CONSTRUCTION AND DEMOLITION WASTE MANAGEMENT PLAN

Moorebank Precinct East Stage 2

19 MARCH 2021

SYDNEY INTERMODAL TERMINAL ALLIANCE
MOOREBANK PRECINCT EAST STAGE 2

Construction and Demolition Waste Management Plan

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Report No	SSS2-QPMS-EN-PLN-00006
Date	19/03/2021
Revision	012

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REVISIONS

Revision	Date	Description	Prepared by	Approved by
001	24/10/2017	For internal review	KP	SB
002	07/02/2018	Updated based on final Development Consent	TE	SB
003	09/02/2018	Updated following internal review	SH	SB
004	19/03/2018	Updated based on ER comments	MB / KN	KP
005	26/03/2018	Additional ER comments addressed	KP	KP
006	27/04/2018	Updated with DPE comments	KN	KP
007	27/09/2018	Updated with ISCA requirements and EPL information	ZQ	JC
008	14/01/2019	RfMA 007 – Update to compliance and non-compliance definitions and inclusion of cumulative impacts required by EPBC CoA (2011/6029)	JH, DP	HT
009	25/10/2019	Minor updates associated with: • RfMA 014 – Suitable spoil importation • RfMA 015 – Moorebank Precinct EPL • RfMA 019 – Clarification of definitions for Early Works and Construction Phase A activities	ZQ	AL
010	16/10/2020	Updated to address ER comments	ZQ	JC
011	06/08/2020	Minor updates associated with: • RfMA-018 – MAUW boundary change • RfMA-028 – MAUW/MADR stockpile areas • SSD 7628-Mod 2 approval	KB CS	JC AW
012	19/03/2021	Minor updates associated with: • RfMA-039 – Corrections and update to Extended Hours Works Plan, and revision to construction program	AW	RJ

	• RfMA-040 – Additional compound for light vehicle parking and break facilities • SSD 7628 - Mod 3 approval • SSD 7628 - Mod 4 approval

ACROYNMS AND DEFINITIONS

Terms	Explanation
CBD	Central Business District
CDWMP	Construction Demolition and Waste Management Plan
CEMP	Construction Environmental Management Plan
CoCs	Conditions of Consent
CCoA	Commonwealth Conditions of Approvals
CMM	Commonwealth Mitigation Measures
CMP	Contamination Management Plan
Contractor's CLM	Contractor's Community Liaison Manager
Contractor's CM	Contractor's Construction Manager
Contractor's EM	Contractor's Environmental Manager
Contractor's PM	Contractor's Project Manager
CPCoC	Concept Plan Conditions of Consent
CSMP	Construction Spoil Management Plan
CSWMP	Construction Soil and Water Management Plan
CT	Contaminant Thresholds
DIPNR	Department of Infrastructure Planning and Natural Resources
DJLU	Defence Joint Logistics Unit
DNSDC	Defence National Storage and Distribution Centre
DP&E	Department of Planning & Environment
EIS	Environmental Impact Statement
ENM	Excavated natural material
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPA	Environment Protection Authority
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999

Terms	Explanation
EPL	Environment Protection Licence
ER	Environmental Representative
ERSED	Erosion and sedimentation
EWCDWMP	Early Works Construction Demolition and Waste Management Plan
EWEMP	Early Works Environmental Management Plan
EWMS	Environmental work method statements
FCMMs	Final Compilation of Mitigation Measures
GFA	Gross floor area
GSW-NP	General Solid Waste - Non-putrescible
GWS-P	General Solid Waste - Putrescible
IMEX	Import Export Terminal. Includes the following key components: • Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue • Rail loading and container storage areas – installation of four rail sidings with adjacent container storage area serviced by manual handling equipment initially and overhead gantry cranes progressively • Administration facility and associated car parking- light vehicle access from Moorebank Avenue.
IMT facility	The IMT facility includes the construction of the following key components together comprising the Intermodal Terminal (IMT): • Truck processing and loading areas • Rail loading and container storage areas • Administration facility and associated car parking.
ISCA	Infrastructure Sustainability Council of Australia
km	kilometre
LGA	Local Government Area
m	metre
mg/L	Milligram per litre

Terms	Explanation
Moorebank Logistics Park	Encompasses both Moorebank Precinct East and Moorebank Precinct West
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.
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
OSD	On-site detention
PAC	Planning Assessment Commission
Project, the	Stage 2 of the MPE Concept Approval (MP 10_0193) approved as the MPE Stage 2 Project (SSD 7628), including the SSD 7628-Mod 2, SSD 7628-Mod 3 and SSD 7628-Mod 4 approvals. It involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades to approximately 2.1 kilometres of Moorebank Avenue.
POEO Act	*Protection of the Environment Operations Act 1997*
RALP	Rail Access Lands Package
SCC	Specific Contaminant Concentrations
SIMTA	Sydney Intermodal Terminal Alliance
SSD	State significant development
TBC	To be confirmed
TCLP	Toxicity Characteristics Leaching Procedure
WRAPP	NSW Waste Reduction and Purchasing Policy

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1 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 2 of the Moorebank Precinct East (MPE) Project (SSD 7628), which comprises the second stage of development under the MPE Concept Consent (MP10_0193). SSD 7628 has been subject to the following modification applications:

- MPE Stage 2 Modification 2 (SSD 7628-Mod 2) application, which was approved on 31 January 2020;
- MPE Stage 2 Modification 3 (SSD 7628-Mod 3) application, which was approved on 18 December 2020; and
- MPE Stage 2 Modification 4 (SSD 7628-Mod 4) application, which was approved on 19 January 2021.

This Construction and Demolition Waste Management Plan (CDWMP) has been developed to detail the quantities of each waste type generated and the proposed reuse, recycling and disposal locations of generated waste during the construction phase of Stage 2 of the MPE Project ('the Project').

This CDWMP addresses the relevant requirements of the Project Approvals, including the Environmental Impact Statement (EIS), Response to Submissions (RtS) and Minister's Conditions of Consent (CoCs), and all applicable guidelines and standards specified to the management of waste and resources during construction of the Project.

1.1 Background

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

The MPE Project involves the development of an intermodal facility including warehouse and distribution facilities, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank.

Stage 2 of the MPE Project (the Project) involves the construction and operation of warehousing and distribution facilities on the MPE site and upgrades[1] to approximately 2.1 km of Moorebank Avenue.

Key components of the Project 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

[1] Other road infrastructure upgrades are required under the MPE Stage 2 Approval however would be undertaken subject to future approval and a separate CEMP (as required).

- 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
  - MPW Southern Access/MPE Stage 2 southern emergency access.

The location of the Project site is shown in Figure 1-1.

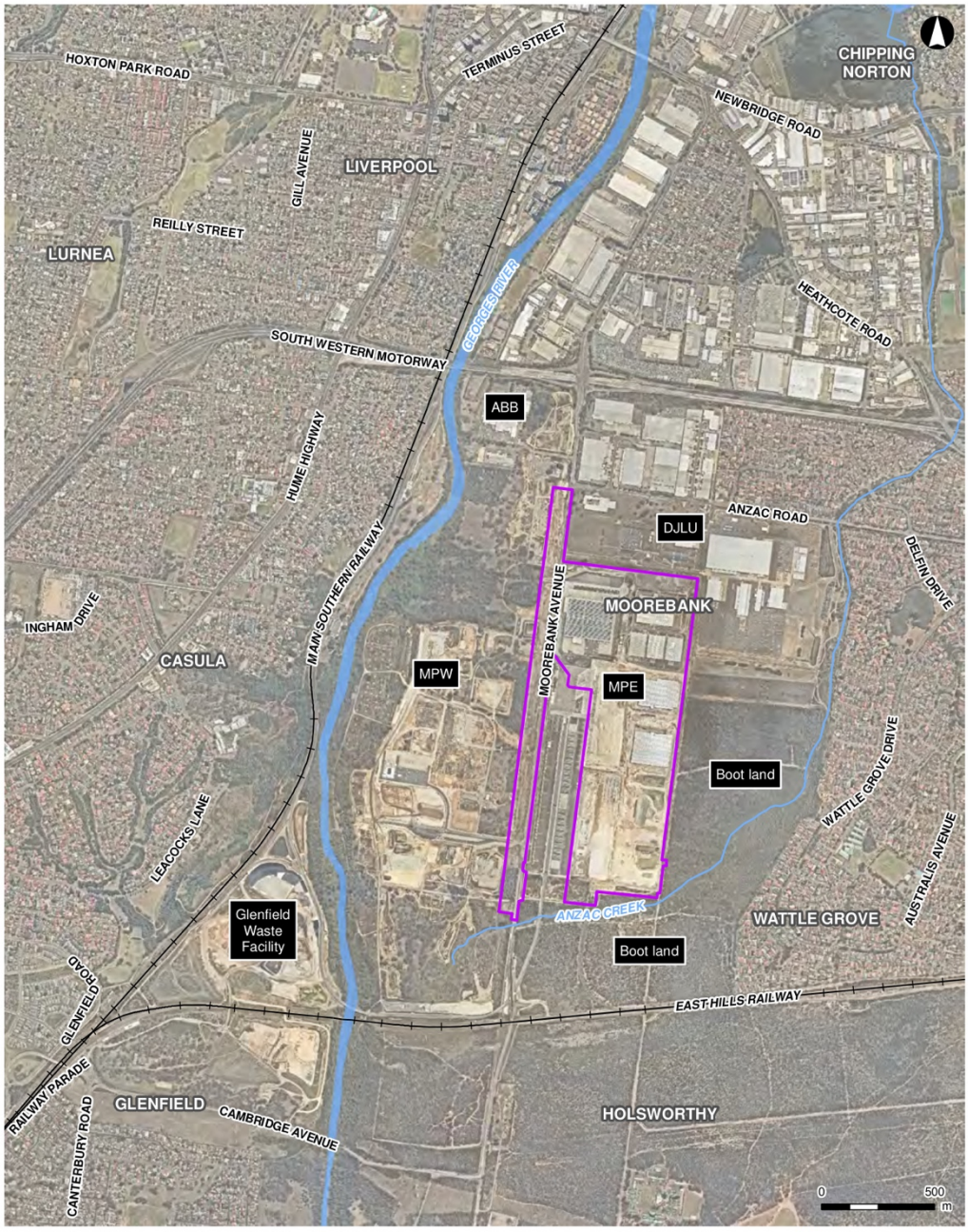

Figure 1-1: Site Location

Date: 4/03/2020 Path: \\hc-aus-ns-fs-01\jobs\AA008765\L-GIS\A_Current\B_Maps\MPES2\MPES2_CEMP\SIMTA_MPES2_CEMP_008_SiteOverview_A4P_v5.mxd
Created by : TT
QA by : RM

Figure 1-1 Site Location

1.1.1 Development Consent

The MPE Stage 2 Project has been assessed by the Department of Planning and Environment (DP&E) 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 (PAC) granted consent for the MPE Stage 2 Project on 31 January 2018 and is subject to the Minister's CoCs (ref SSD 7628). The Project has subsequently been modified. The Project, including its potential impacts, consultation and proposed mitigation and management, is documented in the following suite of documents:

- State significant development (SSD) consent SSD 7628, as modified
- SSD partial consent (subdivision) SSD 7628, as modified
- 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)
- Consolidated assessment clarification responses issued on 10 November 2017.
- *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229) granted on March 2014
- Moorebank Precinct East – Stage 2 (Modification 2) – Environmental Impact Statement (Aspect Environmental Pty Limited, July 2019)
- Moorebank Precinct East – Stage 2 (Modification 2) – Response to Submissions (Aspect Environmental Pty Limited, September 2019)
- Moorebank Precinct East – Stage 2 (Modification 3) – Environmental Impact Statement SSD 7628-Mod 3 (Aspect Environmental Pty Limited, June 2020)
- Moorebank Precinct East – Stage 2 (Modification 3) – Response to Submissions SSD 7628-Mod 3 (Aspect Environmental Pty Limited, August 2020)
- Moorebank Precinct East – Stage 2 (Modification 4) – Environmental Impact Statement SSD 7628-Mod 4 (Aspect Environmental Pty Limited, October 2020)

1.2 Project Delivery Phases

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

The terminology for the project 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 .

Table 1 Project Delivery Phase Terminology

Project 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
Northwest Priority Area	Early Works Fill importation (to 60,000m^3) Construction (to the extent described in Table 1 of the DPE Approval Letter for	Works Period A: Pre-construction Works Period B: Site preparation Works Period E: Bulk earthworks (to the extent described in Table 1 of the DPE Approval Letter

Project Delivery Phase	CoC A18 Phase Equivalent	MPE Stage 2 RtS Works Period Equivalent
	Northwest Priority Works, dated 29 March 2018	for Northwest Priority Works, dated 29 March 2018)
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

1.2.1 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 virgin excavated natural material [VENM] and excavated natural material [ENM], up to 60,000 m^3), establishment of site access, temporary fencing and compound establishment, asbestos and hazardous material removal and the preparation of the demolition of buildings.

The Early Works throughout the MPE Stage 2 construction area includes but is not limited to:

- Geotechnical and utilities investigation 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 Project 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 22,000 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 Project 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 Environmental Management Plan (EWEMP) and required sub-plans.

Upon the commencement of construction, this CDWMP will supersede the Early Works Construction Demolition and Waste Management Plan (EWCDWMP).

1.2.2 Northwest Priority Area Works

The work area is located in the north-western most portion of the Moorebank Precinct East (MPE) site, and is entirely within Lot 1 of DP1048263, adjoining Moorebank Avenue and serviced by an existing access point already in use for the construction activities for the MPE Stage 1 (SSD-6766). The work area covers approximately 14 hectares, which equates to approximately 15% of the total MPE site.

Northwest Priority Area works will include the following work activities:

Site Establishment (including compounds)

- Removal of vegetation
- Demolition of superfluous pavement and structures
- Preparation of temporary materials laydown/stockpile area
- Installation of signage, lighting, waste skips and ERSED controls
- Installation of temporary fencing and line marking for fencing
- Installation of temporary amenity facilities and temporary communications
- Application of all-weather gravels
- Establishment of temporary parking area for workers' vehicles
- Decommission of work site including:
    - Disposal of waste
    - Removal of fencing, amenities, lighting and signage
    - Removal of superfluous ERSED controls
    - Removal of temporary materials laydown/stockpile area
    - Site stabilisation activities (where required).

Remediation

- Installation of monitoring equipment, as required
- Removal of hazardous/contaminated materials
- Covering of temporary stockpiles of hazardous material waste or contaminated waste materials identified for offsite treatment or disposal
- Disposal of waste materials off site (appropriately licensed facility).

Survey; Acquisitions; or Building / Road Dilapidation Surveys

Installation of Environmental Mitigation Measures / Controls

Clearing of Non-native Vegetation

- Undertaking pre-clearing surveys
- Establishment of stockpile area (including controls for segregation following characterisation)
- Removal of vegetation (including segregation of reusable vegetation from weed matter/green waste and disposal of waste materials)

- Recovery of topsoil
- Surface stabilisation.

Importation, Stockpiling and Placement of Fill

- Installation of haul roads (including weighbridge, rumble grids, wheel/undercarriage wash)
- Installation of diversion road for rejected materials
- Importation of spoil
- Surface preparation, rolling and compacting to 95% MDD to accept placement of fill (including excavation where necessary of no greater than 600mm below existing, except where considered to be minimal environmental impact as determined by the ER)
- Stockpiling of spoil
- Placement of spoil.

Utilities Disconnections, Adjustment and Relocation

- Excavation of existing utilities trench including:
    - Characterisation of trench backfill materials
    - Selective stockpiling of excavated materials based on characterisation
    - Disposal of waste materials
- Excavation of intended utilities trench including:
    - Characterisation of excavated trench materials
    - Selective stockpiling of excavated materials based on characterisation
    - Disposal of waste materials
- Removal and relocation of utilities.

Demolition of Buildings and Pavements

- Installation of temporary lighting within the building
- Installation of monitoring equipment, as required
- Removal of adjoining vegetation
- Clearing building interiors of any loose items and debris and store in waste stockpiles or dispose offsite
- Disconnection and removal of all services/utilities connections
- Removal of hazardous/contaminated materials
- Removal of roof and wall cladding
- Demolition of superstructure
- Demolition of substructure, foundations, ground slabs, pavements and roads
- Stockpiling of demolition materials and sorting and segregating material by C&D waste characterisation.

Other Activities Determined by the ER to have Minimal Environmental Impact

1.2.3 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 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 volume imported during Early Works phase) of clean general fill 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 (OSD) 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 Project 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 Project
- Decommissioning/demobilisation of the Project site, including removal of construction compound(s) and temporary construction environmental controls.

1.2.4 Construction Works Phase B (including Moorebank Avenue Upgrade Works)

Construction Works Phase B will include all works described in Early Works Phase and Construction Works Phase A, in addition to the Moorebank Avenue upgrade works. Generally the Moorebank Avenue upgrade works are describes 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 volume imported during Early Works and Construction Phase B) of clean general fill 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
- 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.

1.3 Purpose and Application

This CDWMP has been developed to address the Minister's CoCs, the Final Compilation of Mitigation Measures (FCMMs), and is based on MPE Stage 2 EIS (Section 20.1). This plan demonstrates how waste and resources will be managed during construction of the Project.

This plan provides methods to measure and reduce the impact to waste and resources by the contractor during construction, including all the Construction Contractor and consultant partners.

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

1.4 Staged Submission of this Plan

Subject to the approval of the Secretary (CoC A14), the Project 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 2.

In accordance with CoC A15, Table 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 2. When a document is updated, the most recent version of the document will supersede the previous version(s).

Table 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	Geotechnical and utilities investigations, 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
Northwest Priority Area			
Northwest Priority Area	Site establishment and installation of erosion and sediment controls, clearing of non-native vegetation, remediation, removal of existing pavements, utilities disconnection, adjustment and relocation, demolition of buildings including those containing asbestos, and the importation, stockpiling and placement of spoil.	EWCDWMP approved for use of Northwest Priority Area as described in DPE Approval Letter for Northwest Priority Works, dated 29 March 2018	Prior to commencement of construction
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)	No further staging expected

1.5 Objectives and Targets

The following high level objectives and targets are set for the Project for the management of waste and resources (refer to Table 3). These objectives and targets were developed by the Principal's Representative in consultation with technical specialists based on collective industry experience and best practice.

Table 3 Objectives and Targets

Objectives	Target	Timeframe	Accountability
Diversion of waste from landfill	• 100% of spoil by volume beneficially reused onsite or locally (not including contaminated material) • >90% of construction and demolition waste by volume recycled • >60% of office waste by volume recycled	During construction	Contractor's EM
Reducing the impact of materials use	• Minimum 15% reduction of material lifecycle impacts against the modelled baseline • More than 1 material used meets the ISCA ECO label requirements	During construction	Contractor's EM
Reducing water usage	• >10% reduction in water usage against a modelled business as usual scenario	During construction	Contractor's EM Contractor's EM

2 ENVIRONMENTAL MANAGEMENT

2.1 Legal and Other Requirements

Table 4 below details the legislation, planning instruments and guidelines considered during development of this sub-plan. Further details concerning the legislation, planning instruments and guidelines identified below are provided in the Legislation Register within the CEMP (Appendix B).

Table 4 Legislation, Planning Instruments and Guidelines

Legislation	Description	Relevance to this CDWMP
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 POEO Act establishes the regulatory framework which includes licensing requirements for certain activities. 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. s143 Notice and Waste Acceptance forms and waste classification records must be provided prior to the acceptance of material on the Project 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 Project site must be assessed and managed in accordance with this Act.
Protection of the Environment Operations (Waste) Regulation 2014	This Regulation outlines the management and disposal of the wastes on the site.	All wastes generated onsite will be classified in accordance with *NSW EPA Waste Classification Guidelines 2014.*
Waste Avoidance and Resource Recovery Act 2001	The objects of this Act are: • To encourage the most efficient use of resources and to reduce environmental harm in accordance with the principles of ecologically sustainable development • To ensure that resource management options are considered against a hierarchy • To provide for the continual reduction in waste generation • To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste • To ensure that industry shares with the community the responsibility for reducing and dealing with waste	Key sections of this Act that are relevant to the Project include, but are not limited to: • Part 3 Section 12: Relating to the development of waste strategies.

Legislation	Description	Relevance to this CDWMP
	• To ensure the efficient funding of waste and resource management planning, programs and service delivery • To achieve integrated waste and resource management planning, programs and service delivery on a State-wide basis • To assist in the achievement of the objectives of the POEO Act.	
National Greenhouse and Energy Reporting Act 2007 (Commonwealth)	The object of this Act is to provide a framework for the reporting and dissemination of information related to greenhouse gas emissions, greenhouse gas projects, energy consumption and energy production of corporations.	-
Biosecurity Act 2015	The objects of this Act are to provide a framework for the prevention, elimination and minimisation of biosecurity risks posed by biosecurity matters.	Noxious weeds to be controlled as specified under the control category.
Environmentally Hazardous Chemicals Act 1985	This Act is the primary legislation for specifically regulating environmentally hazardous chemicals throughout their life cycle.	Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of this Act.

Additional legislation, standards and guidelines relating to the management of construction demolition and waste include:

- National Waste Policy: Less Waste, More Resources
- Waste Avoidance and Resource Recovery Strategy 2014
- AS/NZS ISO 14001: Environmental Management
- NSW Waste Reduction and Purchasing Policy (WRAPP)
- Australian Packaging Covenant 2017
- NSW EPA Waste Classification Guidelines 2014
- Best Practice Waste Reduction Guidelines for the Construction and Demolition Industry (tools for practice), Natural Heritage Trust, 2000.

2.1.1 Compliance Matrices

The Project 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 CEMP and delivered during the Project. These requirements, how they are addressed, along with division of responsibilities is provided within Table 5 prepared in accordance with CoC C21.

Table 5 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	Section 3.8 Section 4	Section 3.8 of this CDWMP identifies the management measures to be implemented

CoC	Requirement	Document Reference	How Addressed
	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.		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 all Modification Assessments (if any); (e) in accordance with the amended Development Layout Plans, amended WSUD plans and amended architectural plans to be submitted for the Secretary's approval as part of this consent; and (f) in accordance with the management and mitigation measures at APPENDIX B of this consent.	Tables 5 to 8	Table 5 to 8 in this plan establish how the conditions have been addressed.
A15	If the submission of any strategy, plan or program is to be staged, then the relevant strategy, plan or program 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	Section 1.4	This CDWMP is relevant to construction only.
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	CEMP (Appendix B - Legislation Register and Appendix C – Project Permits and Licences Register)	All applicable licences, permits and approvals will be obtained as required. Approvals, permits and licences required for the Project are discussed in Appendix B and C of the CEMP. An Environmental Protection Licence (EPL) (No. 21054) was issued by the EPA on 4

CoC	Requirement	Document Reference	How Addressed
	comply with such licences, permits, approvals and consents.		June 2018 (variation issued on 18 April 2019). The licence applies to the Moorebank Precinct (excluding the MPE Stage 1 Rail Access Land Package (RALP) 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.
B117	All waste generated by the project must be assessed, classified and managed in accordance with the *Waste Classification Guidelines Part 1: Classifying Waste* (EPA 2014).	Section 3.1 Section 3.8	Section 3.1 outlines the six-step waste classification process which is to be implemented when undertaking an initial classification of waste. The classification will determine the reusability, recyclability or disposability of waste. This condition is addressed in the management measures in Section 3.8.
B118	Prior to the commencement of early works, the Applicant must prepare a **Construction and Demolition Waste Management Plan** for the development to the satisfaction of the Secretary. The plan must form part of the CEMP required by condition C1 and must detail the quantities of each waste type generated during construction and the proposed reuse, recycling and disposal locations.	This document in its entirety Section 3.2 Section 3.6	This plan will be prepared to the satisfaction of the Secretary. Table 11 in Section 3.2 details the waste types and quantities likely to be generated during construction including the likely sources. Table 14 in Section 3.6 details the management options for the expected waste streams, including reuse, recycling and disposal options.
B119	The Applicant must: (a) not commence construction until the Construction and Demolition Waste Management Plan is approved by the Secretary; and (b) carry out the development in accordance with the most recent version of the Construction and Demolition Waste Management Plan approved by the Secretary.	This document in its entirety Section 1.3	This plan will be submitted for the approval of the Secretary prior to the commencement of construction as identified in Section 1.3. Construction will be carried out in accordance with the most recent version of this CDWMP.
B122	All waste materials removed from the site must only be directed to a waste management facility or premises lawfully permitted to accept the materials.	Section 3.6 Section 3.8	Sections 3.6.2 and 3.6.4 detail that all materials requiring recycling or disposal will be transported to a development or facility that has the appropriate development approval and/or environmental protection licence.

CoC	Requirement	Document Reference	How Addressed
			This condition is addressed in the management measures in Section 3.8.
B123	The Applicant must assess and classify all liquid and non-liquid wastes to be taken off site in accordance with the latest version of EPA's *Waste Classification Guidelines Part 1: Classifying Waste* (EPA 2014).	Table 11 Section 3.1 Section 3.8	Table 11 presents an assessment of waste classifications for the waste streams. Section 3.1 outlines the six-step waste classification process which is to be implemented when undertaking an initial classification of all liquid and non-liquid wastes to be taken offsite. This condition is addressed in the management measures in Section 3.8.
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 3.1 Section 3.8	This applies to fill material which will only be accepted onsite when a waste characterisation report / certification is provided and if environmental assurance is conducted to confirm that the fill complies with the *NSW EPA Waste Classification Guidelines.* This condition is addressed in management measures in Section 3.8.
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 3.1 Section 3.6 Section 3.8	Classification of waste and waste management processes are detailed in Section 3.1 and 3.6. A Waste Management Register is also to be maintained on site to record waste type, volume and use/destination. This condition is addressed in management measures in Section 3.8. Further detail on sampling and waste classification can be found in the CSMP.
B142	Warehouses and the freight village must be designed and operated to meet ESD principles including: (a) passive solar design; (b) use of energy efficient plant and equipment; (c) use of renewable energy sources; (d) cross-ventilation (e) selection of materials with lower energy manufacturing requirements; (f) use of locally sourced materials to reduce impacts associate with transport; (g) rainwater capture and reuse; (h) water efficient fixtures and fittings; and (i) waste minimisation and recycling.	Section 3.6 Section 3.8	In relation to warehouse construction, the reference to waste minimisation and management in this condition is addressed by the waste hierarchy detailed in Section 3.6. This condition is addressed in the management measures in Section 3.8.
C1	Before the commencement of construction, a Construction	This document in its entirety	This plan has been prepared to satisfy this requirement.

CoC	Requirement	Document Reference	How Addressed
	Environmental Management Plan (CEMP) must be prepared to the satisfaction of the Secretary. The CEMP must: (f) include the management plans required under this approval, including: (ix) Construction and Demolition Waste Management Plan;		
C2	The Applicant must: (a) not commence construction until the CEMP is approved by the Secretary; and (b) carry out the construction of the development in accordance with the most recent version of the CEMP approved by the Secretary, unless otherwise agreed by the Secretary	Section 1.3	This plan will be submitted as a sub-plan to the CEMP for the approval of the Secretary prior to the commencement of construction as identified in Section 1.3. Construction will be carried out in accordance with the most recent version of this CDWMP.
C7	The Applicant must ensure that the environmental management plans required under this consent are prepared in accordance with any relevant guidelines, and include:		
	(a) detailed baseline data;	N / A	Detailed baseline environmental data is not directly relevant to this plan.
	(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, the development or any management measures;	Section 1.5 Section 2.1	Statutory requirements and objectives / targets are included in Sections 2.1 and 1.5 respectively. Table 3 in Section 1.5 details the objectives (performance measures / criteria) and the targets (performance indicators).
	(c) a description of the management measures to be implemented to comply with the relevant statutory requirements, limits or performance measures/criteria;	Section 3.8	Management measures are provided in Section 3.8..
	(d) a program to monitor and report on the:	Section 4 CEMP – Section 4	Monitoring, and reporting is considered in Section 4, while the broader process is included in Section 4 of the CEMP.

CoC	Requirement	Document Reference	How Addressed
	(i) impacts and environmental performance of the development; and (ii) effectiveness of any management measures (see (c) above);		
	(e) a contingency plan to manage any unpredicted impacts and their consequences;	Section 3.8 (WR53)	Management measures in Section 3.8 detail a plan to manage any unpredicted waste finds and their consequences.
	(f) a program to investigate and implement ways to improve the environmental performance of the development over time;	Section 4.3	Improvement measures are discussed under Section 4.3 through ongoing evaluation and effectiveness of the program.
	(g) a protocol for managing and reporting any: (i) incidents and non-compliances; (ii) complaints; (iii) non-compliances with statutory requirements; and	Section 3.8 (WR52 and WR54) Section 4.4 Section 4.5 Section 4.6	Management measures (WR52 to WR54) outline the details for managing incident response and complaint management. Incident response is outlined in Section 4.4. Further detail is outlined in the Section 2.8.1 of the CEMP. Protocols for managing non-compliances is outlined in Section 4.5. Further incident management processes are outlined within Section 2.8.1 of the CEMP. Protocols for managing and reporting complaints is outlined in Section 4.6 Further detail is found in Section 2.6.3 of the CEMP and Appendix B of the CCS
	(h) a protocol for periodic review of the plan.	Section 4.3 CEMP - Section 1.2.7	(h) A protocol for periodic review is outlined in Section 4.3. Further detail is provided within the Section 1.2.7 in the CEMP.
	Note: The Secretary may waive some of these requirements if they are unnecessary or unwarranted for a particular management plan.		

The FCMMs were prepared as part of the MPE Stage 2 Submissions Report (Arcadis 2017). A list of the FCMMs as relevant to the Project and how they have been complied with in this CEMP are provided in Table 6 and the Compliance Tracking Program, prepared in accordance with CoC C21.

Table 6 Final Compilation of Mitigation Measures (FCMMs)

FCMM	Requirement	Document Reference
5G	Separated oily wastes would be captured and stored so that they do not enter the stormwater system.	Management measures relevant to oily wastes are addressed in Section 3.8 of this document.

FCMM	Requirement	Document Reference
6A	Excavated material will be reused on site where possible. Any excavated material that requires disposal will be subject to waste classification under the *Waste Classification Guidelines 2014* (NSW EPA, 2014) and will be disposed of at an appropriate licensed facility.	Management measures relevant to waste classification, reuse and disposal are addressed in Section 3.8 of this document.
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. • 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.	Management measures relevant to stockpile management are addressed in Section 3.8. Refer to the CSMP for additional information on stockpile management.
6C	A Contamination Management Plan (CMP) (or equivalent) would be prepared and included within the CEMP for the Amended Proposal. The CMP would be prepared in consideration of the outcomes of the Environmental Management Plan (GHD, 2016) and Site Audit Statement and Site Audit Report (JBS&G, 2016) and would contain procedures on the following: • Assessment, classification and disposal of waste in accordance with relevant legislation	Section 3.1 outlines the classification of waste generated during construction and the six-step waste classification process. Management measures relevant to waste classification and disposal are addressed in Section 3.8.
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. • 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	Management measures relevant to waste classification and characterisation are addressed in Section 3.8.

FCMM	Requirement	Document Reference
	frequency of assurance testing will be as nominated by the Environmental assuror/auditor.	
7L	No hazardous or regulated waste would be disposed of on site.	This condition is addressed in the management measures in Section 3.8.
11F	Waste would be diverted from landfill, including diversion of spoil, construction and demolition waste, and commercial and industrial waste, where reasonable and feasible. The management of waste would be considered as part of the preparation of the CEMP for the Amended Proposal, detailing the appropriate procedures for waste management.	Section 3.8
12A	Measures to mitigate the effect of the construction waste streams would be incorporated into the Amended Proposal's CEMP, including the following information: • Avoidance and reuse of material will have priority over recycling • Recycling will have priority over disposal • Earth excavated from the site will be used for fill material and landscaping where feasible • If possible concrete components will be crushed and reused onsite, with the remainder sent to a recycling facility • Waste generation will be minimised by ordering the correct quantity of materials • Selection of materials which maximise recycled content, while having low embodied water and energy use • Selection of materials which maximise durability and lifespan. The following procedures and protocols will be considered within the CEMP regarding waste management: • Characterisation of construction waste streams • Management of any identified hazardous waste streams • Procedures to manage construction waste streams, including handling, storage, classification, quantification, identification and tracking • Mitigation measures for avoidance and minimisation of waste materials • Procedures and targets for reuse and recycling of waste materials. • Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for construction waste management.	Management measures for waste and resources are outlined in Section 3.8.

The MPE Concept Plan was originally approved on 14 September 2011. The most recent modification to the approval was granted on 31 January 2018 subject to the (modified) Concept Plan Conditions of Approval (CoA). MPE Concept Plan CoAs are detailed below in Table 7.

Table 7 Concept Plan Conditions of Approval (CoA)

Concept Approval	Requirement	Document Reference
Waste	Any future Development Application shall ensure that liquid and/or non-liquid waste generated on the site is assessed and classified and where removed from the site, is directed to a waste management facility lawfully permitted to accept the materials.	This condition is addressed in Section 3.8.

The Revised Statement of Commitments (RSoC) includes the most recent compilation of SIMTA commitments to mitigate the environmental impacts, monitor the environmental performance and/or achieve a positive environmentally sustainable outcome. These RSoC (June 2017) were presented in the Moorebank Precinct East – Concept Plan Modification 2 Response to Submissions. The RSoC that are relevant to this plan are identified in Table 8.

Table 8 Revised Statement of Conditions (RSoC)

RSoC	Requirement	Document Reference
Waste Management	The Proponent commits to undertaking waste management in the demolition, construction and operational phases of the development as listed below: <u>Demolition</u> • Re-use of material will have priority over recycling • Recycling will have priority over disposal • Selection of reputable waste removal contractors who will guarantee that recyclable material will be recycled and will provide any relevant certificates • Vegetation removed shall be either preserved for use in the new development, or mulched for inclusion in landscaping activities. The remainder will be sent to a composting facility • Excavated earth will be used for infill and landscaping where feasible, the remainder will be sent to a recycling facility • Asphalt will be re-used by transferring it to a batching plant or using it as a base layer for access roads • Concrete components will where possible be crushed and reused on site, the remainder will be sent to a recycling facility • Fuel and oil storage from demolition machinery will be secured and managed responsibly within compound sites during works, and removed upon completion of works • Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.	Section 3.8

RSoC	Requirement	Document Reference
	Construction • Reduce potential waste by ordering the correct quantities of materials • Coordinate and sequence trades people to minimise waste • Prefabricate materials where possible • Use modular construction and basic designs to reduce the need for off-cuts • Reuse formwork • Reuse or recycle materials from the demolition phase • Separate off-cuts to facilitate reuse, resale or efficient recycling • Minimise site disturbance and limit unnecessary excavation • Select landscaping which reduces green waste • Select waste removal contractors to guarantee that recyclable waste are recycled • Engage with the supply chain to supply products and materials that use minimal packaging • Set up schemes with suppliers to take back packaging materials • Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.	

Infrastructure Sustainability Council of Australia (ISCA) requirements will be carried out for Project and are referenced from the ISCA. The ISCA requirements which are relevant to this plan are detailed in Table 9.

Table 9 ISCA Requirements

Credit	Level	Requirement	Document Reference
WAS-1	Level 1	Predictions for waste quantities and types have been developed for construction	Section 3.2
		Measures to minimise waste during construction have been identified and implemented	Section 3.8
		Monitoring of all waste is undertaken during construction	Section 4.1
	Level 2	All the requirements for Level 1 have been met and the following: Waste monitoring and management has been managed, reviewed or audited by a suitably qualified professional Waste handling and disposal/recycling all the way to final destination has been audited at appropriate intervals	CEMP Section 4.3
WAS-2	Level 3	All of the following targets for landfill diversion have been achieved or bettered: • 100% by volume of spoil AND • >90% by volume of inert and non-hazardous waste • >60% by volume of office waste	Section 1.5
MAT-1	Level 1	Monitoring of materials lifecycle impacts is undertaken using the Materials Calculator across the infrastructure lifecycle	Section 4.1
	Level 1-3 (sliding)	Monitoring demonstrates a reduction in materials lifecycle impacts compared to a base case footprint	Section 4.1
MAT-2	Level 1	One material/product has an ISCA approved environmental label	Section 3.8
WAT-1	Level 1	Monitoring of water use is undertaken	Section 3.8
	Level 1-3 (sliding)	Monitoring demonstrates a reduction in water use compared to base case footprint	Section 4.1
WAT-2	Level 0-3 (sliding)	Monitoring demonstrates that some proportion of total water use is from non-potable sources	Section 3.8 Section 4.1

No Commonwealth Mitigation Measures or Commonwealth Conditions of Approval (CCoA) are applicable to this plan.

2.2 Roles and Responsibilities

Key roles and responsibilities associated with this CDWMP are presented in Table 10.

Table 10 Roles and Responsibilities

Role	Responsibility
Contractor's Project Manager (Contractor's PM)	• Include environmental considerations into all aspects of Project planning • Ensure that Project responsibilities and authorities are defined and communicated • Attend audit meetings and action results of any audit findings • Allocate Project resources to handle environmental issues • Oversee the implementation and maintenance of the CDWMP • Endorse the CDWMP • Appoint / nominate and 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 • Take action to resolve environmental non-conformances and incidents • Sign off on all environment and sustainability inspections • Enforce environmental requirements for suppliers and sub-contractors • Report environmental incidents to the Principal's Representative • Authorise expenditure to implement environmental management requirements within limits of authority as defined in the Principal's Representative Project requirements • Review audit corrective actions and take action as necessary to ensure timely close out of issues • Be contactable 24 hours a day • Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm.
Contractor's Environmental Manager (Contractor's EM)	• Assist and guide the respective workers to meet their environmental responsibilities • Check and monitor the implementation of this CDWMP • Report to the Contractor's CM on environmental issues • Monitor the rectification of incidents • Provide technical advice to personnel and management in the review of work methods • Oversee the conduct a site start-up meeting with the site personnel on site • Implement appropriate action to address any environmental incidents • Manage and investigate identified non-conformances to Conditions of Consent • Development, implementation, monitoring and updating of the CEMP and sub-plans • Ensure environmental risks of the Project are identified and appropriate mitigation measures implemented • Develop environmental site induction and maintain a register of attendance • Present and participate in toolbox meetings • Manage environmental document control, reporting, inductions and training • Oversee site monitoring, inspections and internal audits

Role	Responsibility
	• Manage all sub-contractors and consultants with regards to environmental matters, including assessing their environmental capabilities and overseeing the submission of their environmental documents • Respond to stakeholder enquires / complaints within required timeframes • Undergo induction and training in environmental awareness as directed by management • Act as a 24-hour contact (if other staff as outlined above are not available). • Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm • Liaise with construction team as required in order to implement the ISCA requirements • Cooperate and participate in audits and action results of any audit findings.
Site Supervisors	• Implement environmental controls on-site • Present and participate in toolbox talks and meetings • Train staff in their obligations under EWMS • Meet environmental reporting requirements of the Project • Undergo induction and training in environmental awareness as directed by management • Direct works to be performed in a more environmentally responsible manner that reduces impacts or stop works if there is a risk of environmental harm.
All Personnel	• Minimise the potential of pollution of land, air and water • Take all feasible and reasonable steps to ensure compliance and conformance with the requirements of this CDWMP • Comply with the relevant Acts, Regulations and Standards • Comply with the Project policies and procedures • Comply with the CEMP and sub-plans • Comply with lawful management directions • Promptly report to management on any non-conformances, environmental incidents and / or breaches of the system • Undergo induction and training in environmental awareness as directed by management • Report all incidents in accordance with reporting requirements outlined in this CDWMP • Fulfil the General Environmental Obligations • Undertake works in a manner that will enable the Project to implement ISCA requirements.
Principal's Representative	• Review the CEMP and sub-plans to ensure that it meets all relevant regulatory and Project requirements • Review the Construction Contractor's environmental monitoring reports as well as conformance and compliance documentation to confirm that the CEMP and sub-plans are being implemented

Role	Responsibility
	• Issue a stop work direction immediately where an unacceptable environmental impact may occur • Liaise with relevant regulators if an incident occurs • Ensure that independent and internal audits of the system are conducted • Review audit outcomes and act as necessary • Review environmental performance through the monthly reporting cycle • To manage all aspects of the contract between SIMTA and the Construction Contractor • Stop works if required.

2.3 Training

All personnel working on the Project shall undergo general environmental awareness training in accordance with Section 2.7 of the CEMP.

Records of Project environmental induction and other environmental training will be maintained in the Construction Contractor's site office.

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

- Waste and resource requirements
- Legislation requirements
- Roles and responsibilities
- Control measures
- Incident management and response.

Toolbox and prestart meetings will be used, as required, to highlight any specific issues that arise on-site and further educate employees and sub-contractors including, but not limited to:

- Waste management hierarchy
- Effective procurement strategies
- How to segregate waste and use recycling facilities appropriately
- Identifying different waste streams and what to do with waste
- Energy efficiency
- Learnings from other projects and incidents.

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

3 IMPLEMENTATION

3.1 Classification of Waste

Waste generated during construction will be classified to determine its ability to be reused, recycled and/or disposed. All waste classification data collected during construction will be retained for the life of the Project. An initial waste classification will be undertaken in accordance with *NSW EPA Waste Classification Guidelines 2014,* in particular, the six-step classification process. That process is described below:

Step 1: Is it 'special waste'?

Establish if the waste should be classified as special waste. Special wastes are clinical and related, asbestos and waste tyres or anything classified as special waste under an Environment Protection Authority (EPA) gazettal notice. Definitions are provided in the guidelines.

Note: Asbestos and clinical wastes must be managed in accordance with the requirements of Clauses 42 and 43 of the Protection of the Environment Operations (Waste) Regulation 2014.

Step 2: If not special, is it 'liquid waste'?

If it is established that the waste is not special waste it must be decided whether it is liquid waste. Liquid waste means any waste that has an angle of repose of less than 5° above horizontal, becomes free-flowing at or below 60° Celsius, or is not capable of being picked up by a spade or shovel when it is transported. Liquid wastes are sub-classified into:

- Sewer and stormwater effluent
- Trackable liquid waste to which waste tracking requirements apply
- Non-trackable liquid waste.

Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?

The EPA has pre-classified four commonly generated waste categories; hazardous wastes, restricted solid wastes, general solid waste (putrescible) and general solid waste (non-putrescible). If a waste is listed as 'pre-classified', no further assessment is required.

Step 4: If not pre-classified, is the waste hazardous?

If the waste is not special waste (other than asbestos waste), liquid waste or pre-classified, establish if it has certain hazardous characteristics and can therefore be classified as hazardous waste.

Hazardous waste includes items such as explosives, flammable solids, substances liable to spontaneous combustion, oxidizing agents, toxic substances and corrosive substances.

Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification.

If the waste does not possess hazardous characteristics, it needs to be chemically assessed to determine whether it is hazardous, restricted solid or general solid waste (putrescible and non- putrescible). If the waste is not chemically assessed, it must be treated as hazardous.

Waste is assessed by comparing Specific Contaminant Concentrations (SCC) of each chemical contaminant, and where required the leachable concentration using the Toxicity Characteristics Leaching Procedure (TCLP), against Contaminant Thresholds (CT).

Step 6: Is the general solid waste putrescible or non-putrescible?

If the waste is chemically assessed as general solid waste, a further assessment is available to determine whether the waste is putrescible or non-putrescible. The assessment determines whether the waste is capable of significant biological transformation. If this assessment is not undertaken, the waste must be managed as general solid waste (putrescible).

3.2 Type, Quantity and Source

The waste types and quantities (where possible) likely to be generated during construction, including the likely sources, are listed below in Table 11. The assessment of the six-step classification process is also provided in Table 11.

Six classes of waste have been identified as a result of a range of waste generating activities and various heavy machinery, plant and equipment that will operate in several locations across the Project. The waste classes include Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible)(GSW-P) and General Solid (non-putrescible)(GSW-NP).

Table 11 Activities and Corresponding Waste Streams

Project Activity	Waste Stream	Classification	Estimated Quantity	Comment
Major Waste Streams				
Clearing and grubbing[2]	Vegetation • Non-weed • Weed • Non-weed native vegetation.	GSW-NP (General Solid Waste - Non-putrescible)	1,913 tonnes	-
Topsoil stripping	Topsoil • Non-weed contaminated • Weed contaminated.	GSW-NP	246,700m^3 [3]	Portion of topsoil contaminated with noxious weeds may be able to be re-used on-site; however, this will not be able to be fully determined until commencement of construction
	Spoil including ENM and VENM	Test prior to classification		
	Contaminated soil	Test prior to classification		
	Aggregate and other sand	GSW-NP		
Pavement, road and hardstand establishment and construction activities	General construction wastes such as road base, reclaimed asphalt pavement/asphalt and bitumen	GSW-NP	20,000 m^3	Based on 100 mm pavement and slab depths
Building cleaning and decontamination	Washing water	Liquid	Negligible[4]	-
	Debris from painting areas, vents, bunded areas	GSW-NP and potentially hazardous	Negligible	-
	Vents, filters, ducts	GSW-NP (once cleaned)	800 vents	Approximately 50 air vents / filters in all 16 portal frame warehouses

[2] Sourced from MPE Project Stage 2 Greenhouse Gas and Climate Change Impact Assessment (Arcadis, 2016)
[3] Stripped topsoil – 60,450 m^3. Sourced from Drawing SSS2-ARC-CV-DWG-0111-03
[4] Insignificant quantities in comparison to major waste streams. Where appropriate, waste will be tracked during construction within the Waste Management Register

Project Activity	Waste Stream	Classification	Estimated Quantity	Comment
	Loose drums, bath tanks	GSW-NP (once cleaned)	15 tanks	Tanks located in Buildings 67
	Lead paint removed from timber columns	Hazardous	2,750 columns	Approximately 250 lead impacted columns per building (11 buildings in total)
Demolition of existing structures	Metal wall and roof sheeting, timber beams, concrete, frames, desks, benches and metal debris	GSW-NP	4,765 tonnes	-
Temporary sediment and erosion control during construction	Sediment fences	GSW-NP	2,315 m	Where feasible, temporary sediment and erosion controls may be reused, or re-processed off-site when no longer required.
	Hay bales	GSW-NP	50 bales	
	Mesh, gravel and geotextile inlet filters	GSW-NP	2,500 m	
	Sand bags	GSW-NP	2,000 m	
	Site fences	GSW-NP	2,500 m	
Other Waste Streams				
Concreting	Construction concrete	GSW-NP	Negligible	-
	Concrete washout	Liquid	Negligible	-
Removal of heating equipment and fire resistant building elements (e.g. fire doors)	Asbestos	Special	40	Buildings containing heating equipment and fire resistant building elements as per ADE Consulting Survey include Buildings 13, 33, 42, 67, 68, 69, 72, 80, 82, 84, 88, 92, 93 and Substation 1 & 2.

Project Activity	Waste Stream	Classification	Estimated Quantity	Comment
Surplus building materials from construction and internal fit-out of warehouses	Timber, plasterboard, concrete, bricks, tiles, structural steelwork and metal (rebar and offcuts)	GSW-NP	Indicative waste margins are as follows: • Timber 5-7% • Plasterboard 5-20% • Concrete 3-5% • Bricks 5-10% • Tiles 2-5%.	-
Equipment and materials supply	Packaging (pallets, plastic and cardboard)	GSW-NP	Paper and cardboard packaging typically represents 1.1% and plastic typically represents 1% by weight of the total construction and demolition waste stream.	-
Plant and equipment maintenance	Hazardous wastes including chemicals, lead acid batteries, hydrocarbon rags, drained oil filters, and waste spill kit material (no free liquids)	Hazardous	Negligible	-
	Tyres	Special	Negligible	-
	Liquid/hazardous wastes such as oily water, engine coolant, degreasers, detergents, solvents, waste oils, fuels and grease	Liquid / Hazardous	Negligible	-
	General waste such as spare parts (damaged air filters, hydraulic hose) and containers (not containing liquids)	GSW-NP	Negligible	-
Drainage and utilities adjustment, relocation, installation and removal	Plastic pipes and cables	GSW-NP	Negligible	-

Project Activity	Waste Stream	Classification	Estimated Quantity	Comment
Miscellaneous activities	Site surveying material such as spray cans	Hazardous (if compressed gas)	Negligible	-
	Sharps	Special	Negligible	-
	Paint cans (empty)	GSW-NP	Negligible	-
	Containers holding hazardous substances	Hazardous	Negligible	-
Construction compound usage	General office waste during demolition: food waste[5]	GSW-P	75 L/day	-
	General office waste during demolition: paper/cardboard, glass, plastic, aluminium and packaging (such as pallets, plastic and cardboard) [5]	GSW-NP	75 L/day	-
	Sewage and trade waste[6]		0.75 kL/day	-
	General office waste during construction: food waste[7]	GSW-P	300 L/day	-

[5] It has been assumed that the waste generation rate for the demountable offices and lunch rooms is equivalent to the waste generation rate for standard offices. To estimate waste generation, the City of Melbourne's Guidelines for Preparing a Waste Management Plan – 2015 has been utilised. According to this report, 10L of residual waste and 10L of recycling waste is generated per 100m^2 of office floor area. These generation rates were applied to the Building Code of Australia floor area/personnel design ratio of 10m^2/person floor area, 50 people and a 60 hour working week.

[6] Typical wastewater flow rate for portable toilet assumed to be 15L per person per day (Metcalf and Eddy (2003) Wastewater Engineering, Treatment and Reuse. Proposal consists of 50 construction personnel during demolition

[7] It has been assumed that the waste generation rate for the demountable offices and lunch rooms is equivalent to the waste generation rate for standard offices. To estimate waste generation, the City of Melbourne's Guidelines for Preparing a Waste Management Plan – 2015 has been utilised. According to this report, 10L of residual waste and 10L of recycling waste is generated per 100m^2 of office floor area (for standard daily operating hours). These generation rates were applied to the Building Code of Australia floor area/personnel design ratio of 10m^2/person floor area, 200 people and a 60 hour working week

Project Activity	Waste Stream	Classification	Estimated Quantity	Comment
	General office waste during construction: paper/cardboard, glass, plastic, aluminium and packaging (such as pallets, plastic and cardboard)[7]	GSW-NP	300 L/day	-
	Sewage and trade waste[8]	Liquid waste	3 kL/day	-
	Sanitary waste	GSW-P	Negligible	-
	Cleaning chemicals	Liquid / Hazardous	Negligible	-
	Printer cartridges	GSW-NP	Negligible	-
	Electrical waste and electronic equipment	Unknown	Negligible	-
	Fluorescent tubes	Hazardous	Negligible	-
	Fire extinguisher	TBC	10	-
	Furniture	GSW-NP	Negligible	-

[8] Typical wastewater flow rate for portable toilet assumed to be 15L per person per day (Metcalf and Eddy (2003) Wastewater Engineering, Treatment and Reuse. The Project consists of 200 construction personnel during peak construction

3.3 Aspects, Impacts and Risks

The impacts and potential risks resulting from waste generated during construction are summarised in Table 12 below.

Table 12 Impacts and Risks

Impacts	Potential Risks
• Generation of waste and litter • Incorrect waste disposal or on site storage • Over ordering of materials • Use of resources.	• Depletion of natural resources and deposition of large amounts of waste to landfill • Loss of visual amenity • Odour • Land/water contamination and pollution • Contamination of waste stream.
• Exposure of contaminated land and potential management of regulated waste • Mixing of waste streams • Use of unlicensed waste transport or disposal facility.	• Prosecution for use of unlicensed facility • Contamination of land or water ways • Greater costs associated with increased contamination.
• Disposal of weed contaminated material and vegetation.	• Spread of weeds to non-contaminated areas.
• Use of natural resources such as aggregates, fuels, water etc.	• Depletion of raw materials, energy sources and water resources • Generation of greenhouse gases.

Refer to the Aspects and Impacts Register in Appendix C of the CEMP for the complete list of identified environmental aspects and impacts associated with the Project.

3.4 Cumulative Impacts

The demolition of buildings containing asbestos on the MPE and MPW sites (Moorebank Logistic Park) has the potential to cause human health impacts if not handled, transported and disposed of in an appropriate manner. However, these works will be undertaken as per State and Federal guidelines and legislative requirements and will be undertaken over a short period of time. Additionally, works are scheduled to occur at different times across the precinct, which will further reduce the cumulative impacts. Accordingly, the potential cumulative impact is considered likely to be low.

The cumulative impact of waste generated by the Project is also considered to be low as mitigation measures, as detailed within this plan, will be implemented.

3.5 Waste Exemptions

As per Condition L3 of the Moorebank Precinct EPL, the project site is only allowed to receive waste that meets all the conditions of the resource recovery exemptions under Clause 91 and Clause 92 Protection of the Environment Operations (Waste) Regulation 2014.

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 the Project are defined below in

Table 13. 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 13 Applicable Resource Recovery Exemptions

Exemption	General Conditions	Application
Excavated Natural Material Exemption 2014	The chemical concentration or other attributes of the excavated natural material listed in the Excavated Natural Material 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 SIMTA 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. The consumer must apply the raw mulch within a reasonable period of time. Relevant records detailing fulfilment of Exemption requirements.	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.
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: ○ the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and	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.

Exemption	General Conditions	Application
	○ 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 ○ the works undertaken are either exempt or complying development. • 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.

3.6 Waste Management

The proposed waste management options for the likely waste streams to be generated have been identified in Table 14 below. All sampling and waste classification data will be retained for the life of development in accordance with the requirements of the EPA (refer to Table 15).

The NSW EPA waste management hierarchy has been adopted as the guiding framework for waste management of this Project, depicted in Figure 3-1.

This hierarchy underpins the objectives of the *Waste Avoidance and Resource Recovery Act 2001* and is a key element for guiding waste management practices in New South Wales. As a key objective of construction, avoidance of waste generation and reuse of materials will have priority over recycling, and recycling will have priority of disposal.

The application of the waste hierarchy is relevant to the construction activities as it may influence a reduction in waste volumes requiring disposal from the total waste volumes initially generated by respective activities.

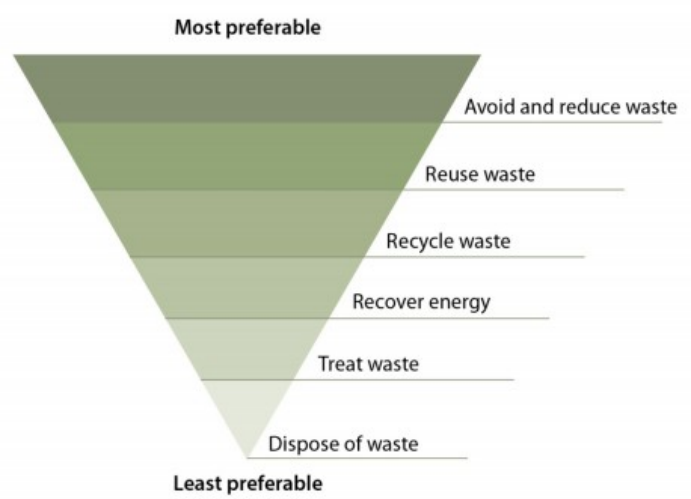

Figure 3-1 Waste Hierarchy

Table 14 Expected Waste Streams and Potential Management Options from General Site Activities

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
GSW-NP	Vegetation: Native vegetation	Minimise removal of native vegetation, where possible	**Mulch**: Stockpile and reuse in erosion and sediment control or landscaping	**Mulch**: Stockpile and reuse in erosion and sediment control or landscaping	-	Stockpile on elevated ground 50 m from waterways (including floodplains) and stands of native vegetation and have a diversion bund on the upstream side to direct water around stockpile	N/A
GSW-NP	Vegetation: Weed and non-native vegetation	Properly separate native vegetation, and weed and non-native vegetation	-	-	Remove to approved facility	Stockpile in-situ as above. Not to be mulched	Refer to Section 3.6.4
GSW-NP	Topsoil: Non-weed contaminated	Minimise removal of non-weed contaminated topsoil, where possible	Undertake topsoil testing to determine nutrient value (where required contractually). Retain suitable topsoil for reuse in rehabilitation	-	-	Designated stockpile area with stabilisation, erosion and sediment controls as per ESCP in place	N/A
GSW-NP	Topsoil: Weed contaminated	Properly separate non-weed contaminated topsoil with weed contaminated topsoil	Treat on site and retain suitable topsoil for reuse as fill material.	-	Remaining weedy topsoil to be removed from site	Stockpile in restricted access area. Application of stabilisation, erosion and sediment controls as per ESCP in place.	Refer to Section 3.6.4

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
Test prior to classification	Spoil (VENM / ENM)	-	Cut material to be used preferentially as fill on site where reasonable and feasible	To site with appropriate development approval and EPL to take the material (under s48 of the POEO Act) where required To other SIMTA projects, stockpile sites or concurrent local government projects subject to meeting the above conditions where relevant	-	Designated stockpile area with stabilisation, erosion and sediment controls as per ESCP in place	N/A
Test prior to classification	Contaminated soil	Minimise spills from site activities	Depending on type of contamination and volume, investigate potential for on site treatment and reuse options	Depending on type of contamination and volume, investigate potential for remediation options	Landfill	Hazardous waste bags and stored in a closed skip. Stockpile contaminated material within a bunded area with a sump separated from sediment basin and stormwater drainage.	Will be assessed at time of spill and will be based on nature of contaminants Refer to Section 3.6.4
GSW-NP	Aggregate and other sand	Order correct quantities incrementally to suit Project needs	Re-use surplus on site wherever possible	Send to recycling or resale facility where there is a surplus	-	Designated stockpile area. Segregation of material types to promote reuse	Refer to Section 3.6.2

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
GSW-NP	Road base, reclaimed asphalt/pavement/ and bitumen	Order correct quantities incrementally to suit Project needs	Reuse on temporary site roads and access points to stabilise surface; Reincorporate to support new asphalt pavements; Use for erosion control in channels/spillways.	Send to recycling facility where there is a surplus	-	Designated stockpile area. Segregation of material types to promote reuse.	Refer to Section 3.6.2
GSW-NP	General demolition waste such as metal wall and roof sheeting, timber beams, concrete, frames, desks, benches and metal debris	Minimise amount of general demolition waste accumulated	Reuse untreated timber onsite for fencing or mulch for landscaping Where possible concrete components will be crushed and re-used on site	Concrete crushed and recycled offsite, if not possible to be crushed and reused on site. Remanufacture metals offsite. Timber to a recycling facility or second hand timber supplier offsite.	Send treated timber to landfill	Segregated skip bins where practical	-
GSW-NP	Sediment fences, hay bales, mesh and gravel inlet filters, sand bags, geotextile inlet filters, pipes and site fences	Order correct quantities incrementally to suit Project needs	Reuse until end of useful life	Reuse until end of useful life Remanufacturing of metals offsite Untreated timber to a recycling facility	-	Skip bin	Refer to Section 3.6.2
GSW-NP	Construction concrete	Order correct quantities incrementally to suit Project needs	Crushed and reused on site wherever possible	Send to recycling or resale facility where there is a surplus for crushing	-	Skip bin / truck	Refer to Section 3.6.2

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
GSW-NP	Surplus materials from construction and internal fit-out such as timber, concrete, plasterboard, bricks, tiles, structural steel and metal	Fabricate offsite Order correct quantities incrementally to suit Project needs	Clean tiles and bricks and reuse for paving where possible Reuse untreated timber onsite for fencing or mulch for landscaping	Send back to supplier if possible. Concrete, bricks and tiles crushed and recycled offsite. Remanufacturing of plasterboard and metals offsite. Timber to a recycling facility or second hand timber supplier offsite.	Send treated timber to landfill	Skip bin	Refer to Section 3.6.2
Special	Asbestos contaminated heating equipment and fire resistant building elements	Avoid contaminating other site materials with asbestos	-	-	To be removed by an accredited contractor and disposed of at an EPA licensed facility	Lockable asbestos waste bin	Refer to Section 3.6.4
GSW-NP	Plastic pipes	Order correct quantities	-	Send to waste transfer facility to recycle	-	Skip bin	Refer to Section 3.6.2
GSW-NP	Cables	Order correct quantities	-	Recover scrap metal and send to licensed contractor for recycling		Skip bin	TBC (e.g. metal for mobility) Refer to Section 3.6.2
GSW-NP (no liquid)	Paint cans	Use all content and absorb any residual liquid Use non-hazardous paints	-	Send to recycling facility	-	Co-mingled recycle bin	Refer to Section 3.6.2
Hazardous	Containers holding hazardous substances	Wherever possible, order non-hazardous materials and use all content	-	-	Send to an appropriately licensed waste facility	Bunded storage areas	Refer to Section 3.6.4

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
Hazardous (if compressed gas)	Spray cans	Use all contents of cans	-	Puncture to remove gas and place in co-mingled recycle bin	-	Co-mingled recycle bin	Refer to Section 3.6.2
Special	Sharps	-	-	-	Send to an appropriately licensed waste facility	Sharps bin	Community centre sharps waste Refer to Section 3.6.4
GSW-NP	Packaging	Bulk order. Where possible	-	Pallets to be sent back to manufacturer Plastics and cardboard placed in co-mingled recycle bin	-	Co-mingled recycle bin	Refer to Section 3.6.2
GSW-NP	Furniture	-	Continue use during operations stage of the Project where possible	Remove excess furniture to new site or donate to local schools/charities. Broken furniture to be recycled where possible.	-	Existing buildings	Refer to Section 3.6.2
TBC	Fire extinguisher	Order correct quantities incrementally to suit Project needs	-	Refill offsite and reuse during construction and operations stage of the Project	-	-	Return to supplier for refill
Hazardous	Fluorescent tubes		-	Send to contractor	-	Flu-tube specific bin	Refer to Section 3.6.2
GSW-P	Food	-	-	-	-	General waste bin	Refer to Section 3.6.4
GSW-NP	Paper / cardboard	Double sided printing, education	-	Recycle	-	Co-mingled recycle bin	Refer to Section 3.6.2
GSW-NP	Glass, plastic, aluminium	-		Recycle	-	Co-mingled recycle bin	Refer to Section 3.6.2

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
GSW-NP	Print cartridges	Use all contents or use on other projects	-	Recycle	-	Print cartridge waste box	Refer to Section 3.6.2
Unknown	Waste electrical and electronic equipment	-	Continue use during operations stage of the Project where possible	Send excess to new projects / donate to schools or charities or recycle as E-WASTE	-	Site office	Refer to Section 3.6.2
GSW-P	Sanitary	-	-	-	Landfill	Toilet facilities	Refer to Section 3.6.4
Liquid/ Hazardous	Cleaning chemicals	Use all contents or use on other projects	Continue use during operations stage of the Project where possible	-	-	Site office	Refer to Section 3.6.2
Liquid	Sewage waste	-	-	-	Sewage waste is to be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH	Toilet facilities	Refer to Section 3.6.4
Liquid	Trade waste	-	-	-	Discharged to sewer through a trade waste agreement with Sydney Water	-	Discharged to sewer through a trade waste agreement with Sydney Water
Liquid	Concrete washout	Undertake washout at concrete plant	Allow to solidify and remaining water to be used as local dust suppression or allowed to evaporate	-	-	Concrete washout pits	NA
Liquid	Oily water	Cover storage areas	-	Use spill pads to clean oil and reuse water for dust suppression	-	Drip trays	NA

Waste Classification	Waste Stream	Waste Avoidance Opportunities	On Site Reuse/Recycling	Off Site Reuse/Recycling	Disposal	On-Site Storage	Waste Facility / Carriers
Liquid	Turbid water	Erosion control	-	Treat and use water for dust suppression	Discharge offsite when compliant with discharge limits as per the Construction Soil and Water Management Plan	Sediment basins/ trenches	NA
GSW-NP	Spare parts (damaged air filters, hydraulic hose)	-	-	-	Landfill	Skip bins	Refer to Section 3.6.4
Hazardous	Hydrocarbon rags, drained oil filters, waste spill kit material (no free liquids)	-	-	-	Landfill	Skip bins	Refer to Section 3.6.4
Special	Tyres	-	-	Send to contractor to chip for reuse or a TSA accredited recycler	-	Site compound	Refer to Section 3.6.2
Hazardous	Lead acid batteries	-	-	Investigate recycle options (e.g. ULAB Australia Battery Recycling Initiative)	-	-	Refer to Section 3.6.2
GSW-NP (no liquids)	Containers	Bulk order, where possible	-	Recycle	-	Co-mingled waste bin	Refer to Section 3.6.2
Liquid / Hazardous	Waste oils, fuels, grease	Use all contents of container	Dedicated on site storage to facilitate full use of products	-	Liquid waste disposal	-	Refer to Section 3.6.4
Hazardous	Chemicals	Use all contents of container	Dedicated on site storage to facilitate full use of products	-	Hazardous waste disposal	-	Refer to Section 3.6.4
Liquid / Hazardous	Degreasers, detergents, solvents and engine coolant	Ensure equipment arrives at Project site fully serviced	Dedicated on site storage to facilitate full use of products	-	Liquid waste disposal	-	Refer to Section 3.6.4

3.6.1 Waste Reduction

Materials shall be ordered in correct quantity as far as practicable, and where possible, in sizes to prevent wastage e.g. precise cut sizes, progressive orders to reflect the activity need and in bulk to reduce packaging waste (where storage facilities allow), and to reduce emissions from deliveries. Unused materials or waste will be returned to the original supplier where possible (e.g. timber pallets).

3.6.2 Reuse and Recycling

Waste separation and segregation will be promoted on the site to facilitate reuse and recycling as a priority of the waste management program as follows:

- Waste segregation onsite – Waste materials, including spoil, will be separated onsite into dedicated bins/areas for either reuse onsite or collection by a waste contractor and transport to offsite facilities.
- Waste separation offsite – Wastes to be deposited into one bin where space is not available for placement of multiple bins, and the waste is to be sorted offsite by a waste contractor.

Excavated material will be reused on site where feasible. Material generated on site will be reused within fill requirements as part of the Project where feasible. Suitable surplus material that is not able to be used on-site will be reused in the following order of priority:

- Transfer to other nearby SIMTA projects for immediate use
- Transfer to an approved SIMTA temporary stockpile site for future use during projects or routine maintenance
- Transfer to a SIMTA approved site for reuse on concurrent private/local government project (with appropriate approvals as required)
- Non SIMTA site for reuse / recycling. Concurrent local government activity preferentially.

In each case, any transfer of materials off site will be undertaken by a licensed transporter (where required) and taken to a development or facility that has the appropriate development approval and/or environment protection licence to receive the materials where required.

3.6.2.1 Recycling Facilities

The waste depots which will receive the recyclable waste are still subject to commercial negotiation. Subsequent versions of this plan would include any additional nominated recycling facilities. Updates of this type may be approved by the Environmental Representative in accordance with Section 1.2.7 of the CEMP.

Facilities that may receive waste generated include:

- Benedict Recycling Facility at Chipping Norton which can accept the following materials: construction and demolition, food and beverage packaging, furniture and fittings, garden and landscape, industrial and manufacturing, metals, paper and cardboard, and rubber.
- Enviro Recycling Facility at Revesby which can accept the following materials: construction and demolition, furniture and fittings, garden and landscape, industrial and manufacturing, metals, paper and cardboard and plastics.

3.6.3 Waste Handling and Storage

Materials delivered to the Project will be received and controlled by the Site Supervisor. Measures to reduce risk of damage (and resultant product/materials waste) will include keeping materials in original packaging, protection from rain damage or collision by plant or vehicles.

The materials storage area will be secured during out of hours to prevent unauthorised access where possible. All chemicals, fuels and oils, including Dangerous Goods will be stored and handled in accordance with CoC B112. Whenever possible, materials shall be ordered for delivery to achieve

minimum storage time, reducing risk of damage and resulting waste, and kept in the storage area before release to site for use.

Where waste is required to be handled and stored onsite prior to onsite reuse or offsite recycling/disposal, the following measures apply:

- Spoil, topsoil and mulch are to be stockpiled onsite in allocated areas, where appropriate, and mitigation measures for dust control and surface water management will be implemented as per the Construction Air Quality Management Plan (CAQMP) and the Construction Soil and Water Management Plan (CSWMP)
- Liquid wastes are to be stored in appropriate containers in bunded areas until transported offsite. Bunded areas will have the capacity to hold 110% of the liquid waste volume for bulk storage or 120% of the volume of the largest container for smaller packaged storage and will be sized to prevent the discharge outside of the bund of liquids from pinhole leaks in any stacked containers or containers greater in height than the bund wall. Bund floors and walls will be appropriately sealed or lined to prevent any seepage leaks
- Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the Environmentally Hazardous Chemicals Act 1985, any relevant Chemical Control Orders under that Act and the EPA waste disposal guidelines
- All other recyclable or non-recyclable wastes will be stored in appropriate bins or skips with regular replacement and disposal of the bins to approved and appropriately licensed facilities.

Site waste will be placed in skips in such a way to minimise ‘empty’ space. Where possible, skips and containers will be provided for segregating the following key waste streams:

- Skips:
  - Construction concrete
  - Plastic pipes and cables
  - Office and crib furniture waste
  - Plant and equipment spare parts
  - Hydrocarbon rags, drained oil filters and waste spill kit material
  - Hazardous contaminated soil.
- Containers and specific bins:
  - Miscellaneous wastes such as paint cans, spray cans and sharps
  - Packaging
  - Food
  - Paper/cardboard, glass, plastic and aluminium
  - Fluorescent tubes
  - Print cartridges.

3.6.4 Disposal

Waste (and spoil) disposal will be in accordance with the *Protection of the Environment Operations Act 1997* and the *Waste Avoidance and Resource Recovery Act 2001*. Wastes that are unable to be reused or recycled will be disposed of offsite to an EPA approved waste management facility following classification. Where the waste is designated as special or hazardous waste, the licence for the waste carrier will also be obtained.

The waste depots which will receive non-recyclable waste are still subject to commercial negotiation. Subsequent versions of this plan would include any additional nominated non-recyclable waste facilities.

Updates of this type may be approved by the Environmental Representative in accordance with Section 1.2.7 of the CEMP.

Facilities that may receive non-recyclable waste generated include:

- Kurnell Landfill at Kurnell which can accept the following materials: construction and demolition, excavation material and sand, furniture, metals, packaging (plastics), and paper and cardboard.
- Lucas Heights Landfill and Resource Recovery Park at Lucas Heights which can accept the following materials: asbestos, VENM, furniture, expanded plastics, fire extinguishers, garden organics, security waste and special waste, car tyres, food waste, metals, paper and cardboard, separated bricks and concrete, and e-waste

Details of waste types, exemptions applied, volumes and destinations will be recorded in the Waste Management Register (Appendix B).

3.6.4.1 Unlicensed Facilities – Section 143

For waste being transported to a facility, or any area that is not owned by SIMTA, a section 143 notice (Appendix A) must be submitted to the client under a hold point. Section 143 pertains to the unlawful transporting or depositing of waste, and identifies a defence to the unlawful act as receiving an approved notice.

The notice must be signed by the landholder or occupier who is receiving the waste:

- No waste will be transported until the hold point has been released;
- Waste will be accurately described on the notice, and waste delivery arrangements will be confirmed with the landholder prior to transporting materials;
- The waste receiver will also be provided with a copy of the EPA Waste Acceptance Information to ensure that they are aware of their legal obligations.

3.7 Resources

3.7.1 Materials

Where it is deemed that the material is technically suitable and/or cost effective, it will be used preferentially to virgin materials to meet the Projects recycled content objectives and targets. Examples of where this might be achieved for this Project may include, but not be limited to:

- Pulverised fly ash as a replacement product for cement within concrete
- Glass sand as a replacement for natural sand
- Use of recycled steel rather than virgin steel within re-bar and other steel products
- Use of sustainably sourced certified timber such as FSC or PEFC
- Recycled asphalt pavement
- Crushed concrete, brick, tiles
- Crusher dust
- Blast and steel furnace slag
- Bottom ash
- Crumbed rubber.

As a minimum, at least two materials will meet the ISCA ECO label requirements and monitoring of materials lifecycle will be undertaken.

3.7.2 Water

Construction activities that are likely to use potable water were investigated to determine potential reduction opportunities.

Potable water consumption will be minimised by:

- Avoiding unnecessary water use
- Use of water efficient equipment on site and in the offices
- Application of spray mist on hoses
- Use of polymers/covers to reduce dust rather than dust suppression using water
- Use of rainwater for office toilet supply
- Utilising water from sediment basins and sediment traps for dust suppression
- Use of binding agents in sub-grade stabilisation
- Reuse of washdown water.

The above opportunities have been evaluated and analysed based on their economic viability and their potential for implementation during construction as part of the Aspects and Impacts Register (Appendix C of the CEMP). Where opportunities were not considered to add value or be economically viable they were not progressed any further.

3.7.3 Energy

Construction activities that are likely to emit greenhouse gas emissions were investigated to determine potential reduction opportunities.

Below are potential measures that could be implemented during construction to reduce greenhouse gas emissions:

- Use of alternative fuels and power such as biodiesel and hybrid technology in plant and equipment
- Provision of emissions information in plant packs with subcontract requirement to emphasise the provision of plant and equipment with lowest emissions
- Use of well-maintained plant and equipment with a subcontract requirement to ensure that this is achieved
- Plant and equipment will not be left on idle when not in use
- Use of local suppliers and ordering of full loads where possible
- Include the requirement to conserve energy within the induction.

The above opportunities have been evaluated and analysed based on their economic viability and their potential for implementation during construction as part of the Aspects and Impacts Register (Appendix C of the CEMP). Where opportunities were not considered to add value or be economically viable they were not progressed any further.

3.8 Management Measures

This section describes the overall approach to managing and mitigating waste and resource risks during construction. The management measures in Table 15 are based on all the conditions detailed in the compliance matrices in Section 2.1.1, as well as the requirements and standards of SIMTA, the Construction Contractor and best practice.

Table 15 Management Measures

ID	Management Measure	Responsibility	Timeframe	Reference
General				
WR1	The NSW Governments Waste Management Hierarchy of "avoid-reduce- reuse- recycle-dispose" will be followed as the framework of waste management throughout the Project. Specifically, avoidance and re-use will have priority over recycling, which in turn will have priority over disposal.	Contractor's EM Contractor's PM	Demolition Construction	RSoC FCMM 12A CoC B142
WR2	All liquid and non-liquid waste will be assessed, classified, managed and disposed of in accordance with the *NSW EPA Waste Classification Guidelines.*	Contractor's EM Site Supervisor	Construction	CoC B117 and B123
WR3	Sewage waste will be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.	Contractor's EM Contractor's PM	Demolition Construction	RSoC FCMM 12B
WR4	All sampling and waste classification data will be retained for the life of the development in accordance with the requirements of the EPA. In addition, a waste register of waste collected for disposal and/or recycling will be maintained and include the license details for waste disposal facilities and carriers (where necessary).	Contractor's EM Contractor's PM	Demolition Construction	CoC B125 Best practice
WR5	Good housekeeping will be maintained with waste removed to designated areas.	Site Supervisor	Demolition Construction	Best practice
WR6	Waste management equipment must not be visible from Moorebank Avenue. Waste bins must be provided in a designated area that is easily and safely accessible for workers. Signage on bins, skips, or areas for collection and storage of all wastes.	Contractor's EM Site Supervisor	Construction	Best practice Liverpool Development Control Plan 2008
WR7	No waste generated outside the site will be received at the site for storage, treatment, processing, reprocessing, or disposal unless it satisfies the conditions in the CoCs. As such, fill material will be accepted on site when a material characterisation report/certification is provided showing that the material is VENM/ENM and if environmental assurance is conducted to confirm that the fill complies with the *NSW EPA Waste Classification Guidelines.*	Contractor's EM Site Supervisors	Demolition Construction	CoC B124 FCMM 6F
WR8	No hazardous or regulated waste would be disposed of on site.	Contractor's EM Site Supervisor	Construction	FCMM 7L

ID	Management Measure	Responsibility	Timeframe	Reference
WR9	Location and setup of waste receptacles will be determined taking into account: • Protection from weather • Accessibility for removal • Safety of personnel • Type of waste • Exclusion of vermin.	Site Supervisor	Construction	Best practice
WR10	Stockpiles will be managed as follows: • Located outside of the drip line of retained trees • Located a minimum of 50 m away from concentrated water flows and at least 20 m from class 1 and 2 waterways • ESC controls around mulch stockpiles will be designed to divert up-gradient water around the stockpile. Material characterisation reports/certifications showing that fill material is VENM / ENM will be required before it is accepted onsite for stockpiling. In addition, each truck will be visually checked and documented to confirm that only approved materials that are consistent with the waste classification reports are allowed to enter the Project site. Only fully tarped loads are to be accepted by the gatekeeper.	Site Supervisor	Construction	CSWMP CSMP FCMM 6F
WR11	Site disturbance will be minimised as much as possible and unnecessary excavation will be limited.	Site Supervisor	Construction	RSoC
WR12	No residential wastes are to be received at the Project site.	Site Supervisor	Construction	Best practice
Reduce				
WR13	Procurement of materials will be planned and managed to avoid the over- ordering of products and minimise excess packaging. Bulk ordering will be undertaken where possible.	Contractor's PM Site Supervisor	Construction	Best practice
WR14	Correct quantities of construction materials will be ordered to reduce potential over-ordering.	Procurement	Construction	RSoC FCMM12A
WR15	Modular construction and basic designs will be used to reduce the need for off-cuts.	Contractor's CM	Construction	RSoC
WR16	Landscaping which reduces green waste will be selected.	Procurement Contractor's EM	Construction	RSoC

ID	Management Measure	Responsibility	Timeframe	Reference
WR17	Trades staff will be coordinated and sequenced to minimise waste.	Site Supervisor	Construction	RSoC
Reuse / Recycle				
WR18	Cleared vegetation will be reused or recycled where possible such as: • Mulching of vegetation for use in landscaping or ESC control • Spreading of vegetation for fauna habitat in suitable areas where agreements are made for this (e.g. mulch, small timber, hollow logs) • Donation of other timber to community or environmental groups. Remainder will be sent to a composting facility where possible.	Site Supervisor Contractor's EM	Construction	RSoC
WR19	Topsoil (weed free) will be stockpiled in accordance with SIMTA criteria in allocated areas and reused for landscaping.	Site Supervisor Contractor's EM	Construction	CEMP CSWMP
WR20	Fill and topsoil will be reused on site wherever possible. Unsuitable fill material and excess cut material that cannot be used on site will be reused or disposed of in the following order of priority (subject to meeting the relevant criteria for off site use or disposal): • Transfer to nearby SIMTA projects for immediate use • Transfer to an approved SIMTA stockpile site for reuse on a future project only if a specific project has been identified prior to stockpiling • Transfer to a SIMTA approved site for reuse on concurrent private / local government project only if a specific project is identified prior to stockpiling and all appropriate approvals are obtained. Disposal at a licensed material recycling or waste disposal facility following classification in accordance to the *NSW EPA Waste Classification Guidelines.*	Site Supervisor Contractor's EM	Construction	Best practice
WR21	Excavated spoil will be used for site fill and landscaping where feasible, and the remainder will be sent to a recycling facility. Any excavated material that requires disposal will be subject to waste classification under the *NSW EPA Waste Classification Guidelines 2014*.	Site Supervisor	Construction	RSoC FCMM 12A FCMM 6A
WR22	Segregation of waste in bins / skips: • General waste • Hazardous • Metal • Office waste comingled recyclables.	Site Supervisor	Construction	Best practice

ID	Management Measure	Responsibility	Timeframe	Reference
WR23	Wherever possible, concrete components will be crushed and reused on site. If this is not possible, it will be sent for crushing at a recycling facility.	Site Supervisor	Demolition Construction	RSoC FCMM12A
WR24	Asphalt will be reused by transferring it to the batching plant or using it as a base layer for access roads where possible.	Site Supervisor	Demolition Construction	RSoC
WR25	Reputable waste removal contractors who guarantee that recyclable demolition and construction material will be recycled and will provide any relevant certificates will be selected.	Site Supervisor Contractor's EM	Demolition Construction	RSoC
WR26	All wastes removed from the site for reuse and recycling will only be directed to a waste management facility or premises lawfully permitted to accept the materials, following classification.	Site Supervisor Contractor's EM	Construction	CoC B122
WR27	Formwork will be reused where possible.	Site Supervisor	Construction	RSoC
WR28	Materials from the demolition phase will be reused and/or recycled where possible.	Site Supervisor	Construction	RSoC
WR29	Off-cuts will be separated to facilitate reuse, resale or efficient recycling where possible.	Site Supervisor	Construction	RSoC
Disposal				
WR30	Contaminated waste will be segregated from other wastes, assessed, classified, and disposed of appropriately in accordance with relevant legislation.	Site Supervisor Contractor's EM	Construction	Best practice FCMM 6C
WR31	Waste will be managed and disposed of in accordance with the POEO Act and the WRAPP.	Site Supervisor Contractor's EM	Construction	Best practice
WR32	All wastes removed from the site that are unable to be reused or recycled will only be disposed of offsite at a licensed waste management facility or premises lawfully permitted to accept the materials, following classification.	Site Supervisor Contractor's EM	Construction	CoC B122
WR33	The disposal of chemical, fuel and lubricant containers, solid and liquid wastes must be in accordance with the requirements of the local council or EPA.	Site Supervisor Contractor's EM	Construction	Best practice
WR34	The burning of waste is strictly prohibited on the Project site.	Site Supervisor Contractor's EM	Construction	Best practice
WR35	No wastes are to be disposed of on site, with the exception of the beneficial reuse of spoil and crushed concrete etc. for the works.	Site Supervisor Contractor's EM	Construction	Best practice Commonwealth CoA

ID	Management Measure	Responsibility	Timeframe	Reference
Materials				
WR36	Recycled material and materials with a recycled content will be considered for use in where that material is cost and performance effective.	Contractor's EM	Construction	Best practice CoC B142
WR37	Imported fill materials will be from an appropriately licensed facility, or other nearby projects with excess suitable clean fill material (subject to meeting the required criteria).	Contractor's EM	Construction	Best practice
WR38	Where possible unused material and chemical containers will be returned to the supplier to reuse.	Contractor's EM	Construction	Best practice
WR39	Materials will be selected wherever possible, which maximise durability and lifespan.	Contractor's PM Site Supervisor	Construction	Best practice CoC B142 FCMM 12A
WR40	Materials will be prefabricated where possible, modular designs will be considered where appropriate.	Procurement	Construction	RSoC
WR41	Suppliers who use minimal packaging for their products and materials will be prioritised, and schemes will be set up with suppliers to take back packaging materials for the duration of the construction phases.	Procurement	Construction	RSoC
WR42	At least 2 materials used will meet ISCA ECO Label requirements.	Procurement Contractor's EM	Construction	ISCA
WR43	Materials lifecycle will be monitored.	Site Supervisor	Construction	ISCA
Liquids				
WR44	The collection and reuse of captured water for dust suppression, wash down and use in amenities or revegetation will be carried out where possible.	Contractor's EM	Construction	FCMM Best practice
WR45	Dedicated concrete washout facilities will be used so that runoff from the washing of concrete machinery and equipment can be collected and disposed of appropriately.	Contractor's EM	Construction	CSWMP
WR46	Oils, oily wastes, and other hazardous liquids will be captured, labelled and stored in a sealed container within a bunded area so that these do not enter the stormwater system. Material collected from within bunded areas will be disposed of offsite at a licensed facility.	Contractor's EM	Construction	Good practice FCMM 5G

ID	Management Measure	Responsibility	Timeframe	Reference
WR47	Fuel and oil storage from machinery will be secured and managed within compound sites during works, and removed upon completion of works.	Contractor's EM Site Supervisor	Construction	RSoC
Water Conservation				
WR48	Use of non-potable water from sediment basins, wheel wash etc will be favoured over potable water supply.	Contractor's EM Site Supervisor	Prior to and during construction	Best practice
WR49	Use of polymers rather than water for dust suppression activities.	Contractor's EM Site Supervisor	Construction	Best practice
WR50	Procurement of water efficient appliances and use of spray mist rather than hoses for demolition dust suppression.	Procurement Contractor's EM Site Supervisor	Prior to and during construction	Best practice
WR51	Selection of materials which maximise recycled content while having low embodied water and energy usage will be prioritised.	Procurement Contractor's EM	Construction	FCMM 12A
Waste Incident Response				
WR52	In the event of a site safety / environmental incident relating to waste, the following procedures will be implemented: • Stop personnel involved in the incident immediately (or as appropriate) • Isolate the work area if practical • Notify appropriate Project personnel (e.g. Contractor's CM, Contractor's PM) • Assess situation and implement remedial measures as required • Works to re-commence when impact is managed. If necessary, update any processes / procedures / management measures associated with this Plan to consider unpredicted impacts.	Contractor's EM Contractor's PM	Construction	CoC C7

ID	Management Measure	Responsibility	Timeframe	Reference
WR53	In the event that any unpredicted waste (i.e. contaminated waste) related impacts and their consequences are identified, the following unpredicted impacts procedure will be implemented: • Stop work / personnel involved immediately (or as appropriate) • Isolate the work area / vehicle if practical • Notify appropriate Project personnel (e.g. Contractor's CM, Contractor's PM) • Assess situation and implement remedial measures as required • Works to re-commence when impact is managed. If necessary, update any processes / procedures / management measures associated with this Plan to consider unpredicted impacts.	Contractor's EM Contractor's PM	Construction	CoC C7
Complaints				
WR54	Complaints received will be managed in accordance with the Appendix B – Complaints Handling in the Community Communication Strategy and Section 2.6.3 in the CEMP	Contractor's CLM	Construction	Best practice CoC C7

4 MONITORING AND REVIEW

4.1 Environmental Monitoring

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

- Adherence to the CDWMP
- Adoption of the waste management hierarchy onsite as common practice
- Correct classification, segregation and subsequent management of waste
- Energy efficiency
- Material usage
- Water consumption.

An Environmental Inspection Checklist will be used to review conformance 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.

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

Table 16 below outlines waste and resource monitoring requirements.

Table 16 Waste and Resource Monitoring Requirements

No.	Monitoring Required	Responsibility	Timing
1	The Construction Contractor must monitor all waste and report on all waste generated via the Project reporting system monthly. The information required will include: • Date, quantity and type of each waste movement (e.g. spoil, inert and non-hazardous waste and office waste groups) • Classification of the waste transported and disposal operator that removed the waste • Intended destination of the waste including treatment/disposal/recycling facility destination • Quantity recycled, reused on site, landfilled etc • Licence details of the disposal facility and carrier where necessary • s143 approved notice where relevant.	Contractor's EM	Monthly
2	Waste generation and storage areas, including any Dangerous Goods storage areas, will be inspected daily and during weekly environment inspections to ensure proper housekeeping, Australian Dangerous Goods Code and Work Health and Safety compliant storage and that any materials, which may cause land and / or water contamination (e.g. tannins) or create odour problems, are controlled or removed from the Project site.	Site Supervisor Contractor's EM	Daily and Weekly

No.	Monitoring Required	Responsibility	Timing
3	Water consumption will be monitored and reported monthly: • Total Water Consumed (kL) • Total Potable Water (kL) • Total Non-Potable Water (kL) • Total Water Captured and Reused (kL) • Total Water Saved (kL).	Contractor's EM	Monthly
4	Materials usage will be monitored monthly. The Construction Contractor must provide detail volumes/tonnes of material being used on the Project: • Concrete (m^3) - MPa, % Supplementary Cementing Materials • Steel (t) – reo-bar, mesh, slab, wire, rail, pipe & tube • Aggregates (t) - manufactured sand, crushed rock, gravel, fill • Asphalt (m3) • Glass (t) • Timber (t) • Aluminium (t) • Plastics (t) • Coatings and finishes (L) • Composites (t).	Contractor's EM	Monthly

4.2 Environmental Auditing and Reporting

Auditing will be undertaken in accordance with the CEMP. Monthly reporting of the above aspects (refer to Table 16) will be undertaken via the Project reporting system.

To satisfy ISCA requirements, waste monitoring and management must be audited by a suitably qualified professional (5+ years' experience in waste management). This will be undertaken annually during construction and operation and will include an audit of the following:

- Systems used to manage waste
- Data recording and monitoring waste
- Final destination of waste (to be undertaken every 6 months)
- Physical and visual verification of waste destinations.

4.3 Review and Improvement

Review and improvement of this plan will be undertaken in accordance with the CoCs and Section 4.5 (Management Review) and Section 1.2.7 (Revision) of the CEMP. Continuous improvement will be achieved by the ongoing evaluation of environmental management performance and effectiveness of this plan against environmental policies, objectives, and targets. This will be completed by the Principal's Representative on the waste records provided by the Construction Contractor on a monthly basis. A copy of the updated plan and changes will be distributed to all relevant stakeholders in accordance with the

approved document control procedure. Construction will be carried out in accordance with the most recent version of this CDWMP.

4.4 Notification

Environmental emergencies and incidents will be handled by the Construction Contractor in accordance with the SIMTAs Environmental Management System (SHEMS) and Section 2.8 of the CEMP.

4.5 Non-compliances, Non-conformance and Actions

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

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

4.6 Complaints Handling

Complaints handling will be undertaken in accordance with Section 2.6.3 of the CEMP and Appendix B of the Construction Community Communication Strategy (CCCS).

APPENDIX A

Section 143 Notice and Waste Acceptance Form

ORIGINAL: TO BE COMPLETED BY LANDOWNER AND GIVEN TO WASTE TRANSPORTER OR DISPLAYED AT WASTE FACILITY

APPROVED NOTICE UNDER SECTION 143

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

WARNING: If you sign this notice it could be used as a defence by a transporter if they deposit waste on your land. It does not give you a defence. It is an offence to provide false or misleading information about waste (section 144AA)

I (*full name*)
……

am the owner and/or occupier (*delete if not applicable*) of (*insert street address and/or folio identification number of place*):

……
……

certify that this place can lawfully be used as a waste facility for the **waste(s) specified** in the following table.

(Note: you must clearly state the exact type. Do not use terms like 'fill' or 'clean fill'.)

Table of specified wastes

Type of waste e.g. virgin excavated natural material	**Classification of waste** e.g. general solid waste	**Amount of waste** e.g. 50 tonnes
……	……	……
……	……	……
……	……	……
……	……	……

Before signing this notice you should read the back of this form for important information about offences.

Signature	……	Signature	……
Name	……	Name	……
Position title (e.g. director, owner, occupier)	……	Position title (e.g. director, owner, occupier)	……
ACN	……	ACN	……
Date	……	Date	……

Note that only one signature is required if the person signing this notice is **not** signing on behalf of a company.

Lawful authority to use place as waste facility for the specified waste

The place can lawfully be used for the types of waste described in the notice **because** (Delete whichever is not applicable):

A. This use is permitted by EPA licence number: ……

Or

An EPA licence is not required (for example, a resource recovery exemption may apply)

And because (Delete whichever is not applicable):

B. The place has consent or approval under the *Environmental Planning and Assessment Act 1979* for the uses described in the table above.

Or

The place can be used as a waste facility without consent or approval under the *Environmental Planning and Assessment Act 1979*.

The use(s) for the waste at the place are: ……..

Land owners and occupiers should note that it is an offence to use land as a waste facility without lawful authority, see section 144 of the *Protection of the Environment Operations Act 1997* (POEO Act). It is also an offence to carry out an activity listed in Schedule 1 to the POEO Act without and Environment Protection Licence when one is required (see section 48). Offences carry a maximum penalty of $250,000 for an individual and $1,000,000 for a corporation. In the case of a continuing offence, a further penalty applies for each day the offence continues, being $60,000 for an individual and $120,000 for a corporation.

Regardless of this notice, any person who carries out any development or activity on land involving waste must ensure they comply with any planning requirements including obtaining any planning consent or approval and complying with any conditions attached to that consent or approval

Information about this notice

Waste is a very broad concept under the law and covers many types of materials you may not think of as waste; for example, it covers waste tyres, building and demolition materials and virgin excavated natural material.

Under the POEO Act, a waste facility includes any premises used for storage, treatment,

processing, sorting or disposal of waste. For example, if you are planning to build a road or dam, or fill a gully, this could involve using your place as a waste facility.

Section 143 of the POEO Act makes it an offence to transport waste to a place that cannot lawfully be used as a waste facility for that waste. The notice above is the approved notice under section 143 (3A) of the POEO Act. If you sign this notice it may be used as a defence by a transporter if they are charged with unlawfully transporting or depositing waste on your land. It does not give you a defence to using your land as a waste facility without lawful authority.

If you sign this notice, you should give it to the transporter or display it at the waste facility. The transporter should keep the original and you should keep a copy.

If the landowner or occupier signing this notice is a company, the full name of the company and ACN should be used and the notice must be executed in accordance with the Corporations Law.

If you operate an unlicensed landfill site for business or commercial purposes you should contact the EPA to discuss reporting and operating requirements.

If you are not sure if you require an EPA licence you can ring the Environment Line on 131 555. You are likely to need development consent to use your land as a waste facility. If you are not sure if you require development consent you should contact your local council.

COPY: TO BE KEPT BY LANDOWNER AND KEPT FOR RECORDS

APPROVED NOTICE UNDER SECTION 143

PROTECTION OF THE ENVIRONMENT OPERATIONS ACT 1997

WARNING: If you sign this notice it could be used as a defence by a transporter if they deposit waste on your land. It does not give you a defence. It is an offence to provide false or misleading information about waste (section 144AA)

I (*full name*)

……

am the owner and/or occupier (*delete if not applicable*) of (*insert street address and/or folio identification number of place*):

……

……

certify that this place can lawfully be used as a waste facility for the **waste(s) specified** in the following table. (Note: you must clearly state the exact type. Do not use terms like 'fill' or 'clean fill'.)

Table of specified wastes

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……	……	……
……	……	……
……	……	……
……	……	……

Before signing this notice you should read the back of this form for important information about offences.

Signature	.....	Signature	.....
Name	.....	Name	.....
Position title (e.g. director, owner, occupier)	.....	Position title (e.g. director, owner, occupier)	.....
ACN	.....	ACN	.....
Date	.....	Date	.....

Note that only one signature is required if the person signing this notice is **not** signing on behalf of a company.

APPENDIX B

Example Waste Management Register

Date	Time	Waste Classification*	Waste Description	Quantity (tonnes and/or m^3)	Waste Use (reuse, recycled, stockpiled or disposed)	Transporter	Receiving Facility	Invoice Number and/or Receiving Facility Reference

* In accordance with the *NSW Waste Classification Guidelines (2014)*