

# CONSTRUCTION WASTE AND RESOURCES MANAGEMENT PLAN

Moorebank Precinct East Stage 1, Package 2

22 OCTOBER 2019

# SYDNEY INTERMODAL TERMINAL ALLIANCE

## CONSTRUCTION WASTE AND RESOURCES MANAGEMENT PLAN

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## REVISIONS

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| 001      | 28/3/17    | For submission to DP&E  | █           | █           |
| 002      | 02/5/17    | Addressing DP&E comments  | █           | █           |
| 003      | 26/10/17   | Construction boundary revision  | █           | █           |
| 004      | 2/10/2018  | Revisions associated with the internal environmental and sustainability audit & RfMA 003 – 005 & 008        | █           | █           |
| 005      | 11/01/19   | Minor updates associated with 'non-conformance,' 'non-compliance' and 'corrective and preventative actions' | █           | █           |
| 006      | 8/07/19    | Revisions associated with RfMA 011  | █<br>█      | █           |
| 007      | 22/10/2019 | Minor revisions associated with RfMA 016 – Moorebank Precinct EPL updates                                   | █           | █           |

## ACRONYMS AND DEFINITIONS

| Terms         | Definition   |
|---------------|--|
| Blue Book     | Managing Urban Stormwater: Soils and Construction, published by Landcom in 2004  |
| CBD           | Sydney Central Business District   |
| CEMP          | Construction Environmental Management Plan   |
| CWRMP         | Construction Waste and Resources Management Plan   |
| CoC           | Conditions of Consent  |
| Contractor    | Principal Contractor   |
| DNSDC         | Defence National Storage and Distribution Centre   |
| DoE           | Commonwealth Department of the Environment   |
| DP&E          | Department of Planning and Environment   |
| DPI           | NSW Department of Primary Industries   |
| EIS           | Environmental Impact Statement   |
| ENM           | Excavated Natural Material   |
| EPA           | NSW Environment Protection Authority   |
| EPL           | Environment Protection Licence   |
| FCMM          | Final Compilation of Mitigation Measures   |
| FSC           | Forest Stewardship Council   |
| GSW-P         | General Solid Waste - Putrescible  |
| GSW-NP        | General Solid Waste – Non-Putrescible  |
| IMEX          | <p>Import Export Terminal. Includes the following key components:</p> <ul style="list-style-type: none"> <li>• Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue</li> <li>• 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</li> <li>• Administration facility and associated car parking- light vehicle access from Moorebank Avenue.</li> </ul> |
| IMT facility  | <p>MPE Stage 1 Package 2 including the construction of the following key components together comprising the intermodal terminal (IMT):</p> <ul style="list-style-type: none"> <li>• Truck processing and loading areas.</li> <li>• Rail loading and container storage areas.</li> <li>• Administration facility and associated car parking</li> <li>• Rail Link.</li> </ul>  |
| km            | kilometres   |
| Minister, the | NSW Minister for Planning  |
| MPE           | Moorebank Precinct East as approved by the Concept Plan (MP_10_0913)   |
| MPE Site      | The site at Moorebank as approved by the Concept Plan (MP_10_0913)   |

| Terms                    | Definition  |
|--------------------------|---|
| MPE Stage 1, Package 1   | The construction of the Rail Link connecting the Southern Sydney Freight Line to the IMEX, traversing across the Boot land, RailCorp Land, Moorebank Avenue, the MPW Golf Course, Georges River, and Glenfield Waste Facility   |
| MPE Stage 1, Package 2   | Construction of the IMEX Terminal (Figure 1) including the following key components: <ol style="list-style-type: none"> <li>1. Truck processing, holding and loading areas - entrance and exit from Moorebank Avenue</li> <li>2. 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</li> <li>3. Administration facility and associated car parking- light vehicle access from Moorebank Avenue</li> </ol> |
| MPE Stage 1 Project      | The whole of the land to which the MPE Stage 1 Project approval SSD 6766 relates including both MPE Stage 1 Package 1, and MPE Stage 1 Package 2.   |
| MPE Stage 2 Project Site | The whole of the land to which the MPE Stage 2 Project approval SSD 7628 relates  |
| Non-compliance           | An occurrence, set of circumstances, or development that results in a non-compliance or is non-compliant with Development Consent SSD 6766 Conditions of Consent or EPBC Act Approval (EPBC 2011/6229) Conditions of Approval but is not an incident  |
| Non-conformance          | Non-conformances are observations or actions that are not in strict accordance with the CEMP and the aspect specific sub-plan.  |
| NW Act                   | NSW Noxious Weeds Act 1993  |
| OEHL                     | Office of Environment and Heritage  |
| PAC                      | Planning Assessment Commission  |
| PEFC                     | Programme for the Endorsement of Forest Certification   |
| POEO Act                 | <i>Protection of the Environment Operations Act 1997</i>  |
| The Project (site)       | The Project is the MPE Stage 1 Package 2 Project i.e. the IMEX Terminal construction site as depicted in figure 1. This is also the area of impact on any flora and fauna species.  |
| RSoC                     | Revised Statement of Commitments  |
| SIMTA                    | Sydney Intermodal Terminal Alliance   |
| SSD                      | State Significant Development   |
| SSFL                     | Southern Sydney Freight Line  |
| the Project              | Stage 1, Package 2 of the Moorebank Intermodal Terminal Development   |
| VENM                     | Virgin Excavated Natural Material   |

## COMPLIANCE MATRICES

Table 1 Final Conditions of Consent (CoC)

| CoC             | Requirement  | Document Reference |
|-----------------|--|--------------------|
| E16             | The reuse and/or recycling of waste materials generated on site shall be maximised as far as practicable, to minimise the need for treatment or disposal of those materials off site.  | Section 5          |
| E17             | All liquid and/or non-liquid waste generated on the site shall be assessed and classified in accordance with Waste Classification Guidelines (Department of Environment, Climate Change and Water 2009).   | Section 5          |
| E18             | All waste materials removed from the subject site shall only be directed to a waste management facility or premises lawfully permitted to accept the materials.  | Section 5          |
| E33<br>(e)(iii) | Measures to monitor and manage waste generated during construction including but not necessarily limited to: general procedures for waste classification, handling, reuse, and disposal; use of secondary waste material in construction wherever feasible and reasonable; procedures or dealing with green waste including timber and mulch from clearing activities; and measures for reducing demand on water resources (including potential for reuse of treated water from sediment control basins) | Section 5          |

Table 2 Final Compilation of Mitigation Measures (FCMM)

| FCMM | Requirement   | Document Reference |
|------|---|--------------------|
| 6B   | 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.   | This document      |
| 13A  | <p>Measures to mitigate the effect of the construction waste streams will be incorporated into the Proposal's Construction Environmental Management Plan (CEMP). Waste management principles that will be incorporated into the CEMP relating to materials purchasing include:</p> <ul style="list-style-type: none"> <li>Avoidance and reuse of material will have priority over recycling</li> <li>Recycling will have priority over disposal</li> <li>Earth excavated from the site will be used for fill material and landscaping where feasible</li> <li>If possible concrete components will be crushed and reused onsite, with the remainder sent to a recycling facility</li> <li>Waste generation will be minimised by ordering the correct quantity of materials</li> <li>Selection of materials which maximise recycled content, while having low embodied water and energy use</li> </ul> | This document      |

| FCMM | Requirement   | Document Reference |
|------|---|--------------------|
|      | <ul style="list-style-type: none"> <li>Selection of materials which maximise durability and lifespan. The following procedures and protocols will be considered within the CEMP regarding waste management:</li> <li>Characterisation of construction waste streams</li> <li>Management of any identified hazardous waste streams</li> <li>Procedures to manage construction waste streams, including handling, storage, classification, quantification, identification and tracking</li> <li>Mitigation measures for avoidance and minimisation of waste materials</li> <li>Procedures and targets for reuse and recycling of waste materials.</li> <li>Inclusion of the waste management strategies included in the Concept Plan Statement of Commitments for construction waste management.</li> </ul> |                    |

Table 3 Revised Statement of Commitments (RSoC)

| RSoC  | Requirement  | Document Reference |
|-------|--|--------------------|
| Waste | <p>Demolition</p> <ul style="list-style-type: none"> <li>a) Re-use of material will have priority over recycling</li> <li>b) Recycling will have priority over disposal</li> <li>c) Selection of reputable waste removal contractors who will guarantee that recyclable material will be recycled and will provide any relevant certificates</li> <li>d) Vegetation removed shall be either preserved for use in the new development, or mulched for inclusion in landscaping activities. The remainder will be sent to a composting facility</li> <li>e) Excavated earth will be used for infill and landscaping where feasible, the remainder will be sent to a recycling facility</li> <li>f) Asphalt will be re-used by transferring it to a batching plant or using it as a base layer for access roads</li> <li>g) Concrete components will where possible be crushed and reused on site, the remainder will be sent to a recycling facility</li> <li>h) Fuel and oil storage from demolition machinery will be secured and managed responsibly within compound sites during works, and removed upon completion of works</li> <li>i) Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.</li> </ul> | This document      |
| Waste | <p>Construction</p> <ul style="list-style-type: none"> <li>a) Reduce potential waste by ordering the correct quantities of materials</li> <li>b) Coordinate and sequence trades people to minimise waste</li> <li>c) Prefabricate materials where possible</li> <li>d) Use modular construction and basic designs to reduce the need for off-cuts</li> </ul>   | This document      |

| RSoC | Requirement   | Document Reference |
|------|---|--------------------|
|      | <p>e) Reuse formwork</p> <p>f) Reuse or recycle materials from the demolition phase</p> <p>g) Separate off-cuts to facilitate reuse, resale or efficient recycling</p> <p>h) Minimise site disturbance and limit unnecessary excavation</p> <p>i) Select landscaping which reduces green waste</p> <p>j) Select waste removal contractors to guarantee that recyclable waste are recycled.</p> <p>k) Engage with the supply chain to supply products and materials that use minimal packaging</p> <p>l) Set up schemes with suppliers to take back packaging materials</p> <p>m) Sewage waste shall be disposed of by a licensed waste contractor in accordance with Sydney Water and OEH requirements.</p> |                    |

*Table 4 Concept Plan Conditions of Approval*

| CPCoA | 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. | Section 6          |



Table 5 Infrastructure Sustainability Council of Australia (ISCA) requirements

| ISCA Credit Reference | Level               | Requirement  | Document Reference      |
|-----------------------|---------------------|--|-------------------------|
| Wat-1                 | Level 1             | Monitoring of water use is undertaken  | Section 5               |
|                       | Level 1-3 (sliding) | Monitoring demonstrates a reduction in water use compared to base case footprint   | Section 4.8.3           |
| Wat-2                 | Level 0-3 (sliding) | Monitoring demonstrates that some proportion of total water use is from non-potable sources  | Section 4.8.3           |
| Ene-1                 | Level 1             | Monitoring and modelling of energy use and GHG emissions, and actions taken to reduce them, is undertaken, covering at least Scope 1, Scope 2 and land clearing across the infrastructure lifecycle. | Section 4.8.2           |
| Was-1                 | Level 1             | Predictions for waste quantities and types have been developed for construction and operation  | Section 4.3             |
|                       |                     | Measures to minimise waste during construction and operation have been identified and implemented  | Section 4 and Section 5 |
|                       |                     | Monitoring of all waste is undertaken during construction  | Section 6.3             |
|                       | Level 2             | Waste monitoring and management has been managed, reviewed or audited by a suitably qualified professional   | Section 6.4             |
|                       |                     | Waste handling and disposal/recycling all the way to final destination has been audited at appropriate intervals   | Section 6.4             |

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# APPENDICES

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# 1 INTRODUCTION

The Sydney Intermodal Terminal Alliance (SIMTA) received approval for the construction and operation of Stage 1 of the Moorebank Precinct East (MPE) Project, comprising an Intermodal (IMT) Facility including a rail link (Package 1) and Import Export (IMEX) Terminal (Package 2) on 12 December 2016 (SSD 6766). The construction and operation of the MPE Stage 1 project was subject to an appeal in September 2017 (Appeal Number 2017/00081889). The approval was upheld and the revised Conditions of Consent were released on 13 March 2018.

This Construction Waste and Resource Management Plan (CWRMP) has been developed to manage waste and resource impacts during the construction of Package 2 of the MPE Stage 1 Project (hereafter the Project).

This plan has been established to demonstrate the contractor's approach to the management of waste and resources. This CWRMP addresses the relevant requirements of the Project Approvals, including the EIS, Submissions Report and Minister's Conditions of Consent (CoC), and all applicable guidelines and standards specific to the management of waste and resources during construction of the Project.

## 1.1 Background and Scope

The MPE 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 Project involves the development of an IMT, including warehouse and distribution facilities, rail link, freight village (ancillary site and operational services), stormwater, landscaping, servicing and associated works on the eastern side of Moorebank Avenue, Moorebank. It is to be developed in three key stages:

- Stage 1 - Construction of the IMEX and rail link
- Stage 2 - Construction of warehouse and Distribution Facilities
- Stage 3 - Extension of the IMEX and completion of Warehouse and Distribution Facilities.

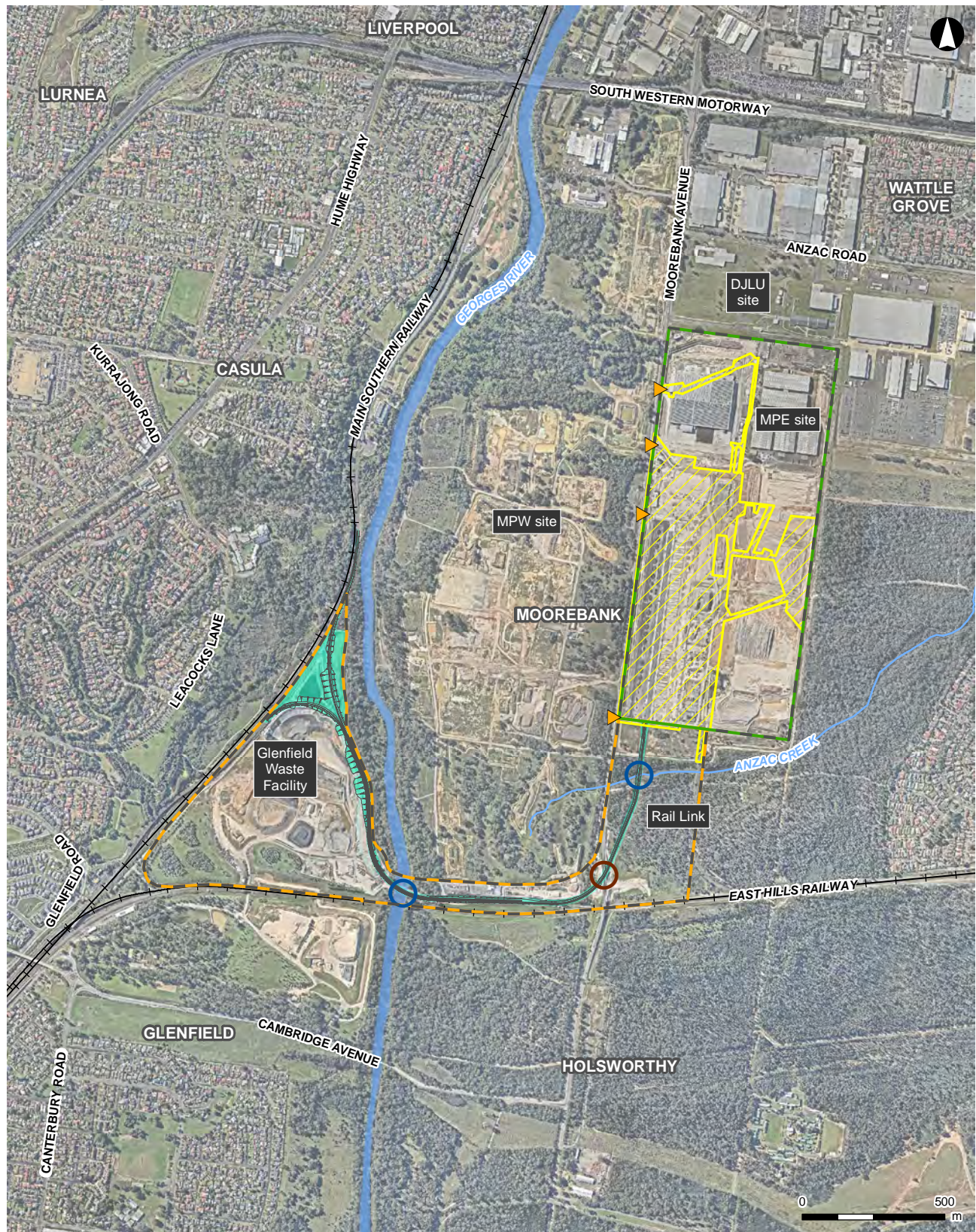
Stage 1 of the MPE Project comprises, and will be constructed across, two packages:

- Package 1: The Rail Link (not included within this CWRMP) includes a connection to the IMEX, and traverses across Moorebank Avenue, Anzac Creek and Georges River prior to connecting to the Southern Sydney Freight Line (SSFL).
- Package 2 (Figure 1): The IMEX (subject of this CWRMP) 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.

The layout of the IMEX generally comprises operational areas, an administration area, rail sidings, utilities and drainage infrastructure, landscaping and signage. The operational areas of the IMEX consist of the primary and secondary container loading / unloading areas and container storage areas, and the truck holding area. Within these areas containers will be stacked up to five high.



# MPE Stage 1 CWRMP



## LEGEND

- |                                   |                      |
|-----------------------------------|----------------------|
| Project site                      | Creek/river crossing |
| Construction footprint            | Road crossing        |
| MPE site                          | Rail link            |
| Rail Corridor                     | Existing railway     |
| MPE Stage 1 Package 1 (Rail Link) | Watercourse          |
| Construction access               |                      |

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 Aerial imagery supplied by nearmap (March, 2019)

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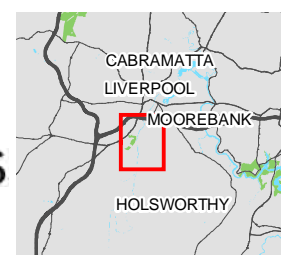


Figure 1: MPE Site Overview



### 1.1.1 Environmental Planning Approval

The MPE Stage 1 Project has been assessed by the Department of Planning and Environment (DP&E) under Division 4.7 (Division 4.1 prior to March 2018) of the *Environmental Planning and Assessment Act 1979* (EP&A Act) as State Significant Development (SSD). The Planning Assessment Commission (PAC) granted Approval for the MPE Stage 1 Project on 12 December 2016 and is subject to the Minister's Conditions of Consent (CoC, 18 December 2016 (ref SSD-6766)). The MPE Stage 1 Project, its impacts, consultation and mitigation were documented in the following suite of documents:

- State Significant Development Application SSD 6766 (as amended in the Land and Environment Court 13 March 2018)
- SIMTA Intermodal Terminal Facility – Stage 1 – Environmental Impact Statement (Hyder Consulting Pty Ltd, May 2014)
- SIMTA Intermodal Terminal Facility – Stage 1 – Response to Submissions (Hyder Consulting Pty Ltd, September 2015)
- *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act) Approval (No. 2011/6229) granted on March 2014.

### 1.2 Purpose and Application

SIMTA have developed this CWRMP to address the final compilation of mitigation measures within the Response to Submissions and Final Conditions of Approval. This plan aims to demonstrate how waste and resources will be managed during construction of the Project.

Specifically, the purpose of this CWRMP is to manage waste and resources impacts in accordance with the Project approval documents (as outlined in Section 1.1.1) and ensure that through the use of best practice, waste and resource impacts are minimised.

### 1.3 Objectives and Targets

The key objective of this plan is to minimise waste generated and resources used as a result of the Project and to maximise recycling or reuse where this is unavoidable. This will be achieved by undertaking the following objectives:

- Ensure measures are identified and implemented to minimise and manage waste, reduce resource use including energy and water conservation, and maximise use of recycled materials throughout the construction of the project
- Ensure the preferred waste management hierarchy of reduce, reuse, recycling and disposal is followed
- Provide staff with an increased level of understanding and awareness of waste and resource use management issues
- Ensure appropriate measures are implemented to address the relevant mitigation measures detailed in the FCMM
- Ensure appropriate measures are implemented to address environmental final compilation of mitigation measures and other requirements as described in Section 3 of this Plan
- Ensure legislative compliance by implementing this plan.

The following targets have been established for the management of waste and energy consumption during the project:

- Aim to recycle/reuse 90% (by weight) of construction, demolition and excavation waste
- All residual waste products are sent to appropriately licensed destinations for either recycling, reuse, treatment or disposal
- Minimise/reduce the quantities of resources to be used
- Investigate the use of recycled materials within construction products.

## 2 ENVIRONMENTAL OBLIGATIONS

SIMTA's obligations include satisfying the requirements and complying with the provisions of the applicable legislation, guidelines and policies, as well as international and SIMTA standards.

Table 6 Relevant legislation, standards, policies and guidelines

|                    |  |
|--------------------|--|
| <b>Legislation</b> | <i>Environmental Planning and Assessment Act 1979 (NSW)</i>  |
|                    | <i>Protection of the Environment Operations Act, 1997 (NSW)</i>  |
|                    | <i>Waste Avoidance and Resource Recovery Act, 2001 (NSW)</i>   |
|                    | <i>Protection of the Environment Operations (Waste) Regulation, 2014 (NSW)</i>   |
|                    | <i>Protection of the Environment Operations Amendment (Illegal Waste Disposal) Act 2013 (NSW)</i>  |
|                    | <i>Contaminated Land Management Act 1997</i>   |
|                    | <i>National Greenhouse and Energy Reporting Act 2007</i>   |
|                    | <i>Noxious Weeds Act 1993</i>  |
|                    | <i>Environmentally Hazardous Chemicals Act 1985</i>  |
| <b>Standards</b>   | AS/NZS ISO 14001: Environmental Management   |
|                    | NSW Waste Reduction and Purchasing Policy (WRAPP)  |
|                    | Waste Packaging Covenant   |
|                    | EPA Waste Classification Guidelines 2014   |
|                    | Best Practice Waste Reduction Guidelines for the Construction and Demolition Industry (tools for practice), Natural Heritage trust, 2000 |

Please refer to CEMP for further explanation of register of legal and other requirements.

### 2.1 Environmental Protection Licence

An EPL (No. 21054) was issued by the EPA for the Moorebank Precinct on 4 June 2018. A variation to the license was issued on 18 April 2019 to capture cut and fill earthworks occurring on the MPE Stage 2 Project Site and additional considerations observed during a site inspection on the 23 November 2018.

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.

Specific requirements for EPL 21054 are addressed in Table 5 and Section 4.2 of the CEMP.



## 3 ENVIRONMENTAL ASPECTS AND IMPACTS

### 3.1 Waste Streams and Resource Usage

The Project will involve a range of activities and incorporate various heavy machinery, plant and equipment that will operate in a number of locations across the Project. All activities have the potential to generate waste and consume natural resources. The broad categories of activity likely to generate waste are listed below in Table 6.

Refer to the Project Aspects and Impacts Register in Appendix O of the CEMP for the complete list of identified environmental risks associated with the project.

Table 7 Aspects and Impacts

| Waste Generating Activities   | Aspects   | Potential Impacts  |
|---|---|--|
| Site establishment, office waste, clearing, earthworks, concreting, road and hardstand construction activities, demolition of existing structures, equipment and materials supply and associated packaging and transport, plant and equipment maintenance, liquid wastes, office wastes, transport to and from site | <ul style="list-style-type: none"> <li>• Generation of waste and litter;</li> <li>• Incorrect waste disposal or on site storage;</li> <li>• Over ordering of materials</li> <li>• Use of resources</li> </ul>                         | <ul style="list-style-type: none"> <li>• Depletion of natural resources and deposition of large amounts of waste to landfill;</li> <li>• Loss of visual amenity;</li> <li>• Odour;</li> <li>• Land/water contamination and pollution;</li> <li>• Contamination of waste stream.</li> </ul> |
|   | <ul style="list-style-type: none"> <li>• Exposure of contaminated land and potential management of regulated waste;</li> <li>• Mixing of waste streams;</li> <li>• Use of unlicensed waste transport or disposal facility.</li> </ul> | <ul style="list-style-type: none"> <li>• Prosecution for use of unlicensed facility;</li> <li>• Contamination of land or water ways;</li> <li>• Greater costs associated with increased contamination</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• Disposal of weed contaminated material and vegetation</li> </ul>   | <ul style="list-style-type: none"> <li>• Spread of weeds to non-contaminated areas.</li> </ul>   |
|   | <ul style="list-style-type: none"> <li>• Use of natural resources such as aggregates, fuels etc.</li> </ul>   | <ul style="list-style-type: none"> <li>• Depletion of raw materials, energy sources and water resources</li> <li>• Generation of greenhouse gases</li> </ul>   |

## 4 WASTE AND RESOURCE MANAGEMENT

### 4.1 Classification of Waste Streams

Where waste cannot be avoided, reused or recycled it will be classified and appropriate disposal will then occur. The classification of waste is undertaken in accordance with the OEH Waste Classification Guidelines Part 1: Classifying Waste (2008). This document identifies six classes of waste: Special, Liquid, Hazardous, Restricted Solid, General Solid (putrescible) and General Solid (non-putrescible) and describes a six step process to classifying waste. 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, waste tyres. 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 2005.

#### **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 when it is transported is generally not capable of being picked up by a spade or shovel.

Liquid wastes are sub-classified into:

- Sewer and stormwater effluent
- Trackable liquid waste according to Protection of the Environment Operations (Waste) Regulation 2005 Schedule 1 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 several commonly generated wastes in the categories of hazardous, general solid waste (putrescibles) and general solid waste (non-putrescibles). 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).

## 4.2 Waste Exemptions

In accordance with Condition L3 of the Moorebank Precinct EPL, waste will not be permitted or allowed to be received on site unless it meets all the conditions of the resource recovery exemption under Clause 91 and Clause 92 of the Protection of the Environment Operations (Waste) Regulation 2014.

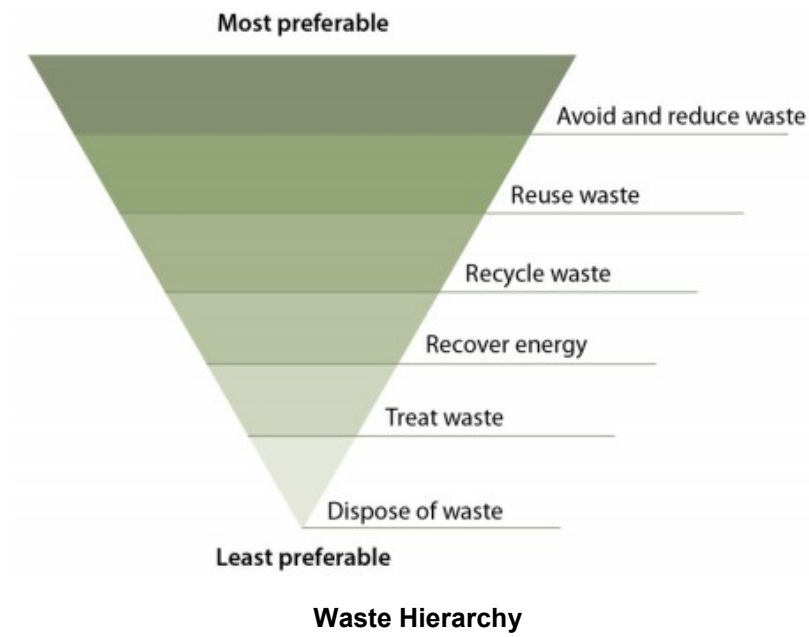
Clause 91 of the Protection of the Environment Operations (Waste) Regulation 2014 enables the EPA to grant exemptions to the licensing and payment of levies for the land application or use of waste. The EPA has issued general exemptions for a range of commonly recovered, high volume and well characterised waste materials that allow their use as fill or fertiliser at unlicensed, off-site facilities. The general 'Resource Recovery Exemptions' may be applicable to this project as defined in Table 7 below. These are general gazette exemptions that do not require approval. A specific exemption may be granted where an application is made to the EPA.

*Table 8 Applicable Resource Recovery Exemptions*

| Exemption                                 | General Conditions  |
|---|---|
| Excavated Natural Material Exemption 2014 | <p>The chemical concentration or other attributes of the excavated natural material listed in the Excavated Natural Material Exemption must not be exceeded.</p> <p>The excavated natural material can only be applied to land as engineering fill or used in earthworks.</p> <p>ENM handling, processing and testing requirements are outlined in detail in the exemption</p>  |
| Mulch Exemption 2016                      | <p>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.</p> <p>The consumer must land apply the raw mulch within a reasonable period of time.</p>   |
| Recovered Aggregate Exemption 2014        | <p>The chemical concentration or other attribute of the recovered aggregate listed in Recovered aggregate Exemption must be met.</p> <p>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:</p> <ul style="list-style-type: none"> <li>• Construction of dams or related water storage infrastructure,</li> <li>• Mine site rehabilitation,</li> <li>• Quarry rehabilitation,</li> <li>• Sand dredge pond rehabilitation,</li> <li>• Back-filling of quarry voids,</li> <li>• Raising or reshaping of land used for agricultural purposes, and</li> <li>• Construction of roads on private land unless: <ul style="list-style-type: none"> <li>(a) the relevant waste is applied to land to the minimum extent necessary for the construction of a road, and</li> <li>(b) a development consent for the development has been granted under the relevant Environmental Planning Instrument (EPI), or</li> <li>(c) it is to provide access (temporary or permanent) to a development approved by a Council, or</li> <li>(d) the works undertaken are either exempt or complying development</li> </ul> </li> </ul> |

## 4.3 Classification of Waste Streams

Waste streams that may be generated during construction, and proposed waste management options for the generated waste have been identified in Table 9 below. Waste management will follow the waste hierarchy as shown below in Figure 2.



*Figure 2 Waste Hierarchy*

Table 9 Expected waste streams and management options

| Waste Classification         | Waste Stream                   | Waste Minimisation Opportunities                  | On Site Reuse/Recycling  | Off Site Reuse/Recycling   | Disposal  | On-Site Storage   | Waste Facility / Carriers |
|------------------------------|--------------------------------|---|--|--|---|---|---------------------------|
| <b>Clearing and Grubbing</b> |                                |   |  |  |   |   |                           |
| GSW-NP                       | Vegetation: non-weed           | Avoid over-clearing to minimise clearing required | <b>Mulch:</b> reuse in erosion and sediment control or landscaping<br><b>Woody debris:</b> retain and reuse as per Flora and Fauna Management Plan<br><b>Habitat Logs:</b> retain for reuse as habitat feature | -  | -   | Stockpile on elevated ground 50m from waterways (including floodplains) and have a diversion bund on the upstream side to direct water around stockpile | NA                        |
| GSW-NP                       | Vegetation: weeds              | As above  | -  | -  | Remove to approved facility and manage as per <b>Appendix J</b> of the Flora and Fauna Management Plan. | Stockpile <i>in-situ</i> as above. NOT TO BE MULCHED  | TBC                       |
| <b>Topsoil Strip</b>         |                                |   |  |  |   |   |                           |
| GSW-NP                       | Topsoil: non-weed contaminated | -   | Undertake topsoil testing to determine nutrient value (where required contractually). Retain topsoil for reuse in rehabilitation   | -  | -   | Stockpile with erosion and sediment controls as per ESCP  | NA                        |
| GSW-NP                       | Topsoil: weed contaminated     | As above  | Burial of contaminated topsoil at depth  | -  | Excess weedy topsoil to be removed from site  | Stockpile and bury within nearest fill area   | TBC                       |
| <b>Earthworks</b>            |                                |   |  |  |   |   |                           |
| GSW-NP                       | -                              | -   | Cut and fill balance to be met, with cut material to be used in fill   | To other SIMTA project, stockpile site or concurrent local government project.<br><br>To site with appropriate development approval to take the material (under S.143) | -   | Stockpile in designated stockpile locations and appropriate ESC controls  | NA                        |

| Waste Classification          | Waste Stream                        | Waste Minimisation Opportunities          | On Site Reuse/Recycling  | Off Site Reuse/Recycling  | Disposal            | On-Site Storage   | Waste Facility / Carriers |
|-------------------------------|-------------------------------------|---|--|---|---------------------|---|---------------------------|
| GSW-NP                        | Road Base                           | -   | -  | Sent to recycling facility where there is a surplus                                   | -                   | Designated stockpile area   | TBC                       |
| GSW-NP                        | Reclaimed Asphalt Pavement/ Asphalt | -   | Reuse on temporary site roads and access gates to stabilise surface;<br>Reincorporate into new asphalt pavements | Sent to recycling facility where there is a surplus                                   | -                   | -   | TBC                       |
| GSW-NP                        | Bitumen                             | -   | -  | Offsite recycle site  | -                   | Designated stockpile area   | TBC                       |
| Test prior to classification  | Contaminated soil                   | Minimise spills from site activities      | -  | Depending on type of contamination, investigate potential for bio-remediation or soil | Landfill            | Bag spill material in hazardous waste bags and store in closed skip<br><br>Stockpile contaminated material within a bunded area | TBC                       |
| GSW-NP                        | Aggregate and other sand            | Order correct quantities                  | -  | Offsite recycle site  | -                   | Designated stockpile area   | TBC                       |
| <b>Structures</b>             |                                     |   |  |   |                     |   |                           |
| GSW-NP                        | Concrete                            | Do not over-order                         | -  | Crush to recycle  | -                   | Skip  | TBC                       |
| GSW-NP                        | Structural steelwork                | Fabricate off-site                        | -  | Send to licensed contractor for recycling   | -                   | Skip  | TBC                       |
| GSW-NP                        | Metal – rebar, offcuts              | Order correct sizes                       | -  | Send to licensed contractor for recycling   | -                   | Skip  | TBC                       |
| <b>Drainage and Utilities</b> |                                     |   |  |   |                     |   |                           |
| GSW-NP                        | Plastic Pipes                       | -   | -  | Send to waste transfer facility to recycle  | -                   | Skip  | TBC                       |
| GSW-NP                        | Cable                               | Do not over order                         | -  | -   | Recover scrap metal | Skip  | Metal for Mobility        |
| <b>Miscellaneous</b>          |                                     |   |  |   |                     |   |                           |
| GSW-NP (no liquid)            | Paint Cans                          | Use all content<br>Use water-based paints | -  | Place in co-mingled recycle bin   | -                   | Skip  | TBC                       |

| Waste Classification          | Waste Stream                                | Waste Minimisation 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  | -                              | Skip                        | TBC                           |
| Special                       | Asbestos                                    | -  | -                       | -   | Landfill                       | Lockable asbestos waste bin | TBC                           |
| Special                       | Sharps                                      | -  | -                       | -   | Special waste facility         | Sharps bin                  | Community centre sharps waste |
| <b>Office/Crib</b>            |   |  |                         |   |                                |                             |                               |
| GSW-NP                        | Packaging: e.g. pallets, plastic, cardboard | Bulk order                               | -                       | Pallets to be sent back to manufacturer / place in co-mingled recycle bin                               | -                              | Co-mingled recycle bin      | TBC                           |
| GSW-NP                        | Furniture                                   | -  | -                       | Remove to new site or donate to local schools/charities. Broken furniture to be recycled where possible | -                              | Skip                        | TBC                           |
| Unknown                       | Fire extinguisher                           | -  | -                       | Refill  | -                              | -                           | Return to supplier            |
| Hazardous                     | Fluorescent tubes                           | -  | -                       | Send to contractor  | -                              | Flu-tube specific bin       | TBC                           |
| GSW-P                         | Food  | -  | -                       | -   | -                              | General waste bin           | TBC                           |
| GSW-NP                        | Paper/ cardboard                            | Double sided printing, education         | -                       | Recycle   | -                              | Co-mingled recycle bin      | TBC                           |
| GSW-NP                        | Glass, plastic, aluminium                   | -  | -                       | Recycle   | -                              | Co-mingled recycle bin      | TBC                           |
| GSW-NP                        | Print cartridges                            | -  | -                       | Recycle   | -                              | Print cartridge waste bin   | TBC                           |
| Unknown                       | Waste Electrical and Electronic Equipment   | -  | -                       | Send to new projects / donate to schools or charities or recycle as E-WASTE                             | -                              | Site office                 | TBC                           |
| GSW-P                         | Sanitary                                    | -  | -                       | -   | Landfill                       | Toilet facilities           | TBC                           |
| Liquid/ Hazardous             | Cleaning chemicals                          | Use all content or use on other projects | -                       | -   | Not required – use all product | Site office                 | TBC                           |

| Waste Classification | Waste Stream  | Waste Minimisation Opportunities                                      | On Site Reuse/Recycling  | Off Site Reuse/Recycling                             | Disposal   | On-Site Storage           | Waste Facility / Carriers |
|----------------------|---|---|--|--|--|---------------------------|---------------------------|
| <b>Liquid</b>        |   |   |  |  |  |                           |                           |
| Liquid               | Septic  | Biodegradable aerated waste water treatment system to be investigated | -  | -  | Connect to mains sewer<br><br>Use licensed septic waste company for portable toilets | Toilet facilities         | TBC                       |
| 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 | -  | Drip trays                | NA                        |
| Liquid               | Turbid water  | Erosion control   | -  | Treat and use water for dust suppression             | Discharge offsite  | Sediment basins/ trenches | NA                        |
| <b>Maintenance</b>   |   |   |  |  |  |                           |                           |
| GSW-NP               | Spare parts (damaged air filters, hydraulic hose)                                 | -   | -  | -  | Landfill   | Skip                      | TBC                       |
| GSW-NP               | Hydrocarbon rags, drained oil filters, waste spill kit material (no free liquids) | -   | -  | -  | Landfill   | Skip                      | TBC                       |
| Special              | Tyres   | -   | -  | Send to contractor to chip for reuse                 | -  | Site compound             | TBC                       |
| Hazardous            | Lead acid batteries   | -   | -  | -  | Landfill   | -                         | TBC                       |
| GSW-NP (no liquids)  | Containers  | -   | -  | Recycle bin  | -  | Co-mingled waste bin      | TBC                       |
| Liquid / Hazardous   | Waste oils, fuels, grease   | Use all contents of container   | -  | -  | Liquid waste disposal  | -                         | TBC                       |



| Waste Classification | Waste Stream                     | Waste Minimisation Opportunities                 | On Site Reuse/Recycling | Off Site Reuse/Recycling | Disposal              | On-Site Storage | Waste Facility / Carriers |
|----------------------|----------------------------------|--|-------------------------|--------------------------|-----------------------|-----------------|---------------------------|
| Hazardous            | Chemicals                        | Use all contents of container                    | -                       | -                        | Liquid waste disposal | -               | TBC                       |
| Liquid / Hazardous   | Degreasers, detergents, solvents | Ensure equipment arrives at site fully serviced  | -                       | -                        | Liquid waste disposal | -               | TBC                       |
| Liquid / Hazardous   | Engine Coolant                   | Ensure equipment arrives at site fully serviced. | -                       | -                        | Liquid waste disposal | -               | TBC                       |

## 4.4 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, 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.

## 4.5 Reuse and Recycling

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

Waste segregation onsite – Waste materials, including spoil and demolition waste, 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 and the waste is to be sorted offsite by a waste contractor.

Excavated material will be reused on site wherever possible. Material generated on site will be reused within fill requirements as part of the Project wherever possible. 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 an SIMTA approved site for reuse on concurrent private/local government project (with appropriate approvals as required).

## 4.6 Waste Handling and Storage

Materials delivered to the project will be received and controlled by the Site Supervisor/engineers. Measures to reduce risk of damage will include keeping materials in original packaging, protection from rain damage or collision by plant or vehicles. Furthermore, the materials storage area will be secured during out of hours to prevent unauthorised access where possible. Whenever possible, materials shall be ordered for delivery to achieve minimum storage time, reducing risk of damage and therefore 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 and the Construction Soil and Water Management Plan
- 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
- Hazardous waste will be managed by appropriately qualified and licensed contractors, in accordance with the requirements of the Environmentally Hazardous Chemicals Act 1985 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 to the bins to approved facilities.

In general, 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 of the following key waste streams:

- Mixed metals
- Mixed construction and demolition waste (general solid waste)
- Comingled recycling for office and crib waste

- General putrescible waste
- Excavated material waste: Any excavated material that requires disposal will be subject to classification under the Waste Classification Guidelines 2014 (NSW EPA, 2014), and will be disposed of at an appropriate licensed facility
- Concrete components: where possible will be crushed and re-used on site, with remainder sent to a recycling facility
- Hazardous waste.

## 4.7 Disposal

### 4.7.1 Licenced Facility and Carriers

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 (refer to section 5.1). Details of waste types, volumes and destinations will be recorded in the Waste Management Register (Appendix B).

Where the waste is designated as special or hazardous waste, the license for the waste carrier will also be obtained.

### 4.7.2 Unlicensed Facilities – Section 143

For waste being transported to an unlicensed 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. The notice must be signed by the landholder 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.

## 4.8 Resources

Options for the use of sustainable materials on this project will be investigated.

### 4.8.1 Materials

Where it is deemed that the material is technically suitable and/or cost effective, it will be used preferentially to virgin materials. 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.

### 4.8.2 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 emphasis 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. Where opportunities were not considered to add value or be economically viable they were not progressed any further.

### 4.8.3 Water

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

Below are potential measures that could be implemented during construction to reduce use of potable water:

Potable water consumption will be minimised by:

- Considering use of rainwater for office toilet supply
- Utilising water which may accumulate during construction of the bioretention swale wherever possible
- 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 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. Where opportunities were not considered to add value or be economically viable they were not progressed any further.

## 5 MANAGEMENT MEASURES

A range of environmental requirements are identified in the Final Compilation of Mitigation Measures and Conditions of Approval as outlined in Table 1 and 2. Specific measures and requirements to address waste management and resource use issues are outlined below in Table 10.

Table 10 Waste and Resource Management Measures

| Item           | Management Action   | Performance Criteria   | Responsibility                       | Timeframe    | Reference                           |
|----------------|---|--|--------------------------------------|--------------|-------------------------------------|
| <b>General</b> |   |  |                                      |              |                                     |
| 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 recycling, which in turn will have priority over disposal | Minimising waste to landfill   | Environment Manager, Project Manager | Construction | FCMM 13A, E16                       |
| WR2            | All waste will be classified and disposed of in accordance with the NSW EPA "Waste Classification Guidelines."  | Minimise mishandling of waste and possible fines                       | Environment Manager, Site Supervisor | Construction | CoC E17                             |
| WR3            | 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).  | To track and monitor waste and maximise recycle rates                  | Environment Manager, Project Manager | Construction | Good practice                       |
| WR4            | Good housekeeping will be maintained with waste removed to designated areas.  | Minimise damage to materials   | Site Supervisor                      | Construction | Good practice                       |
| WR5            | Signage on bins, skips, or areas for collection and storage of all wastes.  | Minimise contaminated waste streams and maximise recycling             | Environment Manager, Site Supervisor | Construction | Good practice                       |
| WR6            | Location and setup of waste receptacles will be determined taking into account: <ul style="list-style-type: none"> <li>Protection from weather</li> <li>Accessibility for removal</li> <li>Safety of personnel</li> <li>Type of waste</li> <li>Exclusion of vermin</li> </ul>           | Appropriately manage impacts to the environment, residents and workers | Site Supervisor                      | Construction | Good practice                       |
| WR7            | Stockpiles will be managed as follows: <ul style="list-style-type: none"> <li>Located outside of the drip line of retained trees;</li> <li>Located a minimum of 5m away from concentrated water flows and at least 20m from class 1 and 2 waterways;</li> </ul>                         | Appropriately manage impacts to the environment                        | Site Supervisor                      | Construction | CEMP Soil and Water Management Plan |

| Item                 | Management Action   | Performance Criteria | Responsibility                       | Timeframe       | Reference                           |
|----------------------|---|----------------------|--------------------------------------|-----------------|-------------------------------------|
|                      | <ul style="list-style-type: none"> <li>ESC controls around stockpiles will be designed to divert up-gradient water around the stockpile.</li> </ul>   |                      |                                      |                 |                                     |
| <b>Reduce</b>        |   |                      |                                      |                 |                                     |
| WR8                  | 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  | Minimise waste       | Procurement, Site Supervisor         | Construction    | Good practice                       |
| <b>Reuse/Recycle</b> |   |                      |                                      |                 |                                     |
| WR9                  | <p>Cleared vegetation will be reused or recycled where possible such as:</p> <ul style="list-style-type: none"> <li>Mulching of vegetation for use in landscaping or ESC control;</li> <li>Spreading of vegetation for fauna habitat in suitable areas where agreements are made for this (e.g. mulch, small timber, hollow logs);</li> <li>Donation of other timber to community or environmental groups.</li> </ul>   | Maximise reuse       | Site Supervisor, Environment Manager | During clearing | Good practice                       |
| WR10                 | Topsoil (weed free) will be stockpiled in accordance with SIMTA criteria in allocated areas and reused for landscaping. SIMTA stockpiling criteria identified in WR7 above.   | Maximise reuse       | Site Supervisor, Environment Manager | During clearing | CEMP Soil and Water Management Plan |
| WR11                 | <p>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:</p> <ul style="list-style-type: none"> <li>Transfer to nearby SIMTA projects for immediate use;</li> <li>Transfer to an approved SIMTA stockpile site for reuse on a future project only if a specific project has been identified prior to stockpiling;</li> <li>Transfer to an SIMTA approved site for reuse on concurrent private / local government project only if</li> </ul> | Maximise reuse       | Site Supervisor, Environment Manager | Construction    | FCMM 6B, 13A                        |

| Item             | Management Action   | Performance Criteria                    | Responsibility                       | Timeframe    | Reference                  |
|------------------|---|---|--------------------------------------|--------------|----------------------------|
|                  | <p>a specific project is identified prior to stockpiling and all appropriate approvals are obtained;</p> <ul style="list-style-type: none"> <li>Disposal at a licensed material recycling or waste disposal facility.</li> </ul>    |   |                                      |              |                            |
| WR12             | <p>Segregation of waste in bins/skips:</p> <ul style="list-style-type: none"> <li>General waste</li> <li>Hazardous</li> <li>Metal</li> <li>Office waste comingled recyclables.</li> </ul>   | Maximise recycling rates                | Site Supervisor                      | Construction | Good practice              |
| WR13             | 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.   | Maximise reuse                          | Site Supervisor                      | Construction | FCMM 13A                   |
| <b>Disposal</b>  |   |   |                                      |              |                            |
| WR14             | Contaminated waste will be segregated from other wastes, classified, and disposed of appropriately.   | Minimise contamination of waste streams | Site Supervisor, Environment Manager | Construction | Good practice              |
| WR15             | Waste will be managed and disposed of in accordance with the PoEO Act and the WRAPP. Wastes that are unable to be reused or recycled will be disposed of offsite at a licensed waste management facility, following classification. | Ensure duty of care                     | Site Supervisor, Environment Manager | Construction | FCMM 6B, CoC E18           |
| WR16             | 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.   | Ensure duty of care                     | Site Supervisor, Environment Manager | Construction | Good practice              |
| WR17             | The burning of waste is strictly prohibited on the project site.  | Maximise recycling rates                | Site Supervisor, Environment Manager | Construction | Good practice              |
| WR18             | 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.   | Maximise recycling rates                | Site Supervisor, Environment Manager | Construction | Good practice and FCMM 13A |
| <b>Materials</b> |   |   |                                      |              |                            |



| Item                       | Management Action  | Performance Criteria  | Responsibility                                    | Timeframe                        | Reference                           |
|----------------------------|--|---|---|----------------------------------|-------------------------------------|
| WR19                       | Recycled material and materials with a recycled content will be considered for use in where that material is cost and performance effective.   | Minimise use of natural resources and reduction of scope 3 carbon emissions | Environment Manager                               | Construction                     | FCMM                                |
| WR20                       | Imported fill materials will be from an appropriately licensed facility, other nearby Projects with excess suitable clean fill material  | Maximise reuse  | Environment Manager                               | Construction                     | Good practise                       |
| WR21                       | Where possible unused material and chemical containers will be returned to the supplier to reuse.  | Maximise recycling rates  | Environment Manager                               | Construction                     | Good practice                       |
| WR22                       | Materials will; be selected wherever possible, which maximise durability and lifespan  | Minimise end of life wastage  | Procurement, Site supervisor                      |                                  |                                     |
| <b>Liquids</b>             |  |   |   |                                  |                                     |
| WR23                       | The collection and reuse of captured water for dust suppression, wash down and use in amenities or revegetation will be carried out where possible.  | Minimise resource usage   | Environment Manager                               | Construction                     | FCMM 13A                            |
| WR24                       | 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.                                   | Minimise pollution and waste  | Environment Manager                               | Construction                     | CEMP Soil and Water Management Plan |
| WR25                       | Oils and other hazardous liquids will be labelled and stored in a sealed container within a bunded area. Material collected from within bunded areas will be disposed of offsite at a licensed facility. | Minimise pollution and waste  | Environment Manager                               | Construction                     | Good practice                       |
| <b>Energy Conservation</b> |  |   |   |                                  |                                     |
| WR26                       | Use of alternative fuels and power such as biodiesel and hybrid technology in plant and equipment wherever possible  | Minimise carbon emissions   | Procurement, Environment Manager, Site Supervisor | Prior to and during construction |                                     |
| WR27                       | Use of well-maintained plant and equipment with a subcontract requirement to ensure that this is achieved.   | Minimise carbon emissions   | Procurement, Environment Manager,                 | Prior to and during construction |                                     |

| Item | Management Action   | Performance Criteria      | Responsibility                          | Timeframe           | Reference |
|------|---|---------------------------|---|---------------------|-----------|
|      |   |                           | Site Supervisor                         |                     |           |
| WR28 | Plant and equipment will not be left on idle when not in use.                   | Minimise carbon emissions | Environment Manager,<br>Site Supervisor | During construction |           |
| WR29 | Use of local suppliers where possible and ordering of full and bulk loads only. | Minimise carbon emissions | Environment Manager,<br>Site Supervisor | During construction |           |
| WR30 | Training, including within the induction, in energy efficiency best practice    | Minimise carbon emissions | Environment Manager,<br>Site Supervisor | During construction |           |

## 6 COMPLIANCE MANAGEMENT

### 6.1 Roles and Responsibilities

The Project teams' organisational structure and overall roles and responsibilities are outlined in Section 4.2 of the CEMP. Specific responsibilities for the implementation of environmental controls are detailed in tables 10 and 11.

*Table 11 Roles and Responsibilities*

| Role                         | Responsibility   |
|------------------------------|--|
| Project Manager              | Responsible for the overall implementation and maintenance of this plan.   |
| Project Engineer             | Responsible for updating this procedure and for undertaking all relevant monitoring. Any amendments to this plan shall be submitted to the PM for review and approval. |
| Environment Manager          | Responsible for management of system documents and for auditing site activities against this plan as required by the PM.   |
| All staff and subcontractors | Have a responsibility to comply with the requirements of this plan and to manage waste and relevant documentation accordingly.   |

### 6.2 Training

The general project induction will include a component on waste management to ensure that personnel understand the potential impacts from construction and the proposed mitigation measures including:

- Sub-plan 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 posters to further educate employees and sub-contractors including, but not limited to:

- Waste management hierarchy
- 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.

### 6.3 Monitoring and Inspections

The below (Table 12) outlines waste-specific monitoring and inspection requirements.

Table 12 Monitoring and Inspection Requirements

| No. | Monitoring Required  | Responsibility                  | Timing              |
|-----|--|---------------------------------|---------------------|
| 1   | <p>The project waste register will be developed by the Contractor and will be frequently maintained and include the following information:</p> <p>The date, quantity and type of waste removed (e.g. spoil, inert and non-hazardous waste and office waste groups)</p> <p>Classification of the waste transported and disposal operator that removed the waste</p> <p>The intended destination of the waste including treatment/disposal/recycling facility destination</p> <p>The licence details of the disposal facility and carrier where necessary. An indicative waste register is included in Appendix B.</p> | Environment manager             | During Construction |
| 2   | <p>Waste generation and storage areas will be inspected daily and during weekly environment inspections to ensure that any materials, which may cause land and / or water contamination (e.g. tannins) or create odour problems, are controlled or removed from site.</p>  | Supervisor, Environment Manager | Daily and Weekly    |
| 3   | <p>Any non-conformances and non-compliances will be recorded in the monthly Environment Representatives Report</p>   | Environment Manager             | As required         |

## 6.4 Auditing

Audit scheduling and requirements for the project are detailed in Section 9.5 of the CEMP IMEX-QPMS-EN-PLN-00000.

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.

## 6.5 Reporting

Waste will be monitored and recorded in the waste register, with reports submitted to SIMTA on a monthly basis.

## 6.6 Non-compliances, Non-conformances 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 9.2.1 of the CEMP.

## 6.7 Review and Improvement

Continuous improvement of this plan will be achieved by the ongoing evaluation of environmental management performance against regulatory environmental policies, legislative requirements, SIMTA's Environmental Policy, Project objectives and targets to identifying opportunities for improvement.

The continuous improvement process will be designed to:

- Identify areas of opportunity for improvement of environmental management and performance
- Determine the cause or causes of non-conformances, non-compliances and deficiencies
- Develop and implement a plan of corrective and preventative action to address any non-conformances, non-compliances and deficiencies
- Verify the effectiveness of the corrective and preventative actions, which are outlined in the CEMP section 9.2.1.3
- Document any changes in procedures resulting from process improvement
- Make comparisons with objectives and targets.

Any revisions to the CWRMP may result from:

- Management Review
- Audit (either internal or by external parties)
- Client complaints or non-conformance and non-compliance reports
- Changes to the Company's standard system
- Changes to procedures, scope of works and/or systems after a potential Class 1 incident.

Revisions shall be reviewed and approved by the Project Manager prior to issue. Updates to this plan are numbered consecutively and issued to holders of controlled copies.

The Environmental Representative will endorse/reject "minor" amendments to the CWRMP whereas major amendments will be provided to the Secretary for approval.

# **APPENDIX A**

## **Section 143 Notice and Waste Acceptance Form**

**ORIGINAL: to be completed by landowner and given to waste transporter**

**- 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.**

1. I (full name) .....

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

.....  
.....

I certify that this place can lawfully be used as a waste facility for the **types** and **amounts** of waste and the **uses** set out in the table below. (Note that you must clearly state the exact type and amount. Do not use terms like "fill" or "clean fill".)

| <b>TYPE</b><br>e.g. uncontaminated soil | <b>AMOUNT</b><br>e.g. less than 50 tonnes | <b>USES</b><br>e.g. storage, disposal |
|---|---|---------------------------------------|
| .....                                   | .....                                     | .....                                 |
| .....                                   | .....                                     | .....                                 |
| .....                                   | .....                                     | .....                                 |
| .....                                   | .....                                     | .....                                 |

2. The place can lawfully be used for the types and amounts of waste described above BECAUSE:  
(Delete if not applicable):

A. This use is permitted by EPA waste facility licence number ..... in force until .....

This use is permitted by EPA waste activity licence number ..... in force until .....

An EPA waste facility or waste activity licence is not required.

AND BECAUSE (Delete if not applicable):

B. The place has development consent from the local council for the uses described in 2. above.

The place can be used as a waste facility without development consent.

**BEFORE SIGNING THIS NOTICE YOU SHOULD READ THE BACK OF THIS FORM FOR IMPORTANT INFORMATION ABOUT OFFENCES.**

Signature (s) .....

Name .....

Date .....

\* Approved 8 July 1999

