularly.

6.2 External Stakeholders

The construction contractor will undertake meetings with external stakeholders on an as needed basis and coordinated through the Community Liaison Representative in coordination with the Superintendent. Any communications with regulatory authorities that result in a meeting, site visit, inspection, or audit will be reported to the Superintendent immediately and a written report will be submitted within 24 hours of the meeting explaining the purpose, scope, and outcome.

Major stakeholders include:

- Federal and New South Wales Governments and their respective departments including but not limited to the:
 - Environment Protection Authority;
 - Liverpool City Council and Campbelltown City Council;
 - Department of Primary Industries;
 - Department of the Environment and Energy;
 - Office of Environment and Heritage;
 - Department of Planning and Environment;
 - Roads and Maritime Services;
 - Sydney Ports Corporation;
 - NSW Rural Fire Service
- Police and emergency services;
- Public utility authorities;
- Traditional owners;
- Local community, business and special interest groups.

The Environmental Representative will report to DP&E on progress and any key environmental matters through monthly reports.

6.3 Community Consultation

The construction contractor will develop a Community Consultation Strategy (CCS) outlining requirements for community liaison. Consultation, engagement and complaints/enquiries management for the Proposal will be consistent with what has already been developed as part of the CCS for the MPE Stage 1 Project, as outlined below.

The construction contractor must:

- utilise a coordinated approach with the Superintendent and where necessary, other contractors, to stakeholder and community liaison management;
- develop strategies, policies, principles and standards for stakeholder consultation and community engagement;
- act in accordance with these strategies, policies, principles and standards, as well as any of the Superintendents strategies, policies, principles and standards, as notified to the construction contractor from time to time, in any stakeholder consultation and community engagement activities;
- ensure that relevant stakeholders (including the Superintendent) and the community are provided with adequate notification of the Works and milestones that may impact them;
- ensure that the Superintendent is informed of all material issues raised by stakeholders and the community;
- ensure that the Superintendent is contacted immediately in relation to planned or unplanned community protests that may arise during the performance of the Works;
- appoint suitably qualified and experienced community relations personnel to fulfil the stakeholder and community liaison requirements;
- provide relevant construction contractor personnel, including technical experts, to attend meetings with the Superintendent, and meetings with the stakeholders and the community, as reasonably requested by the Superintendent.

Communication tools defined in the strategy would include measures to comply with the above including:

- The identification of potentially affected properties;
- A risk assessment of the potential construction impacts;
- A map indicating the locations of potentially impacted properties;
- Measures to minimise impacts on the community;
- Procedure for community notifications;
- Procedure for notifying emergency services of proposed new or changed construction activities;
- Procedure for managing complaints;
- Contact name and number for enquiries;
- Procedures for publicising the details of construction activities; and
- Procedures for training employees and subcontractors on the requirements of the Communication Consultation Strategy.

6.3.1 Complaints and Enquiries

A 24-hour dedicated information line (1800 986 465) has been established for the Proposal and is managed by the Superintendent. All enquiries and complaints are managed through this centralised service and forwarded to the appropriate construction contractor for resolution. The construction contractor must also have a nominated 24-hour contact for complaints/enquiries. Information collated during any stakeholder consultation is to be recorded in an electronic database managed by the Superintendent. The construction contractor will provide all relevant information to the Superintendent in order to populate the database.

The following timeframes have been set for managing enquiries or complaints received through the Superintendent centralised service or directly by the construction contractor:

- 4hrs –acknowledge enquiry/complaint received via 1800 community information number or email.
- 24hrs –provide verbal and/or email response to enquirer or complainant regarding action undertaken (except where additional approval is required by SIMTA).
- 48hrs – Record outcome including action to resolve and close out enquiry or complaint in Consultation Manager (online stakeholder consultation database); and provide a written response to letters within 48 hours.

Note: The timeframes noted above are an indicative upper limit. It is assumed that all urgent matters requiring immediate action will be dealt with in the most efficient manner to ensure the complainant is responded to as quickly as practicable.

Non-urgent enquiries or complaints received outside of business hours will be responded to on the next business day.

6.3.2 Working Hours

Construction would be undertaken primarily during the standard working hours of:

- 7:00am to 6:00pm Monday to Friday;
- 8:00am to 1:00pm Saturday.

The importation of clean fill to the site and construction works to facilitate the Moorebank Avenue upgrade would occur over additional hours (refer to Section 2.4.4 of this PCEMP).

The following exceptions (without further approval) to standard construction hours apply:

- any works that do not cause construction noise to be audible at any sensitive receiver; or
- for delivery of materials required outside these hours by the Police or other relevant authorities
- for safety reasons; or where it is required in an emergency to avoid the loss of lives, property and/or to prevent environmental harm.

Any works to be undertaken outside of normal working hours must be undertaken in accordance with the management measures detailed in the Out of Hours Procedure and Noise and Vibration Management Plan.

7 INCIDENTS AND EMERGENCIES

The CEMP must include a plan on management of environmental incidents and emergencies. This can be included within the Pollution Incident Response Management Plan for the project.

This section of the CEMP must be completed by the construction contractor and must contain details of:

- Key emergency response personnel showing responsibilities and contact details including all-hours telephone numbers.
- Emergency services, their location and contact numbers (e.g. ambulance, fire brigade, spill clean-up services).
- Emergency communications processes.
- Containment measures to be taken in the event of emergency situations that may arise during construction and procedures for restoration.
- The location on site of the register of, and information on, hazardous materials including Safety Data Sheets (SDS).
- Definitions for incident classification and lines of reporting for each incident level.

7.1 Pollution Incident Response Management Plan

As noted in Section 3.1, an Environment Protection Licence (EPL) would be required for 'crushing, grinding or separating' activities associated with construction of the Proposal. Under the *Protection of the Environment Operations Act 1997* (POEO Act) it is a requirement for each licence holder to develop, test and implement when necessary a Pollution Incident Response Management Plan (PIRMP).

The PIRMP must contain the information specified in the POEO Act, the *Protection of the Environment Operations (General) Regulation 2009*, and relevant guidelines published by the NSW Environment Protection Authority.

If a pollution incident occurs in the course of an activity so that material harm to the environment is caused or threatened, the construction contractor must immediately notify each relevant authority and implement the PIRMP (section 153F, POEO Act). The Construction Contractor, Construction Manager, Construction Environmental Manager and the EPA must also be notified immediately in the event of an incident.

8 INSPECTIONS, MONITORING AND AUDITING

8.1 Inspections

If any maintenance and/or deficiencies in environmental controls or in the standard of environmental performance are compromised, they would be recorded during regular inspections. Records would also include details of any maintenance required, the nature of the deficiency, any actions required and an implementation priority.

Prior to the commencement of significant packages of work, an inspection would be carried out and would include a check of relevant environmental controls and resources required to ensure effective construction activity and maintenance.

8.2 Monitoring

Monitoring would be undertaken to validate the impacts predicted for the Proposal, to measure the effectiveness of environmental controls and implementation of the CEMP, and to address approval requirements.

8.3 Auditing

The CEMP must include a section that establishes a schedule of audits to include both internal and external audits. The purpose of auditing is to verify compliance with:

- The CEMP and sub-plans.
- Approval requirements (conditions of approval and mitigation measures identified in environmental assessment documents).
- Any relevant legal and other requirements (e.g. licenses, permits, regulations).
- Compliance with ISO14001.

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

8.4 Reporting

Compliance Tracking Program

A Compliance Tracking Program must be developed within the CEMP. The key objective of the Compliance Tracking Program (CTP) is to identify the applicable requirements of the planning approvals and environmental legislation during the construction phase(s) of the project.

The CTP would be an appendix to the CEMP and the construction contractor would be responsible for maintaining the CTP and for the preparation of monthly compliance tracking reports.

MPW EPBC Approval Reporting

A compliance report must be published on the Proposal website within three months of every 12 month anniversary of the commencement of the Proposal as per condition 12 of the Commonwealth Condition of Approval. The report must address compliance with the conditions of approval including implementation of any management plan or agreements as specified in the conditions.

Documentary evidence providing proof of the date of publication and non-compliance with any of the conditions of this approval must be provided to the DoEE at the same time as the compliance report is published. A report must be published annually.

POEO Act Reporting

Section 66(6) of the POEO Act requires that holders of an EPL make their pollution monitoring data publicly available in a timely manner.

The specific requirements for the publication of monitoring results are set out in section 66(6) of the POEO Act as follows:

“The holder of a licence subject to a condition referred to in subsection (1)(a) must, within 14 days of obtaining monitoring data as referred to in that subsection:

if the holder maintains a website that relates to the business or activity the subject of the licence – make any of the monitoring data that relates to pollution, and the licensee’s name, publicly and prominently available on that website in accordance with any requirements issued by in writing by the EPA, or

if the holder does not maintain such a website – provide a copy of any of the monitoring data that relates to pollution, to any person who requests a copy of the data, at no charge and in accordance with any requirements issued in writing by the EPA.”

There is a penalty for not publishing or making available the results of monitoring in accordance with section 66(6).

The CEMP must identify the reporting requirements under the EPL.

The construction contractor is required to include a table which sets out the reporting requirement applicable to the Proposal, timing of the reporting, who is responsible for managing preparation of the reports and the intended recipient(s) when more information is made available in accordance with relevant legislation.

8.5 Non-Conformance, Corrective and Preventative Actions

A non-conformance is the failure or refusal to comply with the requirements of the CEMP and supporting documentation.

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

Non-conforming activities may be stopped by relevant authorities, Superintendent, Construction Project Manager, Construction Manager and Construction Environmental Manager (or delegate(s)) following consultation with the Construction Manager. The works would not commence until a corrective/preventative action has been closed out. In such circumstances a non-conformance report must be prepared and recorded accordingly.

The construction contractor is required to develop a process for identifying, implementing and reporting on corrective actions.

REVIEW AND IMPROVEMENT

An effective environmental management system and plan includes processes that allow for continual improvement. The CEMP must identify the processes for providing effective feedback on the environmental performance of construction and updates or amendments of the CEMP, sub-plans, and PSPs should it be recognised where mitigation strategies are not achieving compliance. Figure 4 illustrates the principle of continual improvement through planning, implementing, acting and monitoring the environmental performance of the project, during the construction phase.

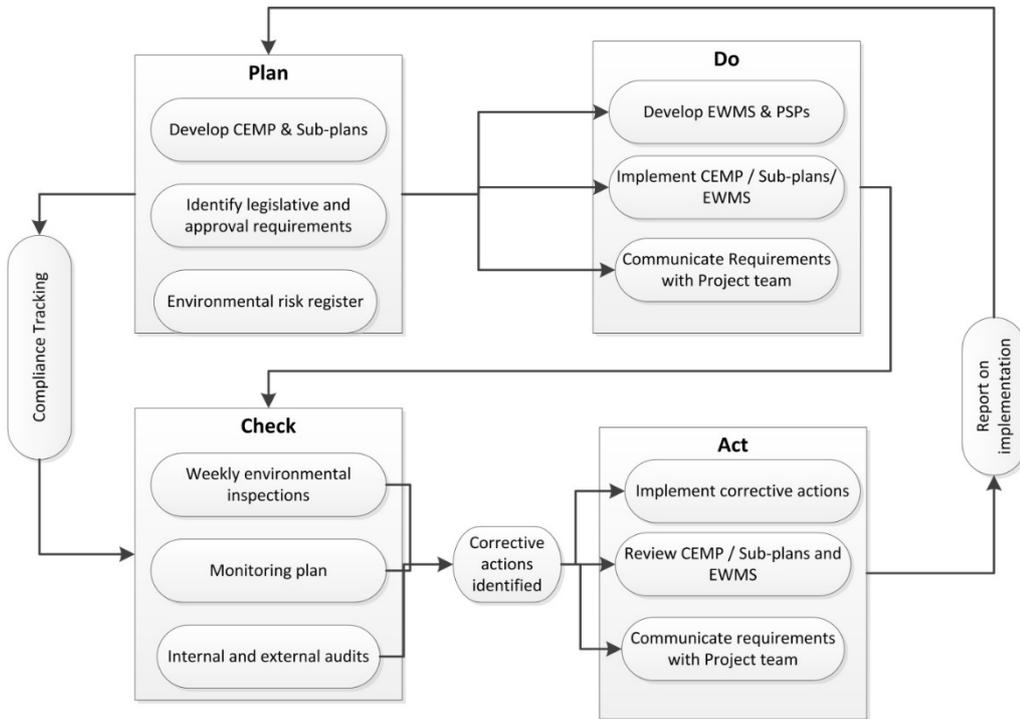


Figure 4 Continuous improvement

DOCUMENTATION

The CEMP must include a section to identify the documentation requirements for environmental management of construction of the Proposal. The section must identify the responsibilities of the project team for capturing and keeping data and documents.

The construction contractor is required to develop and implement a system for document control for documents relating to environmental management and compliance. This must be documented within the CEMP.

10.1 Document Control

The construction contractor would coordinate the preparation, review and distribution of environmental management documents, as appropriate, as described in Section 1.6. Environmental documents would be stored at the construction site for ready reference.

The construction contractor is required to develop and implement a document control procedure to control the flow of documents within and between the Principal Representative, stakeholders and subcontractors.

The procedure must also ensure that documentation is:

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

A register and distribution list must identify the current revision of particular documents or data. Document control would be in accordance with ISO 14001.

10.2 Records

The Construction Environmental Manager would be responsible for maintaining all environmental management documents as current at the point of use.

The construction contractor is required to develop and implement a process for control of all environmental records, including:

- All monitoring, inspection and compliance reports/records.
- Correspondence with relevant authorities.
- Induction and training records.
- Reports on environmental incidents, other environmental non-conformances, complaints and follow-up action.
- Community complaints information.
- Minutes of CEMP and construction environmental management system review meetings and evidence of any action taken.
- Review and update of documents in accordance with changes to legislation and activities on site.

