CONSTRUCTION SPOIL MANAGEMENT PLAN

Moorebank Precinct East Stage 2 - SSD 7628

Moorebank Intermodal Precinct – East Precinct Stage 2

SSD 7628

Construction Spoil Management Plan

Version Author	[redacted]
Version Checker	[redacted]
Version Approver	[redacted]
Report No	SSS2-QPMS-EN-PLN-00003
Date	3/12/2024
Revision Text	15

Limitations on use and reliance

Aspect Environmental Pty Ltd has prepared this report solely for the use of the Client and those parties with whom a warranty / end-user agreement or licence has been executed, or with whom an assignment has been agreed. Should any third party wish to use or rely upon the contents of the report, written approval must be sought from Aspect Environmental Pty Ltd; a charge may be levied against such approval.

Aspect Environmental Pty Ltd accepts no responsibility or liability for:

a) the consequences of this document being used for any purpose or project other than for which it was commissioned, and

b) the use of, or reliance on, this document by any third party with whom an agreement has not been formally executed.

The work undertaken to provide the basis of this report comprised a study of available documented information from a variety of sources (including the Client).

Should additional information become available which may affect the opinions expressed in this report, Aspect Environmental Pty Ltd reserves the right to review such information and, if warranted, to modify the opinions accordingly.

Original Author Details

Author Details	Qualifications and Experience
[redacted] Level 15 / 580 George Street Sydney NSW 2000	B.Sc Environmental Engineering (Distinction) [redacted] is an Environmental Engineer with five years of experience working on infrastructure and environmental projects, in particular with contaminated sites and environmental monitoring. Relevant experience includes waste classification sampling and reporting, Phase I and II assessments and reports, construction supervision (e.g. geotechnical investigations, monitoring, sampling, QA/QC of field data) and preparation of environmental management plans.

REVISIONS

Revision	Date	Description	Prepared by	Approved by
001	9/02/2018	First draft for client review	[redacted]	[redacted]
002	27/02/2018	Update with ER comments	[redacted]	[redacted]
003	15/03/2018	Update with DP&E comments on EW Spoil Management Plan, consider temporary stockpiles	[redacted]	[redacted]
004	23/03/2018	Minor update based on DP&E final comments on EW Spoil Management Plan	[redacted]	[redacted]
005	3/04/2018	Minor update based on ER comments	[redacted]	[redacted]
006	30/04/2018	Update based on DPE comments	[redacted]	[redacted]
007	27/09/2018	Updates to reflect issue of Moorebank Precinct EPL and RfMA 002	[redacted]	[redacted]
008	19/12/2018	RfMA 007 – Update to compliance and non-compliance definitions and inclusion of cumulative impacts required by EPBC CoA (2011/6029)	[redacted]	[redacted]
009	25/10/2019	Minor updates associated with: • RfMA 02A – Additional construction compounds to support warehouse construction • RfMA 006 – Stockpiling locations • RfMA 010 – Temporary stockpile criteria • RfMA 012 – Additional temporary construction access points • RfMA 014 – Suitable spoil importation • RfMA 015 – Moorebank Precinct EPL • RfMA 019 – Clarification of definitions for Early Works and Construction Phase A activities • RfMA 021 – New parking area	[redacted]	[redacted]
010	21/11/2019	Updates to address ER comments; removal of Construction Phase A updates associated with RfMA 019 and minor updates	[redacted]	[redacted]

		associated with RfMA 016 – Temporary access time extension		
011	20/12/2019	Updated to address ER comments, and the approved CTAMP-B	[redacted]	[redacted]
012	16/01/2020	Updated to address ER comments	[redacted]	[redacted]
013	07/08/2020	Minor updates associated with: • RfMA-018 – MAUW boundary change • RfMA 028 – MAUW/MADR Stockpile Area • SSD 7628-Mod 2 approval	[redacted]	[redacted]
014	19/03/2021	Updates associated with: • RfMA-039 – Corrections and update to Extended Hours Works Plan, and revision to construction program • RfMA-040 – Additional compound for light vehicle parking and break facilities • SSD 7268 – MOD3 • SSD 7628 – MOD4	[redacted]	[redacted]
015	03/12/2024	Updates associated with: • SSD 7628 – MOD 1 • SSD 7628 – MOD 5 • RfMA-042 – Minor ancillary compound locations • RfMA-43 – MARW updates • RfMA-44 – Temporary construction compound • RfMA-45 – Minor ancillary facility	[redacted]	[redacted]

KEY TERMS AND ACRONYMS

Acronym / Term	Meaning
CAQMP	Construction Air Quality Management Plan
CDWMP	Construction Demolition and Waste Management Plan
CEMP	Construction Environmental Management Plan
CESCP	Construction Erosion and Sediment Control Plan
CMP	Contamination Management Plan
CoCs	Conditions of Consent
Construction area / Construction footprint	Extent of construction works, namely areas to be disturbed during the construction of the Development, as identified in the MPE S2 RtS
Contractor's CM	Contractor's Construction Manager
Contractor's EM	Contractor's Environmental Manager
Contractor's WM	Contractor's Works package Manager
CSMP	Construction Spoil Management Plan
CSWMP	Construction Soil and Water Management Plan
CTAMP	Construction Traffic and Access Management Plan
Development Management Team	The Development management team would include, as a minimum the Contractor's WM, Contractor's CM, Contractor's EM and Site Supervisor. Additional parties may be included where deemed relevant.
Development Personnel	All persons listed in Section 2.2, including sub-contractors working on the Development Site.
Development Site / Development footprint	The subject of the MPE Stage 2 EIS, the part of the MPE site which includes all areas to be disturbed by the Development (including the operational area and construction area).
Development, the	Stage 2 of the MPE Concept Approval (MP 10_0193) approved as the MPE Stage 2 Development (SSD 7628) as consolidated. It involves the construction and operation of warehousing and distribution facilities on the MPE Site and upgrades to approximately 1.5 kilometres of Moorebank Avenue.
DP&E	NSW Department of Planning and Environment (now DPHI)
DPHI	Department of Planning, Housing and Infrastructure (formerly DPE)
Early Works	Site preparation works, including: (a) establishment of site access points; (b) installation of temporary site fencing; (c) remediation, where required, including unexploded ordnance, exploded ordnance and exploded ordnance waste management; (d) survey; acquisitions; or building/ road dilapidation surveys;

Acronym / Term	Meaning
	(e) establishment of site compounds; (f) installation of environmental mitigation measures; (g) heritage archival monitoring and recording; (h) heritage salvage; (i) clearing of non-native vegetation; (j) importation, stockpiling and placement of 60,000 m^3 of spoil (k) utilities adjustment and relocation that do not present a significant risk to the environment, as determined by the Environmental Representative; and (l) other activities determined by the Environmental Representative to have minimal environmental impact.
EIS	Environmental Impact Statement
ENM	Excavated natural material
Environmental Incident	A set of circumstances resulting in harm, or potential harm, to the environment. Environmental incidents include pollution incidents and environmental emergencies. Environmental incidents may arise from natural (e.g. storm, wind or bushfire) or human factors.
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	NSW Environment Protection Authority
EPL	Environmental Protection License
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
ER	Environmental Representative
ESR	the Developer
EWEMP	Early Works Management Plan
FCMMs	Final Compilation of Mitigation Measures
GFA	Gross floor area
Imported spoil	Spoil imported from existing infrastructure projects within Sydney, notably tunnel excavations; must be VENM, ENM or other material approved in writing by EPA.
km	kilometre
m	metre
Moorebank Precinct	Refers to the whole Moorebank intermodal precinct, i.e. the MPE site and the MPW site.
MPE	Moorebank Precinct East
MPE Concept EIS	The Environmental Impact Statement prepared to support the application for approval of the MPE Concept Plan under the *Environmental Planning and Assessment Act 1979*.

Acronym / Term	Meaning
MPE Concept Plan Approval	MPE Concept Approval (MP 10_0193), granted by DP&E on 29 September 2014 for the development of an intermodal terminal facility including; a rail link connecting the site to the Southern Sydney Freight Line, an intermodal terminal, warehousing and distribution facilities and a freight village.
MPE Development	The MPE Intermodal Terminal Facility as approved under the MPE Concept Approval (MP 10_0193) and the MPE EPBC Approval (2011/6229).
MPE EPBC Approval	Commonwealth Approval (No. 2011/6229) granted in March 2014 under the *Environment Protection and Biodiversity Conservation Act 1999*, for the impact of the MPE Development on listed threatened species and communities (Sections 18 and 18A of the EPBC Act) and Commonwealth land (Sections 26 and 27A of the EPBC Act).
MPE site	Including the former DSNDC site and the land owned by SIMTA which is subject to the MPE Concept Plan Approval (Lot 1 DP1048263). The MPE site does not include the rail corridor, which relates to the land on which the rail link is to be constructed.
MPE Stage 1 Development	MPE Stage 1 Development (SSD 14-6766) for the development of the Intermodal terminal facility at Moorebank. This reference also includes associated conditions of consent and environmental management measures which form part of the documentation for the approval.
MPE Stage 2 EIS	Moorebank Precinct East Stage 2 Proposal – Environmental Impact Statement publicly exhibited between 13 December 2016 and 24 February 2017.
MPE Stage 2 RtS	Moorebank Precinct East Stage 2 Proposal – Response to Submissions Report (July 2017), prepared in response to the submissions received regarding the MPE Stage 2 Proposal.
MPW	Moorebank Precinct West
Native vegetation	For the purposes of this management plan, native vegetation is defined as areas of plant community types mapped by Arcadis and WSP Parsons Brinckerhoff in the Moorebank Precinct (including Moorebank Precinct East and Moorebank Precinct West), being a consolidation of all assessments for the Moorebank Precinct conducted since 2011.
Non-compliance	An occurrence, set of circumstances, or development that results in a non-compliance or is non-compliant with Development Consent SSD 7628 Conditions of Consent or EPBC Act Approval (EPBC 2011/6229) Conditions of Approval but is not an incident
Non-conformance	Observations or actions that are not in strict accordance with the CEMP and the aspect specific sub-plan.
Operational area / Operational footprint	Extent of operational activities for the operation of the Development
POEO Act	*Protection of the Environment Operations Act 1997*
QA	Quality Assurance
QC	Quality Control
RtS	Response to Submissions
Site fill	Includes importation, stockpiling and placement of fill to establish development finished surface levels within the MPE site and for the upgraded Moorebank Avenue.

Acronym / Term	Meaning
Spoil	Includes site fill, VENM and ENM. VENM, ENM (or other material approved in writing by EPA) may be imported from off-site. Spoil for the purposes of the Development excludes consideration of non-VENM / ENM or otherwise approved materials.
SSD	State significant development
VENM	Virgin excavated natural material
Warehousing Compound	The main construction compound of the Development. The warehousing compound will include: • Site office(s) • Staff amenities • Car parking • Storage and laydown areas • Materials testing facilities • Materials crushing facilities • Concrete batching plant.

CONTENTS

APPENDICES

LIST OF TABLES

LIST OF FIGURES

1 BACKGROUND

1.1 Development Ownership

In 2022, LOGOS joined the ESR group of companies and since August 2024, the LOGOS and ESR operations have been integrated to now operate under the name ESR Australia & NZ (ESR). The applicant/ approval holder entity remains unchanged at this stage until further notice and references to LOGOS and LOGOS authored documents and/or plans may continue and remains relevant where LOGOS and ESR are used interchangeably.

1.2 Introduction

Approval for the construction and operation of Stage 2 of the Moorebank Precinct East (MPE) Development, operated by ESR Australia & NZ (formerly LOGOS Pty Ltd), which comprises the second stage of development under the MPE Concept Approval (MP10_0193) was received 31 January 2018 (State significant development (SSD) 7628)), as consolidated.

This Construction Spoil Management Plan (CSMP) has been developed to manage imported spoil impacts during the construction phase of Stage 2 of the Moorebank Precinct East Development (hereafter, 'the Development').

Within this plan, a strategy has been established to demonstrate the Construction Contractor's approach to the management of imported spoil. This CSMP addresses the relevant requirements of the Development Consent, including the Environmental Impact Statement (EIS), Response to Submissions (RtS) and Minister's Conditions of Consent (CoCs), and all applicable guidelines and standards specific to the management of imported spoil during construction phases of the Development.

Spoil is defined in the MPE Stage 2 CoCs as: site fill, virgin excavated natural material (VENM) and excavated natural material (ENM). Site fill is defined in the MPE Stage 2 CoCs as: includes importation, stockpiling and placement of fill to establish development finished surface levels within the MPE site and for the upgraded Moorebank Avenue.

The MPE site, including the Development Site, is located approximately 27 kilometres (km) south-west of the Sydney Central Business District and approximately 26 km west of Port Botany and includes the former Defence National Storage and Distribution Centre site. The MPE site is situated within the Liverpool Local Government Area , in Sydney's South West subregion, approximately 2.5 km from the Liverpool City Centre.

The Development involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 km of Moorebank Avenue.

Key components of the Development include:

- Earthworks including the importation of 600,000 m^3 of fill and vegetation clearing
- Importation, stockpiling and placement of up to 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of imported clean general fill permitted for bulk earthworks)
- Approximately 300,000 m^2 gross floor area (GFA) of warehousing and ancillary offices
- Warehouse fit-out
- Freight village, 8,000 m^2 GFA of ancillary retail, commercial and light industrial land uses
- Internal road network and hardstand across the site
- Ancillary supporting infrastructure within the site, including:
  - Stormwater, drainage and flooding infrastructure
  - Utilities relocation/installation
  - Fencing, signage, lighting, remediation and landscaping
- Moorebank Avenue upgrade including:
  - Raising by about two metres and some widening

  - Embankments and tie-ins to existing Moorebank Avenue road levels
  - Signalling and intersection works
- Intersection upgrades along Moorebank Avenue including:
  - Moorebank Avenue/MPE Stage 2 access
  - Moorebank Avenue/MPE Stage 1 northern access
  - Moorebank Avenue/MPE Stage 2 central access
  - Moorebank Precinct West (MPW) Southern Access/MPE Stage 2 southern emergency access.

The location of the Development Site is shown in Figure 1-1.

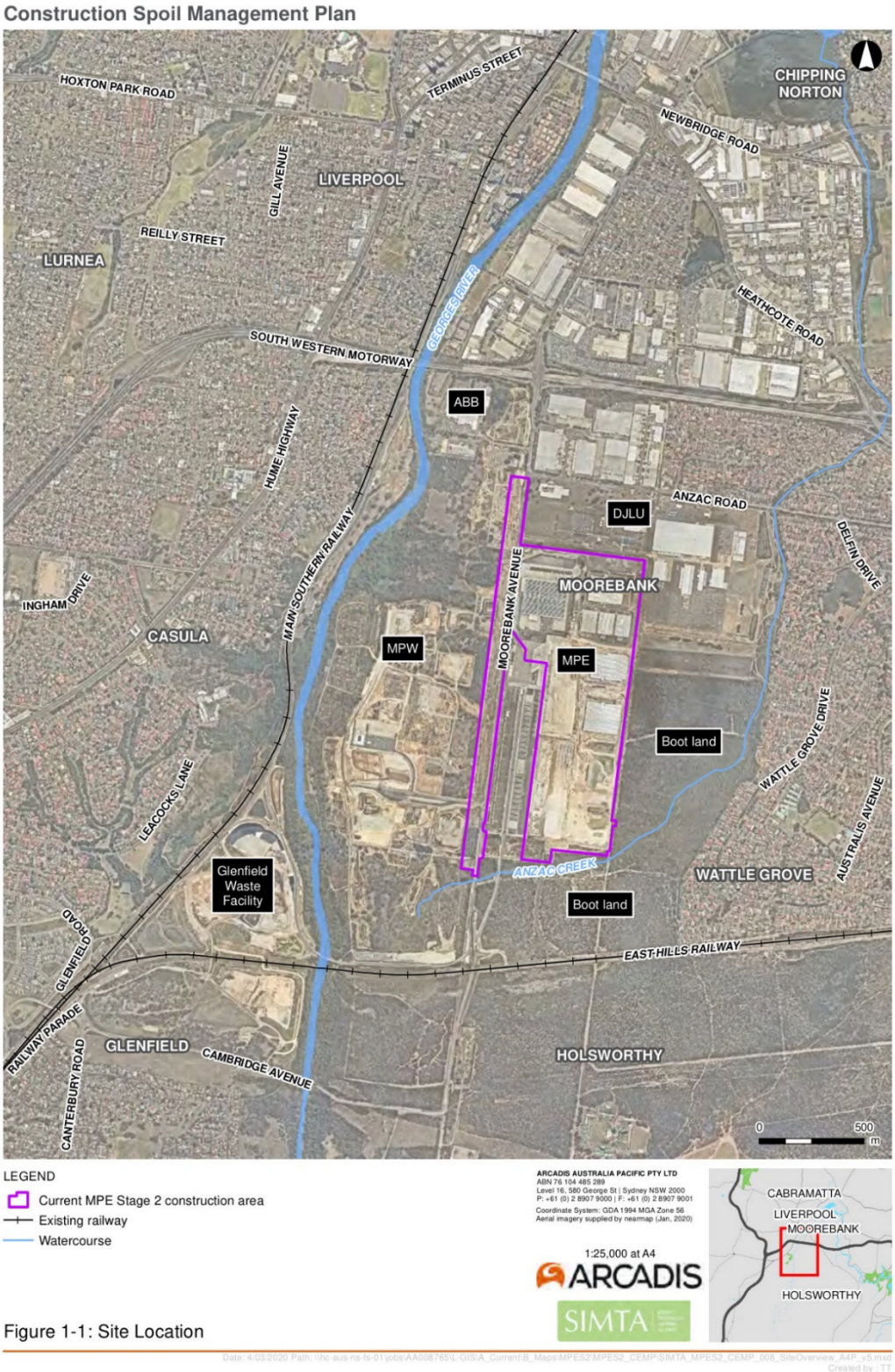

Figure 1-1: Site Location

Figure 1-1 Site Location

1.3 Development Consent

The MPE Stage 2 Development was assessed by the Department of Planning, Housing and Infrastructure and Environment (DPHI) (then the Department of Planning and Environment) under Part 4, Division 4.1 (now Division 4.7 as of 1 March 2018) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as State significant development (SSD). The Planning Assessment Commission granted approval for the MPE Stage 2 Development on 31 January 2018 and is subject to the Minister's CoCs (SSD 7628) as consolidated. The Development has been subsequently modified. The Development, including its potential impacts, consultation and proposed mitigation and management, is documented in the following suite of documents:

- State significant development Consent SSD 7628 and Modification 2 SSD 7628-Mod 2
- Moorebank Precinct East – Stage 2 – Environmental Impact Statement (Arcadis Australia Pacific Pty Limited, December 2016)
- Moorebank Precinct East – Stage 2 – Response to Submissions (Arcadis Australia Pacific Pty Limited, July 2017)
- MPE *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229) granted on March 2014
- MPW *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6086) granted on September 2016 (for Moorebank Avenue Upgrade Works only)

1.4 Development Delivery Phases

The Development construction period is anticipated to be up to five years, which will be generally divided into three works phases, as detailed in the following sections.

The terminology for the Development phases or periods has developed from the preparation of the EIS and RtS documentation in response to the language of the CoCs and the need to stage the delivery of the environmental management documentation required by the CoCs. Current terminology, and the equivalent terminology from the CoCs and RtS are included in Table 1-1.

Table 1-1 Development Delivery Phase Terminology

Development Delivery Phase	CoC A18 Phase Equivalent	MPE Stage 2 RtS Works Period Equivalent
Early Works	Early Works Fill importation (to 60,000m^3)	Works Period A: Pre-construction Works Period B: Site preparation
Construction Phase A	Fill importation Construction	Works Period B: Site preparation Works Period E: Bulk earthworks, drainage and utilities Works Period F: Construction and internal fit out of warehousing Works Period G: Miscellaneous construction works
Construction Phase B	Fill importation Construction	Works Period C: Construction of Moorebank Avenue Diversion Road Works Period D: Pavement and intersection works along Moorebank Avenue Works Period E: Bulk earthworks, drainage and utilities

1.4.1 Early Works

Early Works is generally described as site preparatory works including utilities adjustments and relocations, clearing and stripping of topsoil (top 100mm of topsoil), heritage salvage and fill importation (including VENM and ENM, up to 60,000 m^3), establishment of site access, temporary fencing and compound establishment, asbestos and hazardous material removal and the preparation for the demolition of buildings.

The Early Works includes but is not limited to:

- Geotechnical and utilities works including potholing to confirm the location of existing services, disconnection of non-critical services (with retention in place), grout filling of disconnected draining lines, and adjustment and relocation where applicable
- Clearing of non-native vegetation, stripping of topsoil and stockpiling of topsoil on site for later re-use within site landscaping
- Stabilisation of areas where topsoil has been stripped with imported clean hard fill or by other methods determined by the Environmental Representative (ER) to have minimal environmental impact
- Removal of asbestos from heating equipment and fire resistant building elements (e.g. fire doors) by a licenced asbestos removalist followed by clearance by a certified occupational hygienist
- Hazardous material cleaning and decontamination in Buildings 67, 69, 81 and 83
- Heritage salvage works in Buildings 37, 75 and 80 on the Development Site to recover architectural elements for adaptive re-use
- Importation, stockpiling and placement of up to 60,000 m^3 (not exceeding a total of 13,000 m^3 of material per day) of imported clean general fill material by truck-and-dog and / or semi-trailer
- Establishment of a site access point at the existing MPE site northern access and construction of associated access road, utilising existing paved areas with minor pavement extensions required, to provide for access and manoeuvrability of vehicles into and through the site in accordance with CoC B10
- Establishment of temporary site fencing, a site compound(s) and temporary car parking areas to support Early Works and construction of the Development in accordance with CoC B10, B11 and B12
- Other activities determined by the ER to have minimal environmental impact.

Any of the activities defined in SSD Consent 7628 as ‘Early Works’ may be undertaken during the Early Works. All works during Early Works will be undertaken in accordance with the Early Works Management Plan (EWEMP) and required sub-plans.

The Development’s Construction Environmental Management Plan (CEMP) has superseded the EWEMP.

1.4.2 Construction Works Phase A (Excluding Moorebank Avenue Upgrade Works)

Construction Works Phase A will include all works described in Early Works in addition to bulk earthworks, drainage and utilities, construction and internal fit-out of warehousing and finishing works.

Construction Works Phase A excludes Moorebank Avenue works described in Section 1.4.3. Construction Works Phase A includes, but is not limited to:

Completion of Site Preparation Activities

- Demolition of existing structures
- Clearing of remaining vegetation
- Adjusting the building formation of the site (to final operational levels) within which the Warehousing Compound will be located
- Establishment of temporary batch plant and materials crushing plant.

Bulk Earthworks, Drainage and Utilities

- Importation, stockpiling and placement of up to a total of 600,000 m^3 (including the quantity imported during Early Works) of imported clean general fill (not exceeding a total of 13,000 m^3 of material per day) for bulk earthworks
- Importation, stockpiling and placement of up to 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of imported clean general fill permitted for bulk earthworks)
- Installation of on-site detention and drainage infrastructure within the MPE Stage 2 site
- Construction of retaining walls
- Creation of internal road formation by general earthworks (by constructing fill embankments)
- Bulk earthworks and adjusting the building formation of the Development Site to final level, including the terminal hardstand
- Utilities relocation and installation
- Establishment of hardstand areas.

Construction and Internal Fit-out of Warehousing

- Foundation and floor slab installation
- Erection of framework and structural walls
- Installation of roof
- Internal fit-out of warehouses (racking and associated services).

Miscellaneous Construction and Finishing Works

- 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 Development
- Decommissioning/demobilisation of the Development site, including removal of construction compound(s) and temporary construction environmental controls.

1.4.3 Construction Works Phase B (All Construction Activities)

Construction Works Phase B will include all works described in Early Works and Construction Works Phase A, in addition to the Moorebank Avenue upgrade works. Generally, the Moorebank Avenue upgrade works are described as construction of the Moorebank Avenue Diversion Road, bulk earthworks, drainage and utilities, and pavement works.

Construction Works Phase B includes, but is not limited to:

Construction of the Moorebank Avenue Diversion Road

- 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.

Bulk Earthworks, Drainage and Utilities

- Removal of existing pavement and stripping of topsoil within Moorebank Avenue
- Importation, stockpiling and placement of up to a total of 600,000 m^3 (including the quantity imported during Early Works and Phase A) of imported clean general fill (not exceeding a total of 13,000 m^3 of material per day) for bulk earthworks
- Importation, stockpiling and placement of up to 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of imported clean general fill permitted for bulk earthworks)
- Creation of a road formation for Moorebank Avenue and the Moorebank Avenue Diversion Road by general earthworks (by constructing fill embankments)
- Utilities relocation and installation.

Pavement Works along Moorebank Avenue

- 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, upgraded Moorebank Avenue or Moorebank Avenue Realignment (SSI-10053) if delivered
- 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 to the southern extent of site, or if Moorebank Avenue Realignment (SSI-10053) is delivered, then commissioning to Import Export Terminal main access point.

The site access, compound areas are shown in Figure 1-2.

1.4.4 MARW Early Works

The Moorebank Avenue Realignment Works (MARW) Early Works comprises the following activities, within the scope of the CoC for the MPE Stage 2 Development (SSD 7628):

- At the northern boundary of MPE Stage 2:
    - Property adjustments to Piccolo Me Café and display suite including partial demolition of carpark and reallocation of carparking space.
    - Provide adjustments to MPE lead-in services including sewer/water meters, communication pits and electrical kiosk
    - Demolition of shared pathways
    - Establishing shared internal pathways
    - Overhead utilities adjustments as required by internal MARW works
    - Provision of local connection for temporary MARW utilities
    - Demobilisation of equipment from the area
- At the southern boundary of MPE Stage 2:
    - Disconnect and remove 11kV overhead wires to eastern on-site detention (OSD) basin water pump
    - Disconnect and remove pad-mounted substation currently servicing eastern water pump
    - Relocate generator from western to eastern water pump
    - Remove western water pump and associated hoses
- At the eastern boundary of MPE Stage 2:
    - Disconnect and remove 11kV overhead wires to Hansen Yuncken construction compound.

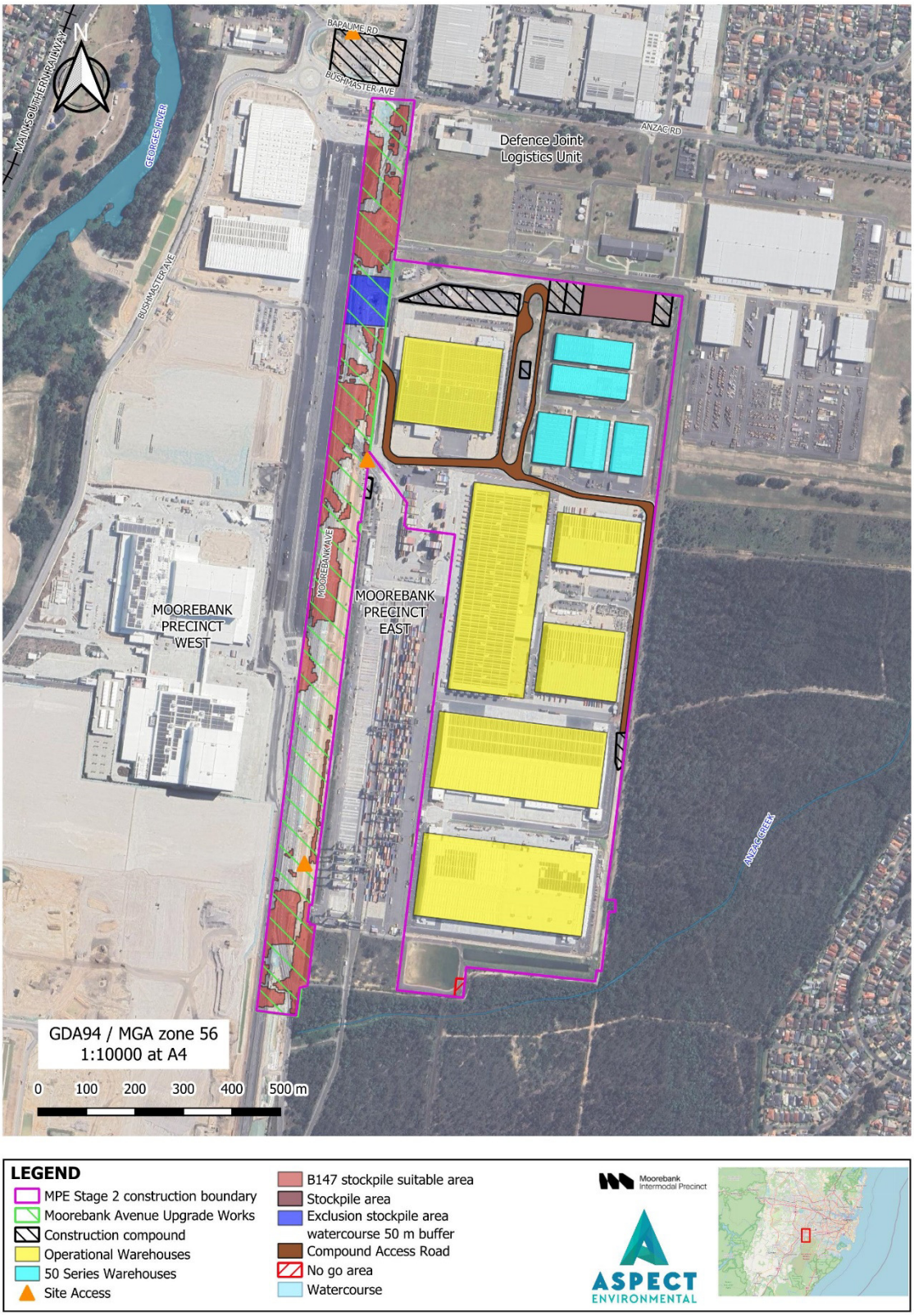

Figure 1-2 Site Access, Compound Areas

1.5 Purpose and Application

This CSMP has been developed to address the CoCs and the final compilation of mitigation measures (FCMMs) and incorporates the requirements of the Stockpile Management Protocol presented in the EIS and RtS. This plan aims to demonstrate how imported spoil will be managed during construction of the Development.

This plan provides measures for the Construction Contractors and consultant partners to manage spoil during construction.

Construction will be carried out in accordance with the most recent version of this CSMP and will not commence until this plan is approved by the Secretary.

1.6 Staged Submission of this Plan

Subject to the approval of the Secretary (CoC A14), the Development has elected to stage the submission of a number of strategies, plans and programs that are required by the CoCs based on the Delivery Works Phases identified in Table 1-2.

In accordance with CoC A15, Table 1-2 identifies the stage of the development to which this document applies, and the relationship between any future stage. The trigger for updating the document is also identified in Table 1-2. When a document is updated, the most recent version of the document will supersede the previous version(s).

Table 1-2 Staged Documentation and Triggers to Satisfy CoC A15

Delivery Works Phases	General Description of Works	Current Document	Trigger to Update Document
Early Works			
Early Works	Utilities adjustments and relocations, clearing and stripping of topsoil, heritage salvage, fill importation, establishment of site access, temporary fencing and compound establishment, and other activities determined by the ER to have minimal environmental impact	☐ Document prepared to address Early Works only	Prior to the commencement of construction works
Construction			
Construction Phase A	Early Works activities, bulk earth works, drainage and utilities, construction and internal fit-out of warehousing and finishing works	☐ Document prepared to address Construction Works Phase A only (does not address Moorebank Avenue upgrade works)	Prior to the commencement of Moorebank Avenue upgrade works
Construction Phase B	Construction Phase A activities, construction of the Moorebank Avenue Diversion Road, bulk earthworks, drainage and utilities and pavement works	☒ Document prepared to address all construction works (Phase A + Phase B)	

1.7 Objectives and Targets

The following high level objectives and targets are set for the Development for the management of imported spoil (refer to Table 1-3). These objectives and targets were developed in consultation with the Proponent and the Principal's Representative, based on collective industry experience and best practice.

Table 1-3 Objectives and Targets

Objective	Target	Timeframe	Accountability
To provide procedures for the management of spoil as outlined within this plan during construction	100% of employees to attend environmental site induction	Duration of construction	Contractor's CM
To implement the Unexpected Finds Protocol to minimise impacts of imported spoil	STOP works in 100% cases where potential contamination is identified in accordance with the Unexpected Finds Protocol (refer to Figure 3-1)	Duration of construction	Contractor's CM Contractor's EM
Unacceptable impacts on the natural environment by mismanagement of imported spoil to be avoided with the management measures outlined within this plan	No known impacts relating to spoil management	Duration of construction	Contractor's EM

2 ENVIRONMENTAL MANAGEMENT

2.1 Legal and Other Requirements

Table 2-1 below details the legislation, planning instruments and guidelines considered during development of this CSMP.

Table 2-1 Legislation, Planning Instruments and Guidelines

Legislation	Description	Relevance to this CSMP
Environmental Planning and Assessment Act 1979	This Act establishes a system of environmental planning and assessment of development proposals for the State.	The CoCs and obligations are incorporated into this plan.
Protection of the Environment Operations Act 1997	The Protection of the Environment Operations (POEO) Act establishes the regulatory framework which includes licensing requirements for certain activities. The POEO Act also establishes the Environmental Protection Authority (EPA). The objective of the EPA is to protect, restore and enhance the quality of the environment in NSW, having regard to the need to maintain ecologically sustainable development.	Division 3 of the POEO Act outlines waste offences including unlawful transporting or depositing of waste. A s143 Notice and Waste Acceptance Form and waste classification record must be provided prior to the acceptance of material on the Development Site.
Contaminated Land Management Act 1997	The general object of this Act is to establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation under Division 2 of Part 3.	Any contamination encountered on the Development Site must be assessed and managed in accordance with this Act and the approved Contamination Management Plan (CMP) for the Development.
Protection of the Environment Operations (Waste) Regulation 2014	Regulates the management of imported spoil to the Development Site.	All imported spoil will be classified in accordance with this Regulation.

Additional guidelines and standards relating to the management of imported spoil include:

- *Managing Urban Stormwater – Soils and Construction Volume 1, 4th Edition* (Landcom 2004)
- *Waste Classification Guidelines: Part 1 Classifying Waste* (NSW EPA 2014).
- *The excavated natural material order* (NSW EPA 2014b)
- *The excavated natural material exemption* (NSW EPA 2014c).

2.1.1 Compliance Matrices

The Development is being delivered under Part 4, Division 4.7 (previously Division 4.1 prior to 1 March 2018) of the EP&A Act. The CoCs include requirements to be addressed in this plan and delivered during the Development. These requirements and how they are addressed are provided within Table 2-2 and are prepared in accordance with CoC C21.

Table 2-2 Conditions of Consent (CoCs)

CoC	Requirement	Document Reference	How Addressed
A1	In addition to meeting the specific performance measures and criteria established under this consent all reasonable measures must be implemented to prevent, and if prevention is not reasonable, minimise, any harm to the environment that may result from the construction and operation of the development, and any rehabilitation required under this consent.	Section 3 Section 4	Section 3 of this CSMP identifies the management measures to be implemented to prevent and minimise environmental harm. Section 4 sets out the processes for monitoring and reviewing the effectiveness of these management measures. Opportunities to further minimise environmental harm will be identified through the ongoing evaluation of environmental management performance and effectiveness of this plan.
A2	The development may only be carried out: (a) in compliance with the conditions of this consent; (b) in accordance with all written directions of the Secretary in relation to this consent; (c) in accordance with the EIS, Submissions Report, Consolidated assessment clarification responses and updated Biodiversity Assessment Report; (d) in accordance with the amended Development Layout Plans and Design Plans, amended WSUD plans and amended architectural plans to be submitted for the Secretary's approval as part of this consent; and (e) in accordance with the management and mitigation measures at APPENDIX B of this consent.	This plan	This plan has been developed to comply with the CoCs, written directions of the Secretary, amended development layout and management and mitigation measures outlined in Appendix B of the CoCs. Refer to the following: (a) Section 2.1.1, Table 2-2 (b) None provided to date (c) Section 2.1.1, Table 2-3 (d) Not applicable to this plan (e) Section 2.1.1, Table 2-3
A6	The total volume of spoil to be imported, including fill required to raise Moorebank Avenue and spoil imported during early works must not exceed 600,000 m^3.	Section 3.12 Appendix A - Imported Spoil Tracking Register Appendix C - Fill Importation Management Protocol	The total volume of spoil to be imported including fill required to raise Moorebank Avenue and spoil imported during Early Works must not exceed 600,000 m^3. An additional 250,000 m^3 of suitable spoil that is separate to the 600,000 m^3 of general fill will be imported. Total volumes of spoil will be tracked via the Imported Spoil Tracking Register and the Fill Importation Management Protocol (Appendix C) to check that daily and construction limits are not exceeded.
A15	If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program	Section 1.6	This CSMP is relevant to construction only.

CoC	Requirement	Document Reference	How Addressed
	must clearly describe the specific stage of the development to which the strategy, plan or program applies, the relationship of the stage to any future stages and the trigger for updating the strategy, plan or program		
A20	All licences, permits, approvals and consents as required by law must be obtained and maintained as required for the development. No condition of this consent removes the obligation for the Applicant to obtain, renew or comply with such licences, permits, approvals and consents.	CEMP (Appendix A - Legislation Register and Appendix B – Development Permits and Licences Register)	All applicable licences, permits and approvals will be obtained as required. Approvals, permits and licences required for the Development are discussed in Appendix A and B of the CEMP. An Environmental Protection Licence (EPL) (No. 21054) was issued by the EPA on 4 June 2018 (variation issued on 18 April 2019). The licence applies to the Moorebank Precinct (excluding the MPE Stage 1 Rail Access Land Package which has a separate EPL licence (No. 20966) and authorises > 100,000 – 500,000 tonnes crushing, grinding or separating processing capacity per annum and > 500,000 – 2,000,000 tonnes extraction, processing or storage capacity per annum. The licence applies to all other activities carried on at the premises, including road construction, bulk earthworks 'cut and fill' and importing fill.
B35	The Applicant must ensure that only VENM or ENM, or other material approved in writing by EPA is brought onto the site.	Section 3.3	Only VENM, ENM or other material approved in writing by the EPA will be brought onto the Development Site. All spoil entering the Development site will be accompanied by a waste classification form. QA / QC will be undertaken to check that imported spoil meets the appropriate standards outlined in this plan.
B36	Prior to commencement of importation of spoil, the Applicant must prepare a Spoil Management Plan to the satisfaction of the Secretary. The Spoil Management Plan must incorporate detailed information on the handling and transport of spoil, including stock pile management. The Spoil Management Plan must be approved by a NSW EPA Accredited Site Auditor prior to submission to the Secretary, to ensure that imported material will be assessed including with regard to the waste classification and site suitability. The Spoil Management Plan is to be prepared separate to,	This plan has been prepared to satisfy this condition. Specific requirements of this condition are identified in the next column. Appendix B – Site Auditor Approval (the Site Auditor approved version 004 dated 23 March 2018 of this plan in a memo dated 29 March 2018)	This plan has been prepared to manage the importation of spoil for the Development. The plan will be approved by a NSW EPA Accredited Site Auditor (Appendix B) and will be submitted for the approval of the Secretary prior to the importation of spoil. CMP details the management of contaminated spoil identified on site. No contaminated spoil will knowingly be imported to site.

CoC	Requirement	Document Reference	How Addressed
	but consistent with the CEMP required by conditions C1 and must:		
	(a) be prepared by a suitably qualified and experienced person(s);	See author details on the front cover	The plan has been prepared by a suitably qualified and experienced person as documented on the title page.
	(b) include: (i) a protocol for recording the volume, type and source of fill imported to site and vehicle registrations on a daily basis; (ii) quality assurance and quality control measures to ensure compliance with condition B35; (iii) a protocol for dealing with unexpected finds including material contamination; and (iv) independent auditing by a suitably qualified and experienced specialist.	(i) Section 3.4 (ii) Section 3.5.1 (iii) Section 3.11 (iv) Section 4.2	(i) Section 3.4 outlines a protocol for recording requirements for the imported spoil. An Imported Spoil Tracking Register is also provided in Appendix A. The Fill Importation Management Protocol is provided in Appendix C. (ii) Quality assurance and quality control (QA / QC) for imported spoil management is provided in Section 3.5.1. (iii) Section 3.11 outlines an Unexpected Finds Protocol for imported spoil. (iv) Regular independent auditing will be undertaken in accordance with Section 4.3 of the CEMP and is summarised in Section 4.2 of this plan.
	(c) be consistent with Volume 1 of Managing Urban Stormwater: Soils and Construction ('the Blue Book') (Landcom 2004) and include: (i) Details on and the location of fill sorting, crushing and stockpiling; (ii) Plans and details on the progressive formation of stockpiles, placement and stabilisation of placed fill; (iii) Stockpiles not to exceed 10m in height with stockpiles over 4m in height to be benched, with maximum of 1V:3H slopes; (iv) Monitoring of stockpile moisture content and stockpile watering; (v) Stabilisation of stockpiles if not worked on for more than 10 days; and (vi) Stabilisation of placed fill if construction does not commence within 10 days.	c) Sections 3.6, 3.9, and 3.12 (i) Figure 1-2 (ii) - (iii) Section 3.6, Section 3.12 (SP18) iv) Section 3.9, Section 10 (SP26 and SP29) (v) Section 3.10 (vi) Section 3.10	(c) The Blue Book (Landcom 2004) provides extensive information regarding erosion and sediment control. A Construction Erosion and Sediment Control Plan (CESCP) has been developed for the site in accordance with the Blue Book (Landcom 2004). Stockpile management is consistent with the Blue Book (Landcom 2004) as discussed in Sections 3.6, 3.9 and identified in Section 3.12. (i) Approximate locations of fill sorting, crushing and stockpiles for the Development can be found in Figure 1-2. (ii)(iii) The progressive formation of stockpiles and the stockpile dimension requirements will occur in accordance with Section 3.6. Stockpile dimension requirements are identified in Section 3.12 (SP18). (iv) Monitoring of stockpile moisture content and stockpile watering requirements will be accordance with the 'Blue Book' (Landcom 2004) and Section 3.9. Refer to Section 3.12 (SP26 and SP29). (v)(vi) Stabilisation of the stockpiles will be in accordance with the 'Blue Book' (Landcom 2004) and Section 3.10.

CoC	Requirement	Document Reference	How Addressed
B37	The handling of spoil during construction of the development is to be conducted in accordance with the Spoil Management Plan.	Section 3.5	Section 3.5 outlines the procedures for handling of spoil during construction.
B38	Permanent fill batters to adjacent lands to be a maximum of 1V:4H and details to be provided on methods of slope stabilisation.	Construction Soil and Water Management Plan (CSWMP)	Not relevant to this plan. The CSWMP provides the details required for this condition.
B54	Best practice reactive and proactive management measures must be implemented to minimise dust generated during all works authorised by this consent.	Section 3.12	Best practice management measures identified in Section 3.12 will be implemented to minimise dust during construction.
B56	During construction:		Fill importation and stockpiling will be undertaken in a manner that minimises dust emissions, where possible. The Construction Air Quality Management Plan (CAQMP) and CSWMP provide additional detail not covered in this plan.
	(a) fill importation must not exceed 22,000 m^3 per day;	Section 1.3 Section 3.4 Section 3.12 (SP1)	
	(b) exposed areas and stockpiles must be watered regularly to minimise dust emissions;	Section 3.12 (SP26)	
	(c) water carts must be used to control dust emissions from vehicles travelling on unpaved surfaces, and graders and dozers pushing fill material;	Section 3.12 (SP26)	
	(d) grader and bulldozer travel routes and the fill material being handled must be suitably moist;	Section 3.12 (SP14)	
	(e) water must be used as appropriate to maintain moisture in the fill material being bulldozed, such that dust emissions would be halved relative to not applying the water;	Section 3.12 (SP26)	
	(f) water may be applied prior to fill being delivered to site, provided that the same effect is achieved as in (e) above;	Section 3.12 (SP14)	
	(g) all trucks entering or leaving the site with loads must have their loads covered;	Section 3.12 (SP11)	
	(h) trucks associated with the development must not track dirt onto public roads;	Section 3.12 (SP13)	

CoC	Requirement	Document Reference	How Addressed
	(i) public roads used by trucks associated with the development must be kept clean; and	Section 3.12 (SP13)	
	(j) land stabilisation works must be carried out progressively on site to minimise exposed surfaces.	Section 3.12 (SP16)	
B58	Air quality monitoring must be undertaken during early works, fill importation and construction.	Section 3.12CAQMP	Air quality monitoring will be undertaken during construction and is outlined in Section 3.12. The CAQMP also provides additional detail on air quality monitoring not covered in this plan.
B124	Waste generated outside the site must not be received at the site for storage, treatment, processing, reprocessing, or disposal unless it satisfies these conditions.	Section 3.12	Waste generated outside the Development Site will not be received without the proper waste classification records.
B125	The Applicant must retain all sampling and waste classification data for the life of the development in accordance with the requirements of EPA.	Section 3.12	All sampling and waste classification data will be retained for the life of the development in accordance with the requirements of the EPA.
C7	The Applicant must ensure that the environmental management plans required under this consent are prepared in accordance with any relevant guidelines, and include:	This plan	This plan has been prepared to manage the importation of spoil for the Development. Specific requirements of this condition are identified below.
	(a) detailed baseline data;	Section 3.3	Not applicable as spoil management is not currently occurring on the Development Site, therefore no baseline data has been included in this plan. Spoil may be sourced from the WestConnex New M5 project. The majority of tunnel spoil excavated from the New M5 project is expected to be VENM as identified in Section 3.3.
	(b) a description of: (i) the relevant statutory requirements (including any relevant approval, licence or lease conditions); (ii) any relevant limits or performance measures/criteria; and (iii) the specific performance indicators that are proposed to be used to judge the performance of, or guide the implementation of,	(i)(ii)(iii) Section 2.1	(i) Relevant statutory requirements for spoil management are listed in Section 2.1. (ii) and (iii) Section 2.1 outlines the guidance documents associated with importing ENM / VENM to the Development Site. Refer also to Table 5 – FCMMs.

CoC	Requirement	Document Reference	How Addressed
	the development or any management measures;		
	(c) a description of the management measures to be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 3.12	Management measures are outlined in Section 3.12 and are to be implemented to comply with relevant statutory requirements, limits or performance measures / criteria.
	(d) a program to monitor and report on the: (i) impacts and environmental performance of the development; and (ii) effectiveness of any management measures (see (c) above);	Section 4 CEMP – Section 4.2	A monitoring and report program is outlined in Section 4 for imported spoil management, while the broader process is included in Section 4.2 of the CEMP.
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Figure 3-1	An Unexpected Finds Protocol has been developed to manage any unpredicted impacts and their consequences, and is outlined in Figure 3-1.
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 4.4	Review and improvement of this plan will be undertaken annually and periodically in accordance with Section 4.5 of the CEMP as discussed under Section 4.4 of this plan.
	(g) a protocol for managing and reporting any: (i) incidents and non-compliances;	Section 2.4 CEMP - Section 2.9	Managing and reporting for incidents will be undertaken in accordance with Section 2.4 of this plan. Further detail is provided in Section 2.9 of the CEMP.
	(ii) complaints;	Section 4.5 Construction Community Communication Strategy – Appendix B	Protocols for managing and reporting complaints is outlined in Section 4.6 Further detail is found in Section 2.7 of the CEMP and Appendix B of the Community Communication Strategy.
	(iii) non-compliances with statutory requirements; and	Section 4.3 CEMP – Section 4.4	Non-conformances will be undertaken in accordance with Section 4.3 of this plan. Further detail is provided in Section 4.4 of the CEMP.
	(h) a protocol for periodic review of the plan. Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for a particular management plan.	Section 4.4 CEMP – Section 4.5	Periodic review of the plan will occur and is outlined in Section 4.4 of this plan. Further detail is provided in Section 4.5 of the CEMP.

The FCMMs were prepared as part of the consolidated assessment clarification responses issued to DPHI (then DP&E) on 10 November 2017. A list of the FCMMs as relevant to the Development and how they have been complied with in this plan are provided in Table 2-3 and the Compliance Tracking Program, prepared in accordance with CoC C21.

Table 2-3 Final Compilation of Mitigation Measures (FCMMs)

FCMM	Requirement	Document Reference
1G	Importation of fill to site during construction of the Amended Proposal is to not exceed a total of 22,000 m^3 of material per day. This limit is to be further reduced by an amount equivalent to any fill being imported to the MPW Stage 2 Proposal (SSD 7709) on the same day such that the combined importation of fill to the Amended Proposal site and MPW site does not exceed 22,000 m^3 on any given day.	Fill importation must not exceed 13,000 m^3 per day for the Development Site, in accordance with CoC B56(a).
3C	During construction and operation, real-time boundary monitoring would be used to measure site emissions and alert site personnel when dust triggers are breached. This monitoring would determine if the best practice measures are effective and/or if additional reactive controls are needed on any particular day.	Monitoring is addressed in Section 4.1. Refer also to the CAQMP for detail.
6B	Stockpile sites established during construction are to be managed in accordance with stockpile management principles set out in Appendix G of the MPE Stage 2 RtS. Mitigation measures within the Stockpile Management Protocol include: • In order to accept fill material onto site, material characterisation reports / certification showing that the material being supplied is VENM/ENM must be provided. Each truck entering the MPE Stage 2 Proposal site will be visually checked and documented to confirm that only approved materials that are consistent with the environmental approvals are allowed to enter the site. • Only fully tarped loads are to be accepted by the gatekeeper. • Environmental Assurance of imported fill material will be conducted to confirm that the materials comply with the NSW EPA Waste Classification Guidelines and the Earthworks Specification for the MPE site. The frequency of assurance testing will be as nominated by the Environmental assuror/auditor. • All trucks accessing the site for the purpose of clean general fill importation would enter and exit via the existing main MPE Stage 2 site access located in the North-west of the MPE site from Moorebank Avenue. • Ingress and egress to the stockpiling areas would be arranged so that the reversing of trucks within the site is minimised • Stockpiles would not exceed ten-metres in height from the final site levels, with battered walls at gradients of 1V:3H • For any stockpile heights greater than 4 m, benching would be implemented. • Where reasonable and feasible, and to minimise the potential for erosion and sedimentation of stockpile(s), stockpile profiles would typically be at angle of repose (the steepest angle at which a sloping surface formed of loose material is stable) with a slight concave slope to limit the loss of sediments off the slope, or through the profile and the formation of a toe drain.	Stockpiles will be managed in accordance with stockpile management principles set out in Appendix G of the RtS. Refer to Section 3.11 and Table 9. Stockpiling is also discussed in Section 3.6. Erosion and sediment control for stockpiles is also addressed in Section 3.9.2.

FCMM	Requirement	Document Reference
6B (cont)	• The top surface of the stockpile(s) would be slightly sloped to avoid ponding and increase run off. • Topsoil stockpiles would be vegetated to minimise erosion. • Stockpiles would be protected from upslope stormwater surface flow through the use of catch drains, berms, or similar feature(s) to divert water around the stockpile(s).	As above
6B (cont)	• A sediment control device, such as a sediment fence, berm, or similar, would be positioned downslope of the stockpile to minimise sediment migration. • Any water seepage from stockpiles would be directed by toe drains at the base of the stockpiles toward the sediment basins or check dams and away from the emplacement or extraction working face. • Newly formed stockpiles would be compacted (sealed off) using a smooth drum roller at the end of each working day to minimise water infiltration. • Haul roads would be located alongside the stockpile to the work/tipping area. As per best practice, the catchment area of haul roads for surface water runoff would be approximately 25-30 m lengths, facilitated by the provision of spine drains which would convey water from the haul road to toe drains at the base of the stockpile, and then to sediment basins.	As above
6B (cont)	• Temporary sediment basins would be established in accordance with the ESCP prepared for the site. • Stockpiling of clean fill material is to be carried out during Works Period A (pre-construction) and Works Period D (bulk earthworks). • Any imported clean general fill material that would be subject to stockpiling within the Proposal site for more than a 10-day period without being worked on, would be subject to stabilisation works, to minimise the potential for erosion.	As above
6B (cont)	• Where the material being stockpiled is less coarse or has a significant component of fines then surface and slope stabilisation would be undertaken. Methods for slope stabilisation may include one or a combination of the following: – Application of a polymer to bind material together – Application of hydro-seed or hydromulch – Covering batters with mulch to provide ground cover. – Covering batters with geofabric – Use of a simple sprinkler system for temporary stockpiles, including use of radiating sprinkler nozzles to maintain fine spray over exposes surfaces. – Other options identified by the Contractor. • Topsoil stockpiles would be seeded with a grass/legume or nitrogen fixing species (such as acacia) to assist in erosion control and reduce loss of beneficial soil micro-organisms.	As above
6F	In order to accept fill material onto site, the following will be undertaken: • Material characterisation reports/certification showing that the material being supplied is VENM/ENM must be provided.	Section 3.3 Section 3.4

FCMM	Requirement	Document Reference
	Each truck entry will be visually checked and documented to confirm that only approved materials that are consistent with the environmental approvals are allowed to enter the site. Only fully tarped loads are to be accepted by the gatekeeper. Environmental assurance of imported fill material will be conducted to confirm that the materials comply with the NSW EPA Waste Classification Guidelines and the Earthworks Specification for the MPW site. The frequency of assurance testing will be as nominated by the Environmental assuror/auditor.	
11E	Where possible locally sourced materials will be used to reduce GHG emissions associated with transport during construction.	Section 3.3 identifies that spoil may be sourced from the WestConnex New M5 project, which is located approximately 15 to 25 km from the Development Site.
11F	Waste would be diverted from landfill, including diversion of spoil, construction and demolition waste, and commercial and industrial waste, where reasonable and feasible. …	MPE Stage 2 will require a maximum of 600,000 m^3 fill. This fill will be sourced from existing infrastructure projects within Sydney as identified in Section 3.3. A maximum of 600,000 m^3 fill would therefore be diverted from landfill and utilised on this Development Site. An additional 250,000 m^3 of suitable spoil that is separate to the 600,000 m^3 of general fill will be imported.

2.2 Roles and Responsibilities

Key roles and responsibilities associated with this CSMP are presented in Table 7.

Table 2-4 Roles and Responsibilities

Roles	Responsibilities
Contractor's Works Package Manager (Contractor's WM)	• Attend audit meetings and action results of any audit findings • Oversee the implementation and maintenance of the CSMP • Endorse the CSMP • Provide support for the Contractor's EM • Report to senior management and the Principal's Representative on the performance of the system and environmental breaches • Undergo induction and training in environmental awareness specific to spoil management • Sign off on all environment and sustainability inspections relating to spoil management • Enforce environmental requirements for suppliers and sub-contractors.
Contractor's Construction Manager (Contractor's CM)	• Communicating with all personnel and sub-contractors regarding compliance with the CSMP • Undergo induction and training in spoil management as directed by management

Roles	Responsibilities
	• Identifying resources required for implementation of the CSMP • Organise and manage site plant, labour and temporary materials for spoil management • Co-ordinating the implementation and maintenance of site environmental controls and provide support for the Contractor's EM
Contractor Environmental Manager (Contractor's EM)	• Check and monitor the implementation of this CSMP • Report to the Contractor's WM on spoil management issues • Provide technical advice to personnel and management in the review of work methods specific to spoil management • Present and participate in toolbox meetings relating spoil management • Manage environmental document control, reporting, inductions and training • Oversee site monitoring, inspections and internal audits against the CSMP • Responsible for undertaking all relevant monitoring • Responsible for auditing site activities against the CSMP • Assist and guide the respective workers to meet their environmental responsibilities against the CSMP • Undergo induction and training in spoil management as directed by management. • Record and communicate volumes, classifications, source, etc of spoil brought to the Development Site identified in Section 3.4 to the Principal's Representative on a weekly basis.
Site Supervisor	• Implement environmental controls on-site for spoil management • Present and participate in toolbox talks and meetings • Train staff in their obligations under this plan • Undergo induction and training in spoil management as directed by management.
All Personnel	• Take all feasible and reasonable steps to comply with the requirements of this CSMP • Undergo induction and training in spoil management as directed by management • Comply with the relevant Acts, Regulations and Standards relevant to the CSMP • Comply with the Development policies and procedures relevant to the CSMP.

2.3 Training

All personnel working on the Development shall undergo general environmental awareness training in accordance with Section 2.8 of the CEMP. Records of Development environmental induction and other environmental training will be maintained in the Contractor CM's site office.

All site personnel shall undergo site specific induction training, where construction staff will be made aware of:

- Environmental and compliance obligations specific to spoil management, including incident response requirements
- Legislation requirements
- Roles and responsibilities for:
  - Handling and stockpiling of spoil during construction

- A management tracking system for imported spoil to check the proper management of imported spoil movements are completed during construction
- Assessment and classification of imported spoil in accordance with relevant legislation
- A contingency plan for unexpected contaminated materials (Unexpected Find(s) Protocol), such as materials that are odorous, stained or containing anthropogenic materials, that may be encountered during construction.

Toolbox meetings will also be undertaken, as and when required.

Competency training will be provided by the Construction Contractor as required and may include a certification, vocational qualification or a competency assessment.

Records of all training are to be filed in accordance with the document control system outlined in the CEMP.

2.4 Incident Response

In the event of a safety / environmental incident or unpredicted impacts relating to spoil management, the following procedures will be implemented:

- Stop personnel involved in the incident immediately (or as appropriate)
- Isolate the work area if practical
- Notify appropriate Development personnel (e.g. Contractor's CM, Contractor's WM, Principal's Representative)
- Assess the situation and implement remedial measures as required
- Works to re-commence when impact is managed.

If necessary to update any processes / procedures / management measures associated with this plan to consider unpredicted impacts.

Incidents will be classified and notified in accordance with Section 2.9 of the CEMP.

3 IMPLEMENTATION

3.1 Aspects, Impacts and Risks

3.1.1 EIS Identified Impacts

Development-wide environmental aspects, impacts and opportunities have been identified and assessed in accordance with the risk assessment as presented in the MPE Stage 2 EIS. The MPE Stage 2 EIS identified the following spoil management risks related to the Development and are applicable to construction include:

- Dust generation
- Erosion
- Construction traffic
- Noise.

3.1.2 Construction Impacts

Further to Section 3.1.1, potential impacts directly related to spoil management during construction can occur. The most significant construction activities related to spoil management include:

- Use of heavy and light vehicles
- Placement of imported spoil
- Movement and deposition of imported spoil
- Stockpiling imported spoil
- Unexpected finds.

The Aspects and Impacts Register can be found in Appendix C of the CEMP.

3.2 Cumulative Impacts

The potential cumulative impacts for spoil management relate to air, soil and water, traffic and noise. Each of these aspects are discussed in the relevant aspect specific subplans, i.e. the CAQMP, CSWMP, Construction Traffic and Access Management Plan (CTAMP) and the Construction Noise and Vibration Management Plan respectively.

With the implementation of the management measures identified in Section 3.12, and the mitigation measures outlined in each of the individual aspect management plans, the potential cumulative impacts are considered to be manageable.

3.3 Assessment of Imported Spoil

All imported spoil including the 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of clean general fill permitted under CoC A6) entering the Development Site will be classified, managed and stockpiled in accordance with legislation and standards provided in Section 2.1

Spoil imported to the site will be restricted to:

- Virgin excavated natural material (VENM) defined in accordance with Schedule 1 of the *Protection of the Environment Act 1997*
- Excavated natural material (ENM) classified in accordance with *The excavated natural material exemption* (NSW EPA 2014c)
- Other material approved in writing by EPA.

The imported spoil, including the 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of clean general fill), will be sourced from existing infrastructure projects within Sydney, notably tunnel excavations, which may include, but not be limited to the WestConnex New M5 project located in southwest Sydney. The WestConnex New M5 Spoil Management Plan (revision 07, dated 15 December 2016) states that the majority of spoil excavated is expected to be classified as VENM.

All imported spoil, including the 250,000 m^3 of suitable spoil (separate to the 600,000 m^3 of clean general fill), entering the Development Site must be accompanied by a waste classification report completed by the supplier. Material characterisation will occur prior to being exported to the Development Site in accordance with the *Waste Classification Guidelines: Part 1 Classifying Waste* (NSW EPA 2014). A s143 Notice and Waste Acceptance form will be completed prior to the importation of spoil from each new spoil source. The s143 Notice and Waste Acceptance form will be completed by the supplier and signed by the receiver of the imported spoil.

Prior to and during the importation of VENM or ENM, visual inspection must be undertaken to verify the appearance of the material is consistent with the source material description.

No imported spoil is permitted to enter the site without providing a waste classification report.

3.3.1 Waste Exemptions

The Moorebank Precinct EPL (No. 21054) Condition L.3.1 restricts all waste importation into site except for wastes that meet the following criteria:

- Meets all the conditions of the resource recovery exemption under Clause 91 and Clause 92 Protection of the Environment Operations (Waste) Regulation 2014
- Used for activities specified in each particular resource recovery exemption.

Clause 92 of the *Protection of the Environment Operations (Waste) Regulation 2014* enables the EPA to grant exemptions to the licensing and payment of levies for the land application or use of waste. The EPA has issued general exemptions for a range of commonly recovered, high volume and well characterised waste materials that allow their use as fill or fertiliser at unlicensed, off-site facilities. The general 'Resource Recovery Exemptions' which may be applicable to this Development are defined in Table 3-1 below. These are general gazette exemptions that do not require approval. A specific exemption may be granted where an application is made to the EPA.

Table 3-1 - Applicable Resource Recovery Exemptions

Exemption	General Condition	Application
Excavated Natural Material Exemption 2014	The chemical concentration or other attributes of the excavated natural material listed in the Excavated Natural Material (ENM) Exemption must not be exceeded. The excavated natural material can only be applied to land as engineering fill or used in earthworks. ENM handling, processing and testing requirements are outlined in detail in the exemption. Relevant records detailing fulfilment of Exemption requirements.	Onsite reuse of spoil (ENM classified) as fill Importation of fill (ENM classified) Distribution of spoil (ENM classified) offsite to other ESR projects or sites in accordance with the ENM Exemption.
Raw Mulch Exemption 2014	The raw mulch can only be applied to land for the purposes of filtration or as a soil amendment material or used either singularly or in any combination as input material(s) to a composting process.	Onsite and/or offsite reuse of mulch (non-weed vegetation) in erosion and sediment control or landscaping and in accordance with the Raw Mulch Exemption.

	The consumer must apply the raw mulch within a reasonable period of time. Relevant records detailing fulfilment of Exemption requirements.	
Compost Exemption 2016	At the time the compost is received at the premises, the material must meet all chemical and other material requirements for compost which are required on or before the supply of compost under 'the compost order 2016. The compost can only be applied to land as a soil amendment. The consumer must ensure that they do not cause or permit the migration of leachate from the land application site. The consumer must ensure that any application of compost to land occurs within a reasonable period of time after its receipt. Relevant records detailing fulfilment of Exemption requirements.	Onsite use as a soil amendment in landscaped areas.
Excavated Public Road Material Exemption 2014	The excavated public road material can only be applied to land within the road corridor for public road related activities including road construction, maintenance and installation of road infrastructure facilities. The excavated public road material can only be stored within the road corridor at the site where it is to be applied to land. The excavated public road material cannot be applied to private land. The consumer must ensure that any application of excavated public road material to land must occur within a reasonable period of time after its receipt.	For use in a public road corridor for public road related activities.
Processed foundry sand exemption 2014	At the time the processed foundry sand is received at the premises, the material must meet all chemical and other material requirements for processed foundry sand which are required on or before the supply of processed foundry sand under 'the processed foundry sand order 2014'. Where the processed foundry sand is a blend of foundry sand and recovered aggregate, it can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications:	Can be utilised across site with exception of stormwater system works.

	• Construction of dams or related water storage infrastructure
	• Mine site rehabilitation
	• Quarry rehabilitation
	• Sand dredge pond rehabilitation
	• Back filling of quarry voids
	• Raising or reshaping of land used for agriculture
	• Construction of roads on private land unless:
	  • It is applied only to the minimum extent necessary for the construction of the road
	  • An applicable development consent has been granted for the activity
	  • It is to provide access (temporary or permanent) to a development approved by a Council
	  • The works are either exempt or complying development	

Recovered Aggregate Exemption 2014	The chemical concentration or other attribute of the recovered aggregate listed in Recovered Aggregate Exemption must be met. The recovered aggregate can only be applied to land for road making activities, building, landscaping and construction works. This approval does not apply to any of the following applications: • Construction of dams or related water storage infrastructure, • Mine site rehabilitation, • Quarry rehabilitation, • Sand dredge pond rehabilitation, • Back-filling of quarry voids, • Raising or reshaping of land used for agricultural purposes, and • Construction of roads on private land unless: o the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and o a development consent for the development has been granted under the relevant Environmental Planning Instrument, or o it is to provide access (temporary or permanent) to a development approved by a Council, or o the works undertaken are either exempt or complying development.	Onsite reuse of aggregate for landscaping and construction works. Distribution of aggregate offsite to recycling facility or resale facility in accordance to the Recovered Aggregate Exemption.

	• Relevant records detailing fulfilment of Exemption requirements.	
Reclaimed Asphalt Pavement Exemption 2014	Applies to reclaimed asphalt pavement (an asphalt matrix which was previously used as an engineering material and which must not contain a detectable quantity of coal tar or asbestos. Reclaimed asphalt can only be applied to land for road related activities including road construction or road maintenance activities being: (a) use as a road base and sub base, (b) applied as a surface layer on road shoulders and unsealed roads, and (c) use as an engineering fill material. Relevant records detailing fulfilment of Exemption requirements.	Potential use of reclaimed asphalt in relation to pavement extensions for the interim access road to warehousing in the north-east portion of the MPE Stage 2 site.

Continuous Process Recovered Fines Exemption 2014	At the time the "continuous process" recovered fines are received at the premises, the material must meet all chemical and other material requirements for "continuous process" recovered fines which are required on or before the supply of "continuous process" recovered fines under 'the "continuous process" recovered fines order 2014'.
	
	The "continuous process" recovered fines can only be applied to land for the purposes of construction or landscaping. This exemption does not apply to any of the following applications:
	
	• Construction of dams or related water storage infrastructure
	• Mine site rehabilitation
	• Quarry rehabilitation
	• Sand dredge pond rehabilitation
	• Back-filling of quarry voids,
	• Raising or reshaping of land used for agricultural purposes,
	• Construction of roads on private land unless:
	  • the "continuous process" recovered fines are applied to land to the minimum extent necessary for the construction of a road, and
	  • a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or
	  • it is to provide access (temporary or permanent) to a development approved by a Council, or
		Onsite reuse for landscaping and construction works.

- the works undertaken are either exempt or complying development.

3.4 Tracking System for Spoil Importation

The following information will be recorded in the Imported Spoil Tracking Register (refer to Appendix A), or other similar tracking register. All imported spoil is appropriately transported and handled in accordance with this document. The following will be recorded in the tracking register by the Site Supervisor or Contractor's CM, and kept on site for the lifetime of the development for review by the Contractor EM's:

- Date
- Time in and out of truck hauling imported spoil
- Truck registration number
- Source of imported spoil
- Material type and classification
- Details of the statement of compliance under the ENM Order
- Volume of imported spoil
- Location of stockpiled imported spoil
- Location of final destination of imported spoil
- Details of any sampling performed for purposes of certification.

Fill importation will not exceed 13,000 m^3 per day for construction and will not exceed 600,000 m^3 in total for the Development (which includes fill to raise Moorebank Avenue and the fill imported during Early Works), in accordance with CoC A6. An additional 250,000 m^3 of suitable spoil that is separate to the 600,000 m^3 of general fill will be imported. Spoil limits will be managed in accordance with the Fill Importation Management Protocol, included in Appendix C. So that the importation of fill (i.e. volumes and truck movement) is documented and carried out in accordance with the CoCs, the following will be implemented:

- Construction Contractor to forecast fill import volumes and truck movement requirements
- Principal's Representative to review and allocate fill volumes and truck movements amongst the Construction Contractors operating on site
- Monitoring of total fill volumes and truck numbers at the gate by the Construction Contractor
- Reporting total fill volumes and total truck numbers by the Construction Contractor to the Principal's Representative.

3.5 Transport and Handling of Imported Spoil

Imported spoil will be brought to site by trucks (approximately 15 tonne and / or truck and dogs (approximately 30 tonne). All construction vehicles accessing the site for the purpose of spoil importation will enter and exit via the existing main site access located in the north-west of the Development Site from Moorebank Avenue. Construction vehicles will travel northwards along Moorebank Avenue to the M5 Motorway. Construction vehicle movements within the Moorebank Avenue site would follow the procedures outlined in the CTAMP.

Each truck entering the Development Site will be visually checked and documented in the Imported Spoil Tracking Register (Appendix A, or equivalent). This will be done to verify only approved material that is consistent with the waste classification forms are entering the Development Site. Only fully tarped loads will be accepted by the gatekeeper.

The trucks will follow a nominated site haul road to the stockpile location or the direct placement area. Upon arrival the truck spotter will direct the driver via the two-way radio or visual communication to the unloading

point. The truck driver and truck spotter will identify an unloading point that is a firm, stable, and level pad, suitable for the unloading operation. The truck spotter will prevent pedestrians or light vehicles from entering the potential fall zone of a fully extended truck body.

Once unloaded, the truck will exit the tip area. The imported spoil will either be placed directly as fill or pushed into a nominated stockpile. For the imported spoil placed directly as fill, bulldozers (or similar equipment) will be used to move the imported fill around and will be compacted to achieve the required geotechnical requirements for construction. This delivery, compaction and conditioning of the imported spoil for construction, would continue until the surface level for laying road pavement or hardstand is achieved. On completion of each layer, a soil technician would test for compliance with the geotechnical (including compaction) requirements.

Imported spoil will be transferred throughout the Development Site periodically as the earthworks activities are undertaken. Ingress and egress to the stockpiling areas will be arranged so that the reversing of trucks within the site is minimised. On commencement of site fill activities, removal of material from an existing stockpile would progress in reverse of the formation process. Windrows will be established on the stockpile to serve as a safety barrier for traffic movements on the top of the stockpile.

3.5.1 Quality Assurance and Quality Control

QA / QC will be undertaken, only imported spoil classified as ENM or VENM, or other material approved by the EPA is to be brought onto the Development Site. Environmental assurance of imported spoil will be conducted in accordance with the *Waste Classification Guidelines: Part 1 Classification of Waste* (NSW EPA 2014) and *The excavated natural material exemption* (NSW EPA 2014c). A suitably qualified and experienced professional (e.g. Site Supervisor) will check the waste classification records for the imported spoil weekly to verify the imported fill is classified as ENM or VENM.

There is no requirement for sampling imported material in *The excavated natural material exemption* (NSW EPA 2014c). However, for QA / QC purposes, sampling of the stockpiled imported spoil will be conducted monthly to verify material being imported is ENM or VENM. Sampling of stockpiled imported spoil may include tests for heavy metals, total recoverable hydrocarbons, benzene, xylenes, ethylbenzene and xylenes, polycyclic aromatic hydrocarbons, organochlorine pesticides / organophosphorous pesticides, polychlorinated biphenyl and asbestos.

Should any non-complying imported spoil be identified, the Unexpected Finds Protocol will be followed (refer to Figure 3-1). For details of the management of contaminated material, refer to the CMP.

3.6 Stockpiling Imported Spoil

Stockpiles for Imported Spoil (excludes materials listed in Section 3.8) will be established and managed in accordance with the following criteria:

- Will not exceed 10 m in height from the final site levels, with battered walls at gradients of 1V:3H
- For any stockpile heights greater than 4 m, benching would be implemented with a maximum of 1V:3H slopes
- Located a minimum of 5 m from existing vegetation, concentrated water flow, roads and hazard areas
- Located 50 m from a waterway
- Located on relatively level land.

Stockpile profiles will typically be at angle of repose (the steepest angle at which a sloping surface formed of loose material is stable) with a slight concave slope where reasonable and feasible, to limit the loss of sediments off the slope, or through the profile and the formation of a toe drain. The top surface of the stockpile(s) would be slightly sloped to avoid ponding and increase run off.

The majority of spoil will be placed directly on site. Spoil importation, placement and stabilisation will occur progressively and is expected to extend through Q4 of 2018 (refer to CEMP, Section 1.4 for a high level Development program).

Spoil stockpiles (refer to Figure 1-2 for location) provide a buffer of material for placement and stabilisation. Throughout construction, stockpiles are expected to grow and shrink as the demand and supply of spoil fluctuates.

3.7 Temporary Spoil Stockpiling

Temporary spoil stockpiles may be required during active works and may include, but not be limited to:

- Material excavated from the Development Site (excluding contaminated material)
- Imported spoil materials

These temporary stockpiles will be located immediately adjacent to active works, throughout the Development Site.

Temporary stockpiles will be subject to the following criteria:

- Remain in situ for no more than 10 days
- Will not exceed 10 m in height from the final site levels, with battered walls at gradients of 1V:3H
- For any stockpile heights greater than 4 m, benching would be implemented with a maximum of 1V:3H slopes.

3.8 Stockpiling of Materials Other than Spoil

Stockpiles for material other than spoil may be required during active works for the following materials:

- Imported materials such as sand, gravel and other materials processed off-site
- Site won materials (excluding excavated soil materials) won through a process permitted by the Development Site Environmental Protection Licence (No. 21054).

Stockpiles of these materials will be subject to the following criteria:

- Will not exceed 10 m in height from the final site levels
- Will meet the requirements of Section 3.9.

3.9 Water Management for Stockpiles

Stockpile water management will vary depending upon the material composition of the stockpile and the likely residence time.

3.9.1 Dust Minimisation

For the overall management of dust minimisation, the CAQMP will be implemented. Air quality management measures relating to imported spoil are described in Table 3-2.

Stockpile management (e.g. watering, compaction, etc.) will consider adverse weather (e.g. hot, dry and windy conditions based on visual / current conditions or local weather stations, where appropriate) and when dust is seen leaving the site.

3.9.2 Erosion and Sediment Control

In accordance with the ‘Blue Book (Landcom 2004)’, stockpiles will be protected from upslope stormwater surface flow through the use of catch drains, berms, or similar feature(s) to divert water around the stockpile(s). A sediment control device, such as a sediment fence, berm, or similar, will be positioned downslope of the stockpile to minimise sediment migration. Toe drains at the base of stockpiles would preferentially direct any stormwater surface flows to sediment basins. Any water seepage from stockpiles will

be directed by toe drains at the base of the stockpiles toward the sediment basins or check dams and away from the emplacement or extraction working face.

Temporary sediment basins will be established in accordance with the CESCP prepared in accordance with the Blue Book (Landcom 2004) for the Development Site.

To minimise water infiltration of stockpiles, stockpiles would be compacted (sealed off) at the end of each working day. Any water seepage from stockpiles will be directed by toe drains at the base of the stockpiles toward the sediment basins or check dams and away from the emplacement or extraction working face.

Haul roads will be located alongside the stockpile to the work and tipping area. As per best practice, the catchment area of haul roads for surface water runoff will be approximately 25 to 30 m lengths, facilitated by the provision of spine drains which would convey water from the haul road to toe drains at the base of the stockpile, and then to sediment basins.

Further details will be managed as outlined with the CSWMP and the CESCP.

3.10 Stockpile Stabilisation

Stockpile stabilisation will be required for any imported spoil that will be subject to stockpiling within the site for more than a 10-day period without being worked on. Stabilisation requirements will be dependent on the type of material stockpiled as outlined below:

- Coarse grained stockpiles will incorporate rock armouring
- Less coarse-grained stockpiles or stockpiles that have a significant component of fines will require slope stabilisation which may include the following:
  - Application of a polymer to bind material together
  - Application of hydro-seed or hydromulch
  - Covering batters with mulch to provide ground cover
    - Mulch must not be used within 40m of a waterway to minimise the potential for tannins entering the water system. This is a medium-term temporary solution where batters are not to be disturbed.
  - Covering batters with geofabric
  - Use of a simple sprinkler system for temporary stockpiles, including use of radiating sprinkler nozzles to maintain fine spray over exposes surfaces.
  - Other options identified by the Construction Contractor.

3.11 Unexpected Finds Protocol

The nature of any undiscovered hazards which may be present in imported spoil are generally expected to be detectable through visual or olfactory means such as:

- Hydrocarbon contaminated soils (staining / discolouration visible)
- Excessive volatile organic compound contaminated soils (odorous - sweet/chemical)
- Fragments of asbestos-containing materials (visible) or potential friable material
- Unexploded ordnance, exploded ordnance and exploded ordnance waste
- Significant ash and / or slag contaminated soils / fill materials (visible)
- Demolition type materials, bricks, tile fragments, timber, ceramics, etc. (visual).

Upon identification of potential contamination within imported spoil, the Unexpected Finds Protocol for imported spoil management will be implemented (refer to Figure 3-1).

Refer to the CMP for requirements for stockpiling contaminated materials and management of unexpected contamination finds, other than for imported spoil.

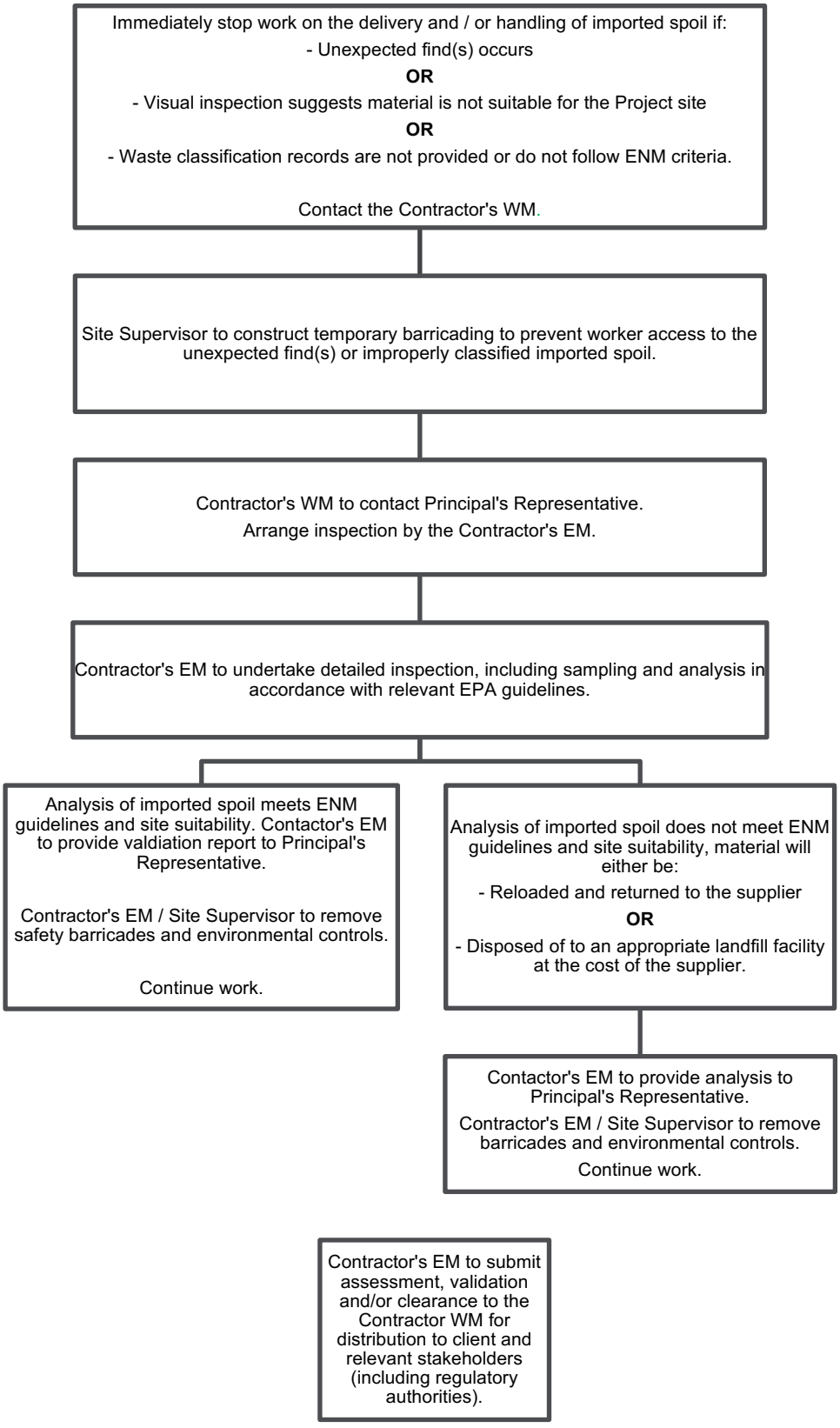

Figure 3-1 Unexpected Finds Protocol Flowchart for Imported Spoil Management

3.12 Management Measures

This section describes the overall approach to managing and mitigating spoil management risks during construction of the Development. The management measures in Table 3-2 are based on the FCMMs, RtS, CoCs, Stockpile Management Protocol, as well as the requirements and standards of ESR, the Construction Contractor and best practice.

Table 3-2 Management Measures

ID	Management Measure	Timing	Responsibility	Reference
General				
SP1	Total volume of spoil to be imported must not exceed 13,000 m^3 per day.	During construction	Site Supervisor Contractor's EM	CoC B56(a) FCMM 1G CARAS
SP2	Total volume of spoil to be imported, including fill required to raise Moorebank Avenue and spoil imported during Early Works must not exceed 600,000 m^3. An additional 250,000 m^3 of suitable spoil that is separate to the 600,000 m^3 of general fill will be imported.	During construction	Site Supervisor Contractor's EM	CoC A6 CARAS
SP3	Spoil imported to site must be restricted to VENM or ENM, or other material approved in writing by EPA. Material characterisation of the imported spoil will occur prior to being exported to the Development Site by the producer of the material at source, in accordance with the latest version of the *Waste Classification Guidelines Part 1: Classifying Waste* (NSW EPA 2014) and this plan.	During construction	Site Supervisor Contractor's EM	CoC B35 FCMM 6B
SP4	A s143 Notice and Waste Acceptance form will be completed prior to the importation of spoil from each new spoil source. The form will be completed by the supplier and signed by the receiver of the imported spoil.	During construction	Site Supervisor Contractor's EM	CoC A20
SP5	Before waste that has been generated outside the site is received at the site for use, a check must be completed to assess whether the waste VENM or ENM, or other material approved in writing by EPA (see Table 3-1). If waste does not satisfy this requirement, it must not be allowed on site.	During construction	Site Supervisor	CoC B124
SP6	All sampling and waste classification data will be retained for the life of the development in accordance with the requirements of the EPA.	During construction	Contractor's WM Contractor's EM Development Manager	CoC B125
SP7	Record information daily regarding the imported spoil on an Imported Spoil Tracking Register, or other similar waste register, including:	During construction	Site Supervisor Contractor's EM	CoC B36(b)(i) CoC B36(c)(i)

ID	Management Measure	Timing	Responsibility	Reference
	• Date • Time in and out of truck hauling imported spoil • Truck registration number • Source of imported spoil • Material type and classification • Details of the statement of compliance under the ENM Order • Volume of imported spoil • Location of stockpiled imported spoil • Location of final destination of imported spoil • Details of any sampling performed for purposes of certification.			
SP8	Where possible, imported spoil will be from a nearby Development with excess ENM, VENM, or material approved by the EPA.	During construction	Site Supervisor Contractor's EM	Best Practice
SP9	Written records of the quantity of ENM, and the name and address of the supplier of ENM must be kept for six years.	During construction	Contractor's WM Contractor's EM	Best Practice
SP10	Written records of the ENM received for the site must be made available to authorized officers of EPA on request.	During construction	Contractor's WM Contractor's EM	Best Practice
Transportation of Imported Spoil				
SP11	Trucks must not remove their load cover until they reach the unloading area. Trucks containing material for disposal must cover their loads before leaving the site.	During construction	Site Supervisor	CoC B54 CoC B56(g) FCMM 6B FCMM 6F

ID	Management Measure	Timing	Responsibility	Reference
SP12	Each truck entry will be visually checked and documented to confirm that only approved materials that are consistent with the environmental approvals are allowed to enter the Development Site.	During construction	Site Supervisor Contractor's EM	CoC B35 CoC B36(b)(ii) FCMM 6B
SP13	Where trucks have tracked dirt onto a public road, a sweeper must be used to remove the dirt. All site access points to construction areas are to be stabilised in accordance with the Blue Book (Landcom 2004) Standard Drawing 6-14. Construction site exit points will include the installation of wheel wash or rumble grid systems. During wet weather, vehicle movements between unsealed and sealed areas to be minimised. Where this cannot be avoided, a gurney or similar can be deploy at the site access point to clean wheels and undercarriage. This will require appropriate Ersed controls to avoid water ponding at access point.	During construction	Site Supervisor	CoC B54 CoC B56
SP14	Imported spoil must be suitably moist on delivery to the Development Site.	During construction	Site Supervisor	CoC B54 CoC B36 (c)(iv) CoC B56 (d) (f)
SP15	Undertake haulage of imported fill in accordance with the Fill Importation Management Protocol (Appendix A)	During construction	Contractor's EM	Best Practice
Stockpiling				
SP16	Land stabilisation works, where practical must be carried out progressively on site to minimise exposed surfaces.	During construction	Site Supervisor Contractor's EM	CoC B54 CoC B56(j) FCMM 6B
SP17	The management principles outlined in *Managing Urban Stormwater* (Landcom 2004) for sites with stockpiles will be implemented.	During construction	Site Supervisor Contractor's EM	CoC B37 The Blue Book (Landcom 2004)
SP18	Stockpiles not to exceed 10m in height, with battered walls at gradients of 1V:3H. For and stockpile heights are to be benched at 4m intervals.	During construction	Site Supervisor Contractor's EM	CoC B36(c)(iii) FCMM 6B

ID	Management Measure	Timing	Responsibility	Reference
SP19	Stockpiles must be stabilised in accordance with the Blue Book (Landcom 2004) if not worked on for more than 10 days.	During construction	Site Supervisor Contractor's EM	CoC B36(c)(v) The Blue Book (Landcom 2004)
SP20	Placed fill must be stabilised in accordance with the Blue Book (Landcom 2004) if construction does not commence within 10 days.	During construction	Site Supervisor Contractor's EM	CoC B36(c)(vi) The Blue Book (Landcom 2004)
SP21	Where the material being stockpiled is less coarse or has a significant component of fines then surface and slope stabilisation will be undertaken. Methods for slope stabilisation may include: • Application of a polymer to bind material together • Application of hydro-seed or hydromulch • Covering batters with mulch to provide ground cover • Covering batters with geofabric • Use of a simple sprinkler system for temporary stockpiles, including use of radiating sprinkler nozzles to maintain fine spray over exposes surfaces. • Other options identified by the Construction Contractor.	During construction	Site Supervisor Contractor's EM	Best Practice
SP22	Locate stockpiles more than 5m outside the drip line of existing vegetation, concentrated water flow, roads and hazard areas.	During construction	Site Supervisor Contractor's EM	CoC B36(c)The Blue Book (Landcom 2004)
SP23	Where possible, stockpiles will be placed more than 50m away from a waterway.	During construction	Site Supervisor Contractor's EM	CoC B36(c) The Blue Book (Landcom 2004)
SP24	Topsoil stockpiles will be seeded with a grass/legume or nitrogen fixing species to assist in erosion control. Where practical, topsoil stockpiles not to exceed 2m in height.	During construction	Site Supervisor Contractor's EM	FCMM 6B The Blue Book (Landcom 2004)
SP25	Temporary stockpiles will be located immediately adjacent to active works and will be subject to the following criteria:	During construction	Site Supervisor Contractor's CM	Best Practice

ID	Management Measure	Timing	Responsibility	Reference
	• Remain in situ for no more than 10 days • Will not exceed 10m in height from the final site levels, with battered walls at gradients of 1V:3H • For any stockpile heights greater than 4 m, benching would be implemented with a maximum of 1V:3H slopes.			
Water and Air Quality Management for Stockpiles				
SP26	Visually monitor stockpiles for moisture content so dust generation is minimised. Visual checks will be made daily. Water stockpiles and exposed surfaces regularly (or other equivalent means) to minimise dust emissions, such that emissions would be halved relative to not applying the water (or other treatment). Water carts must be used to control dust emissions from graders and dozers pushing fill material.	During construction	Site Supervisor Contractor's EM	CoC B36(c)(iv) CoC B56(b)(c)(e)
SP27	Stockpiles will be protected from upslope stormwater surface flow through the use of catch drains, berms, or similar feature(s) in accordance with the Blue Book (Landcom 2004) to divert water around the stockpile(s). A sediment control device, such as a sediment fence, berm, or similar, would be positioned downslope of the stockpile to minimise sediment migration. Toe drains at the base of stockpiles will preferentially direct any stormwater surface flows to sediment basins.	During construction	Site Supervisor Contractor's EM	Best Practice FCMM 6B The Blue Book (Landcom 2004)
SP28	To minimise the potential for erosion and sedimentation of stockpiles, stockpile profiles will typically be at angle of repose (the steepest angle at which a sloping surface formed of loose material is stable) with a slight concave slope where reasonable and feasible, to limit the loss of sediments off the slope, or through the profile and the formation of a toe drain. The top surface of stockpiles will be slightly sloped to avoid ponding and increase run off.	During construction	Site Supervisor Contractor's EM	Best Practice FCMM 6B
SP29	Monitor dust generated during site activities, including stockpiling and the importation of spoil. Minimise dust emissions as required (e.g. regular watering, compaction, etc.). Stockpile management (e.g. watering, compaction, etc.) will consider adverse weather (e.g. hot, dry and windy conditions based on visual / current conditions or	During construction	Site Supervisor Contractor's EM	CoC B54 CoC B56 CoC B36 (c)(iv)

ID	Management Measure	Timing	Responsibility	Reference
	local weather stations, where appropriate) and when dust is seen leaving the Development Site.			The Blue Book (Landcom 2004)
SP30	Air quality monitoring (e.g. dust production), including visual monitoring, must be undertaken during fill importation in accordance with the CAQMP.	During construction	Site Supervisor Contractor's EM	CoC B58 CAQMP
SP31	Newly formed stockpiles will be compacted (sealed off) using a smooth drum roller (or equivalent methodology) at the end of each working day to minimise water infiltration and sheet erosion.	During construction	Site Supervisor	FCMM 6B
Unexpected Finds Protocol				
SP32	For Imported Spoil Management, unexpected finds, including contaminated spoil will be managed via the Unexpected Finds Protocol.	During construction	Site Supervisor Contractor's EM Contractor's CM	CoC B56(a) FCMM 6B
QA/QC and Auditing				
SP33	A suitably qualified and experienced professional must check the waste classification records weekly that the imported fill is properly classified as ENM, VENM or the applicable resource order and exemption.	During construction	Contractor's WM Contractor's CM	CoC B36(b)(ii) FCMM 6B
SP34	Sampling of imported spoil will be conducted at least once every 20,000m^3 to assess if the material meets the criteria for VENM, ENM or the applicable resource order/exemption.	During construction	Contractor's EM	CoC B36(b)(ii) FCMM 6B
SP35	A suitably qualified and experienced professional must check the s143 Notice and Waste Acceptance form is properly completed by the supplier and signed by the receiver of the imported spoil.	During construction	Contractor's EM	CoC B36(b)(ii)
SP36	Where material does not meet the criteria for VENM, ENM or the applicable resource order/exemption, it must be rejected. If the material has been imported to site and is found to not meet the criteria for VENM, ENM or the applicable resource order/exemption. The material provider will be contacted and requested to remove the material from site.	During construction	Contractor's EM	CoC B36(b)(ii)

4 MONITORING AND REVIEW

4.1 Environmental Monitoring

Auditing and reporting will be undertaken in accordance with the CEMP.

Monitoring under this plan will be undertaken by the Contractor's EM during weekly inspections of construction activities to monitor compliance with the requirements of the CoCs and this plan. Weekly inspections will focus on the following key issues:

- Adherence to the CSMP
- Proper classification of imported spoil
- QA / QC of imported spoil classification
- Unexpected Finds Protocol for imported spoil management
- Consistency with the *Volume 1 of Managing Urban Stormwater: Soils and Construction* (Landcom 2004).

Weekly inspections will be undertaken throughout construction of the Development. An Environmental Inspection Checklist will be used to maintain compliance and effectiveness of controls. Items that require action will be documented during environmental inspection and notified to the site supervisor. The Site Supervisor will be responsible for providing appropriate resources in terms of labour, plant and equipment to enable the items to be rectified in the nominated timeframes. Section 4.2 of the CEMP provides additional detail on the Environmental Inspection Checklist and inspections requirements.

Daily inspections and maintenance of controls will be made by the Site Supervisor and maintenance will be recorded in site diaries during active site works.

Table 4-1 outlines spoil monitoring requirements.

Table 4-1 Spoil Monitoring Requirements

No.	Monitoring Required	Responsibility	Timing
1	Monitor and record all imported spoil to Development Site using the Imported Spoil Tracking Register. The information required will include: • Date • Time in and out of truck hauling imported fill • Truck registration number • Source of imported spoil • Material type and classification • Details of the statement of compliance under the ENM Order • Volume of imported spoil • Location of stockpiled imported spoil • Location of final destination of imported spoil • Details of any sampling performed for purposes of certification. Refer to Imported Fill Management Protocol in the CTAMP for additional management information.	Site Supervisor Contractor's EM	Daily, as required
2	Review waste classification reports and/or certifications to confirm only approved material has been allowed to enter the site.	Site Supervisor	Weekly

No.	Monitoring Required	Responsibility	Timing
3	Review s143 Notice and Waste Acceptance forms that have been completed by the supplier and signed by the receiver.	Contractor's EM	Once, for each new spoil source
4	Monitor all imported spoil and stockpiles with regards to *Volume 1 of Managing Urban Stormwater: Soils and Construction* (Landcom 2004).	Site Supervisor Contractor's EM	Weekly
5	Monitor (visual) dust generated during the importation of spoil and handling of stockpiles.	Site Supervisor Contractor's EM	Daily
6	Undertake real-time boundary monitoring to measure site dust emissions	Site Supervisor Contractor's EM	Continuous
7	Monitor erosion and sediment controls used for stockpiles.	Site Supervisor Contractor's EM	Weekly
8	Soil sampling of stockpiled imported spoil for VENM or ENM.	Contractor's EM	Monthly
9	Each truck entry will be visually checked and documented so that only approved materials are allowed to enter the Development Site.	Site Supervisor Contractor's EM Contractor's CM	Before entry of truck for importation of spoil

4.2 Environmental Auditing and Reporting

Environmental auditing and reporting of the Development during construction will be undertaken in accordance with Section 4.3 of the CEMP.

The first internal audit of the Construction Contractor will be undertaken by the Principal's Representative within three months of commencement. Internal audits will be undertaken quarterly thereafter on a rolling schedule. The fourth internal audit will be replaced by the annual independent external audit. The audit scope will be determined by the auditor based on current site activities.

Within one year of the commencement of the Development, an independent environmental audit would be undertaken by a suitably qualified and experienced specialist in accordance with CoC C18. The audit would consider the environmental performance of the Development and assess compliance with the CoCs, and any strategy, plan or program required under the consent, including this plan. This audit would also satisfy the independent auditing required under CoC B36(b)(iv).

According to the ENM Exemption (NSW EPA 2014b), the following requirements must also be met:

- Written records of the quantity of ENM and, the name and address of the supplier of the ENM received must be kept for six years
- Records must be made available to authorised officers of EPA on request.

4.3 Non-Compliances, Non-conformances and Actions

It is the responsibility of all personnel to report non-conformances and statutory non-compliances to their Site Supervisor and/or the Contractor's EM.

Non-conformances, non-compliances and corrective and preventative actions will be conducted in accordance with Section 4.4 of the CEMP.

4.4 Review and Improvement

Review (both annually and intermittently) and improvement of this plan is to be undertaken in accordance with the CoCs and Section 4 of the CEMP. Continuous improvement will be achieved by the ongoing evaluation of environmental management performance and effectiveness of this plan.

Revisions of this plan are to be undertaken in accordance with Section 1.3.7 of the CEMP.

Any revisions to this plan may result from:

- Review of this plan
- Audits (either internal or by external parties)
- Changes to the environmental management system
- Changes to the procedures, scope of works and/or systems after an incident or potential incident
- Design changes
- Changes in the CoCs
- Identification of opportunities for improvement of deficiencies in the Development system (e.g. through the course of site inspections)
- Following complaints.

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

4.5 Complaints Handling

Complaints handling is to be undertaken in accordance with Section 2.7.3 of the CEMP and Appendix B of the Construction Community Communication Strategy.

5 REFERENCES

Landcom (Landcom, 2004) *Volume 1 of Managing Urban Stormwater: Soils and Construction ('the Blue Book')*.

New South Wales Environment Protection Agency (NSW EPA 2014) *Waste Classification Guidelines: Part 1 Classifying Waste*.

New South Wales Environment Protection Agency (NSW EPA 2014b) *The excavated natural material order 2014.*

New South Wales Environment Protection Agency (NSW EPA 2014c) *The excavated natural material exemption*.

New South Wales Environment Protection Agency (NSW EPA 2014d) *The Directed Pallets mulch exemption 2016.*

New South Wales Environment Protection Agency (NSW EPA 2014e) *The compost exemption 2016*.

New South Wales Environment Protection Agency (NSW EPA 2014e) *The excavated public road material exemption 2014.*

New South Wales Environment Protection Agency (NSW EPA 2014f) *The recovered aggregate exemption 2014.*

APPENDIX A

Imported Spoil Tracking Register

APPENDIX B

Site Auditor Approval

APPENDIX C

Fill Importation Management Protocol

FILL IMPORTATION MANAGEMENT PROTOCOL

Purpose and Objective

This protocol outlines the procedures for the management of fill importation to the Moorebank Precinct Development. This document is to be referenced with the:

- Early Works Spoil Management Plan
- Early Works Traffic and Access Management Plan
- Construction Traffic and Access Management Plan (CTAMP)
- Construction Spoil Management Plan (CSMP).

Procedure

So that the importation of fill (i.e. volumes and truck movement) is documented and carried out in accordance with the Moorebank Precinct East and Moorebank Precinct West Development requirements, the following must be implemented:

- Construction Contractor to forecast fill import volume and truck movement requirements
- Principal's Representative to review and allocate fill volumes and truck movements amongst the Construction Contractors operating on site
- Monitoring of total fill volumes and truck numbers at the gate by the Construction Contractor(s)
- Reporting total fill volumes and total truck numbers by the Construction Contractor(s) to the Principal's Representative.

Forecasting Fill Import Requirements

The Construction Contractor will forecast the daily fill requirements (in m^3) for the Construction Contractor's operating site. The Construction Contractor will send an email to the Principal's Representative on the first working day of each fortnight with the estimated, daily fill requirements for the following fortnight. The Principal's Representative is to review the estimated fill import requirements for each of the operating sites. The Principal's Representative will then either sign off on the estimated fill volumes or request changes to the fill volumes for the respective operating site via email.

Forecasting Truck Movement Requirements

The Construction Contractor will forecast the daily truck movements required for fill importation for the Construction Contractor's operating site. If applicable to the operating site, the daily truck movements required for other construction activities should also be estimated. The Construction Contractor will send an email to the Principal's Representative on the first working day of each fortnight with the estimated, daily truck movements for the following fortnight. The Principal's Representative will review the estimated truck movement requirements for each of the operating site. The Principal's Representative will either sign off on the estimated truck movements or request changes to the truck movement for the respective operating site via email.

Monitoring Material as it Enters the Site

The following will apply at the Construction Contractor's operating site:

- Only material classified as virgin excavated natural material (VENM), excavated natural material (ENM) or other material approved by Environment Protection Authority (EPA) will be permitted on the operating site. No imported fill is permitted to enter the site without providing a waste classification report.

- Site Supervisor (or delegate) will be advised on the source and relevant truck details for each truck supplying fill to the site
- Each truck load will be visually inspected by the Site Supervisor (or delegate) as it enters the site and as it is tipped to assess the visual consistency with the approved material.
    - Should any non-complying material be identified during the inspection, the material will either be reloaded and returned to the supplier or be assessed for waste classification prior to off-site disposal to an appropriate landfill facility at the cost of the source site supplier.
- Each truck load will be documented by the Supervisor (or delegate) in the Imported Fill Tracking Register (or similar tracking documentation) including:
    - Date
    - Time in and out of truck hauling imported fill
    - Truck registration details
    - Source of imported fill
    - Material type and classification
    - Details of the statement of compliance under the *NSW EPA The excavated natural material order 2014*
    - Volume of imported fill
    - Location of stockpiled imported fill
    - Location of final destination of imported fill
    - Details of any sampling performed for purposes of certification.
- Photographs and / or location drawings of the imported fill.

Reporting and Documentation

The following reporting / documentation will apply to the fill importation:

- Waste classification forms:
    - Completed by the supplier (must be suitably qualified professional) for each truck load
    - Completed in accordance with the *NSW EPA Waste Classification Guidelines 2014* and *NSW EPA The excavated natural material order 2014.*
- Imported Fill Tracking Register (or other similar tracking documentation):
    - Completed daily by the Site Supervisor during fill importation activities
- Total daily fill volumes and truck numbers:
    - Reported to the Principal's Representative by the Site Supervisor via email daily
- Total fortnightly fill volumes and truck numbers:
    - Reported to the Principal's Representative by the Site Supervisor via email fortnightly
    - Validation exercise and check between the daily reporting.

All documentation will be kept by the Construction Contractor for future reference.