



# **Waste Management Sub-plan**

**SMWSASSM-PLD-1NL-PC-PLN-000030 (Rev 01)**

Parklife Metro D&C

# Document Approval

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## Glossary/Abbreviations

Abbreviation	Expanded Text
AS/NZS	Australian Standard/New Zealand Standard
CEMF	Sydney Metro Construction Environmental Management Framework
CEMP	Construction Environmental Management Plan
CLM Act	Contaminated Land Management Act 1997
Condition	Planning Minister's Conditions of Approval
CSSI	Critical State Significant Infrastructure
D&C	Design and Construct
DPE	NSW Department of Planning and Environment
ECM	Environmental Control Maps (or referred to as Site Environmental Plan/s (SEPs))
EIS	Environmental Impact Statement
EMS	Environmental Management System
ENM	Excavated Natural Material
EP&A Act	Environmental Planning and Assessment Act 1979 (NSW)
EPA	NSW Environment Protection Authority
EPBC Act	Environmental Protection and Biodiversity Conservation Act 1999
EPL	Environment Protection Licence
ER	Environmental Representative.
ESCP	Erosion and Sediment Control Plan
GS	Green Star
ISC	Infrastructure Sustainability Council
Minister, the	Minister of the NSW Department for Planning and Public Spaces
POEO Act	Protection of the Environment Operations Act 1997
POEO Waste Regulation	Protection of the Environment Operations (Waste) Regulation 2014
Principal, the	Sydney Metro
Project, the	Sydney Metro Western Sydney Airport
REMMs	Revised Environmental Mitigation Measures
RRE	Resource recovery exemption
RRO	Resource recovery order
SSTOM	Stations, Systems, Trains, Operation and Maintenance
WARR Act	NSW Waste Avoidance and Resource Recovery Act 2001
WRAPP	NSW Government's Waste Reduction and Purchasing Policy

# 1 Introduction

This NSW (off-airport) Waste Management Sub-plan (WMP, this Sub-plan) is applicable to the SSTOM Works of the Sydney Metro Western Sydney Airport (SMWSA) Project (the Project). This Sub-plan describes how Parklife Metro D&C will minimise and manage waste related environmental impacts during the delivery of the SSTOM Works on NSW land (State controlled land).

This Sub-plan has been prepared to address the requirements of the:

- State Significant Infrastructure (SSI) 10051 Planning Approval (dated 23 July 2021)
- SSI 10051 Mod 1 (determined 14 April 2022), which includes a modification to Condition E4 to reduce the biodiversity offsets credit requirements
- Sydney Metro Western Sydney Airport – CSSI Staging Report (Staging Report)
- AS/NZS ISO 14001:2015 Environmental Management Systems – Requirements with guidance for use
- Sydney Metro Construction Environmental Management Framework (CEMF)
- Environmental Impact Statement (EIS) and the Submissions Report, including the Revised Environmental Mitigation Measures (REMMs)
- Contractual requirements
- Applicable legislation (NSW and Commonwealth).

## 1.1 Background

Sydney Metro is Australia's biggest public transport program comprising four main packages of work including Metro North-West Line, Sydney Metro City and Southwest, Sydney Metro West, and Sydney Metro Western Sydney Airport. The SMWSA will become the transport spine for Greater Western Sydney, connecting communities and travellers with the new Western Sydney International (Nancy-Bird Walton) Airport (referred to as Western Sydney International) and the growing region.

The Sydney Metro Western Sydney Airport EIS was prepared in October 2020 to assess the impacts of construction and operation of the Project and was placed on public exhibition between 21 October 2020 and 2 December 2020. The Project was declared a Critical State Significant Infrastructure (CSSI) Project and is listed in Schedule 5 of State Environmental Planning Policy (State and Regional Development) 2011.

The Sydney Metro Western Sydney Airport Project was approved by the Minister for Planning and Public Spaces on 23 July 2021 (SSI 10051) under section 5.19 of the *NSW Environmental Planning and Assessment Act 1979* (EP&A Act).

The Project involves the construction and operation of a new metro railway line around 23km in length that extends from the existing Sydney Trains suburban T1 Western Line at St Marys in the north and the Aerotropolis in the south at Bringelly. The alignment includes a combination of tunnel, surface, bridges and viaduct sections, and comprises of six new metro stations between St Marys and the Aerotropolis Core precinct, as well as a stabling and maintenance facility and operational control centre to support the operation of the new metro railway line (see Figure 1).

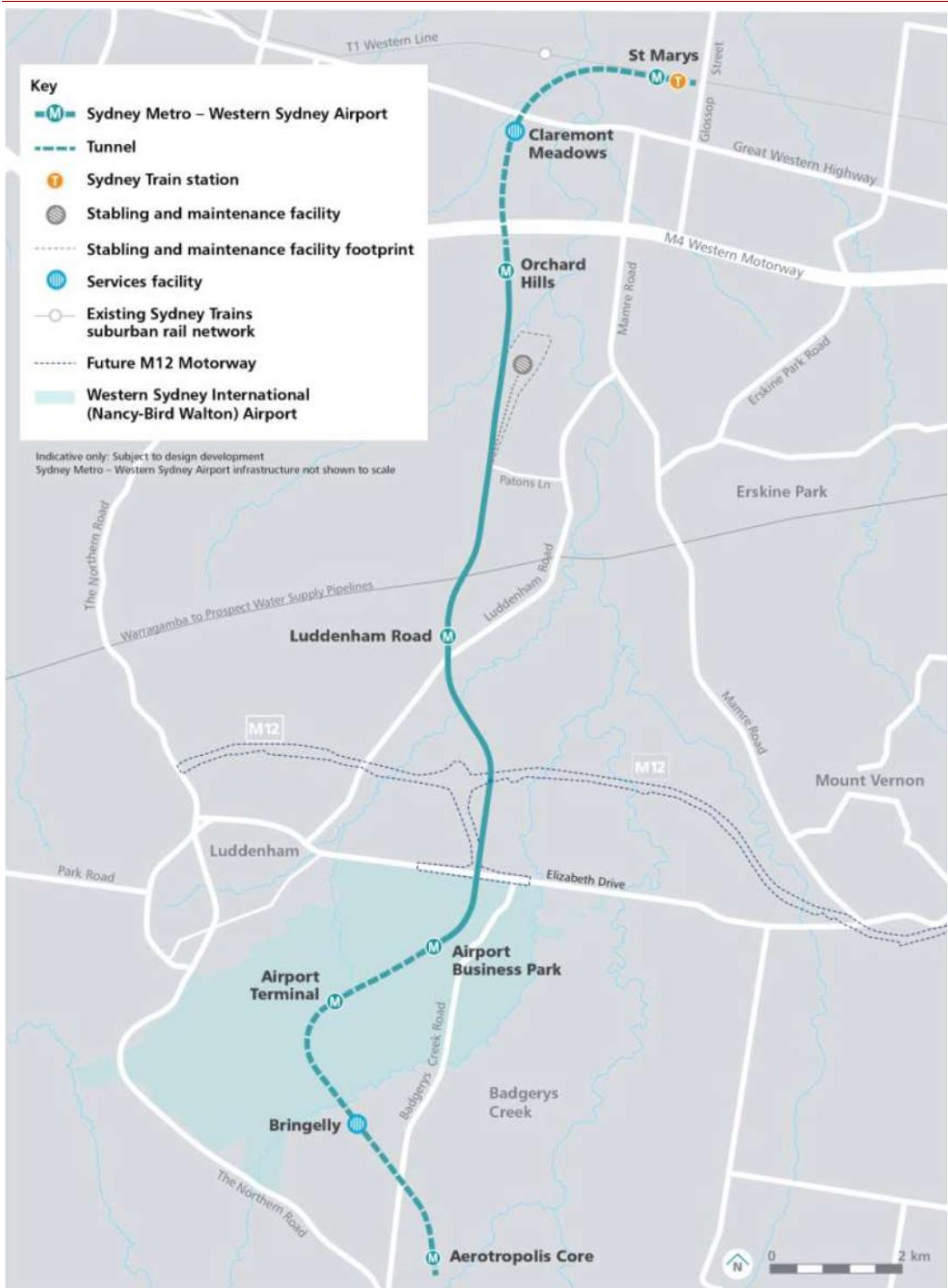


FIGURE 1 OVERVIEW OF SMWSA PROJECT

## 1.2 Scope

The scope of this WMP is to describe how Parklife Metro D&C will minimise and manage waste related impacts of the SSTOM Works and discuss how compliance and implementation of the applicable sections from the following documents, collectively referred to herein as the 'Project requirements':

- NSW Minister for Planning and Public Spaces Conditions of Approval (Conditions) and Modification 1 – Biodiversity Credits
- Revised Environmental Mitigation Measures (REMMs)
- Sydney Metro Construction Environmental Management Framework (CEMF).

The SSTOM Works scope as part of the Sydney Metro Western Sydney Airport Project includes:

- Installation of tracks, signalling, mechanical and electrical systems
- Construction of a stabling and maintenance facility at Orchard Hills
- Construction of the lower chamber of Bringelly shaft, along with capping and backfill
- Construction of the lower chamber of Claremont Meadows shaft, along with capping and backfill
- Construction of six stations, including:
  - A new metro station connecting to, and providing an interchange with, the T1 Western Line (part of the existing Sydney Trains suburban rail network) at St Marys
  - Two new metro stations between the T1 Western Line and Western Sydney International; one at Orchard Hills and one at Luddenham within the Northern Gateway Precinct
  - Two new metro stations within the Western Sydney International site; one at the Airport Terminal and one at the Airport Business Park, both of which are located on Airport land and are managed under a separate CEMP and Sub-plans
  - A new metro station within the Aerotropolis Core precinct, south of Western Sydney International.

The SSTOM package also includes the supply of new driverless trains, and the operation and maintenance of the new metro railway line and its assets, which will be managed separately to this WMP.



## 2 Objectives and Targets

To assess the environmental performance relating to waste and resource management during construction, environmental objectives and targets have been established. These objectives and targets have been developed to align with those established through the EIS and set out in the Construction Environmental Management Framework (CEMF).

The environmental performance outcomes in relation to waste from the EIS (Chapter 18) and CEMF are:

- A minimum 95 per cent recycling target is achieved for construction and demolition waste
- Products made from recycled content are prioritised over products without recycled content
- The use of potable water for non-potable purposes is avoided if non-potable water is available
- The reuse of water is maximised, either on-site or offsite.

Objectives and targets for the for the management of waste are provided in Table 1, which are in accordance with Section 14.1 of the CEMF and will be used by Parklife Metro D&C during construction.

TABLE 1 OBJECTIVES AND TARGETS

Objective	Target	Measurement Tool
<b>Minimise waste throughout the project life cycle</b>	A construction waste recycling target of 95%.	Waste Avoidance and Resource Recovery (WARR) Reporting
<b>Waste management strategies for off-airport works will be implemented in accordance with the Waste Avoidance and Resource Recovery Act 2001 management hierarchy as follows:</b>	Classification of all waste in accordance with Waste Classification Guidelines (NSW EPA, 2014).	Waste Tracking Register
- <b>Avoidance of unnecessary resource consumption</b>	Sustainability Policy includes a commitment to sustainable procurement.	Procurement Procedure Sustainability Management Plan
- <b>Resource recovery (including reuse, reprocessing, recycling, and energy recovery); and</b>	- A construction waste recycling target of 95%. - 100% of re-usable spoil will be re-used. - Waste streams will be segregated to avoid cross contamination of materials and maximise recycling opportunities.	Waste Tracking Register Material Tracking Register WARR Reporting
- <b>Disposal.</b>		

The Water Reuse Strategy details Parklife Metro D&C’s approach to maximising water reuse and minimising potable water use. Adopted sustainability initiatives and targets are included in the Sustainability Management Plan (SMWSASSM-PLD-INL-PC-PLN-000064).

The performance of the Parklife Metro D&C will be monitored against the objectives and targets (refer to Section 3.3 of the CEMP) and performance monitoring will be documented in the compliance reporting and at least on an annual basis as part of auditing requirements (refer to Section 3.9 of the CEMP).

The general performance expectations are addressed throughout this WMP.

## 3 Legal and Other Requirements

### 3.1 Relevant Legislation and Guidelines

Legislation relevant to this Waste Management Plan includes:

- *Environmental Planning and Assessment Act 1979* (EP&A Act)
- *Protection of the Environment Operations Act 1997* (POEO Act)
- *Protection of the Environment Operations (Waste) Regulation 2014* (Waste Regulation)
- *Waste Avoidance and Resource Recovery Act 2001* (WARR Act)
- *Contaminated Land Management Act 1997* (CLM Act)
- *Work Health and Safety Act 2011* (WHS Act).

Refer to Section 3.4. of the CEMP for a full list of legislation applicable to SSTOM Works.

Additional guidelines and standards relating to the management of waste include:

- Waste Classification Guidelines Part 1: Classifying Waste
- Waste Classification Guidelines Part 2: Immobilisation of waste
- Waste Classification Guidelines Part 3: Waste containing radioactive material
- Waste Classification Guidelines Part 4: Acid Sulfate Soils
- Addendum to the Waste Classification Guidelines (2014) – Part 1: classifying waste
- Australian Dangerous Goods Code 7th Edition (ADG7)
- Construction and demolition waste: a management toolkit
- NSW Governments Waste Reduction and Purchasing Policy (WRAPP).

### 3.2 Project Compliance Requirements

The Conditions and CEMF requirements relevant to the development of this WMP are listed in Table 2. Other requirements relevant to the management of waste, including revised environmental mitigation measures (REMMS), are listed in Appendix A.

TABLE 2 REQUIREMENTS FOR PREPARATION OF THIS WMP

No.	Condition	Where addressed
<b>SSI 10051 Infrastructure Approval (dated 23 July 2021)</b>		
<b>C1</b>	Construction Environmental Management Plans (CEMPs) and CEMP Sub-plans must be prepared in accordance with the Construction Environmental Management Framework (CEMF) included in the documents listed in Condition A1 of this schedule to detail how the performance outcomes, commitments and mitigation measures specified in the documents listed in Condition A1 of this schedule will be implemented and achieved during construction.	Section 2
<b>Construction Environmental Management Framework</b>		
<b>3.4g</b>	As a minimum the Principal Contractor CEMP will:	
<b>iii.</b>	For each plan under the CEMP include a matrix of the relevant SSI Conditions of Approval referencing where each requirement is addressed;	Section 3.2 Appendix A
<b>iv.</b>	For each plan under the CEMP, set objectives and targets, and identify measurable key performance indicators in relation to these	Section 2

<b>3.5a</b>	Subject to Section 3.4(b) the Principal Contractors will prepare issue-specific environmental sub plans to the CEMP which address each of the relevant environmental impacts at a particular site or stage of the project. Issue specific sub plans will include as a minimum: <ul style="list-style-type: none"> <li>• Noise and Vibration Management</li> <li>• Heritage Management.</li> <li>• Flora and Fauna Management</li> <li>• Visual Amenity management</li> <li>• Soil and Water Management</li> <li>• Air Quality Management</li> <li>• Waste Management</li> </ul>	This Sub-plan
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#### Environment Protection Licence (EPL 21807)

<b>05.1</b>	The licensee must prepare and provide to the EPA a Construction Waste Management Plan (CWMP) for each stage of the project or where due to project variables the CWMP requires updating. The CWMP must be provided prior to the commencement of each stage of the project and include (at a minimum):	
<b>05.1 a)</b>	The waste types and likely or estimated quantities for each waste type to be generated on the premises	Section 4.1 (Table 5)
<b>05.1 b)</b>	Details of the proposed sampling, testing and other methods to be used to characterise and classify waste to be generated on the premises for waste management and transport purposes	Appendix B
<b>05.1 c)</b>	Anticipated or known waste classification and characterisation of waste in accordance with the Waste Classification Guidelines Part 1: Classifying waste (EPA, 2014)	Appendix B Section 5.2
<b>05.1 d)</b>	Details of how and where the waste is anticipated to be reused, recycled, stored or disposed of	Section 5.3, 5.4, 5.5 and Appendix D
<b>05.1 e)</b>	The proposed location(s) for all waste anticipated to be stored at the premises	Section 5.4
<b>05.1 f)</b>	The proposed methods and frequencies for conducting compliance checks under condition O5.4	Section 7
<b>05.1 g)</b>	the licensee must consider the guidance in Construction and demolition waste: a management toolkit (EPA, 2019) when preparing and implementing the CWMP	Section 3.1

### 3.3 ISC Rating and Green Star Requirements

The ISC Rating and Green Star (GS) requirements relevant to this WMP are outlined in Table 3.

TABLE 3 ISC RATING CREDITS & GS REQUIREMENTS RELEVANT TO THIS WMP

ID	ISC Rating Tool and GS Requirements	Where addressed
<b>Was-1 L2</b>	Waste quantities are predicted and practices to reduce waste have been identified during construction. Waste monitoring and management processes are in place and reviewed or auditing by a suitable qualified professional. Auditing targets waste handling, disposal and recycling destinations.	Section 4.1 Sustainability Management Plan (SMP)
<b>Was-2 L3</b>	Specific measures implemented to reuse and recycle material during construction will include: <ul style="list-style-type: none"> <li>• 100% reuse of useable spoil</li> <li>• &gt;95% beneficial reuse of inert and non-hazardous construction / demolition waste, excluding spoil</li> <li>• &gt;60% of office waste is recycled or alternatively beneficially reused.</li> </ul>	Section 5.3.1
<b>GS Credit 2</b>	<ul style="list-style-type: none"> <li>• divert at least 90% of construction and demolition waste from landfill</li> <li>• Comply with the 'Green Star Construction and Demolition Waste Reporting Criteria'</li> </ul>	Section 2 Section 5.3.1 Section 7.7

## 3.4 Licences and Permits

An Environment Protection Licence (EPL 21807) for Railway activities – railway infrastructure construction has been obtained prior to commencement of construction activities that trigger the scheduled activity. Under Schedule 1 of the POEO Act, the EPL will be applicable to construction work. All documents relevant to the EPL will be made available to the ER on request.

This WMP details the storage, treatment, processing, reprocessing or disposal of any waste, and must comply with the conditions as detailed by the EPL. Parklife Metro D&C will also comply with the following licensing or permits or regulatory processes:

- Optimisation of waste reuse offsite will be managed through the Waste Recover Orders / Exemptions under the POEO Waste Regulation. Further information is provided in Section 5.5.2
- Waste will only be disposed of at appropriately licensed facilities or other facilities that have appropriate approvals to receive re-useable wastes including waste meeting a resource recovery order. Further information is provided in Section 5.5
- The transportation of asbestos waste, asbestos soils or waste tyres will be undertaken by waste removal contractors registered under the EPA's Waste Locate system. Further information is provided in Section 5.4.1.

Table 2 details the sections of this document that satisfy the requirements as set out in the EPL.

## 3.5 Document Approval

In accordance with the Staging Report, and as requested by Sydney Metro, this Sub-plan will be provided to the ER for endorsement at least 1 month prior to construction.

Construction is not to commence until the CEMP and all required Subplans and Monitoring Programs have been endorsed by the ER, and where required approved by the Department of Planning and Environment (DPE). This Sub-plan will be implemented for the duration of construction.

## 4 Environmental Aspects and Impacts

### 4.1 Waste Streams

The EIS identified waste streams likely be generated during construction of the Project. These waste streams and reference to the associated management measures are detailed in **Table 4**.

TABLE 4 INDICATIVE TYPES OF WASTE GENERATED DURING SSTOM WORKS

Activity	Waste Stream	Where addressed
<b>Excavations, cuttings, and general earthworks</b>	Spoil	Section 5.2, 5.3.1, 5.5 Soil and Water Management Sub-plan
	Contaminated material as classified in accordance with the waste classification guidelines.	Section 5.4 Soil and Water Management Sub-plan
	Wastewater to be disposed (liquid waste)	Section 5.3.1 Waste Classification Procedure
<b>Dust suppression, wash down of plant and equipment, and staff amenities at construction sites</b>	Sediment-laden and/or potentially contaminated wastewater, sewage, and grey water (wastewater to be disposed)	Section 5.2 Waste Classification Procedure
	Wastewater to be treated/reuse	Section 5.3.1 Soil and Water Management Sub-plan
<b>5.5</b>	Concrete waste, timber formwork, scrap metal, steel, plasterboard, cable, and packaging material	Section 5.2, 5.5
	Spoil	Section 5.2, 5.3.1, 5.5 Soil and Water Management Sub-plan
<b>Maintenance of construction plant, vehicles, and equipment</b>	Adhesives, lubricants, waste fuels and oils, engine coolant, batteries, hoses, and tyres (liquid waste)	Section 5.2, 5.4, 5.5
	Hazardous or special waste	Project Health and Safety Plan/s
<b>Testing and commissioning</b>	Adhesives, lubricants, waste fuels and oils, engine coolant, batteries, hoses, and tyres (liquid waste)	Section 5.2, 5.4, 5.5
<b>Activities at construction site offices</b>	General waste including paper, cardboard, plastics, glass, and printer cartridges	Section 5.2, 5.4, 5.5
<b>Clearing and grubbing of vegetation, landscaped and/or turfed areas</b>	Green waste	Section 5.2, 5.3.1, 5.4
	Weeds/noxious weed	Section 5.5 Flora and Fauna Management Plan

The various waste streams predicted during construction of the SSTOM Works, that are not viable for reuse on-site, are provided in Table 5, which includes estimated quantities and likely resulting disposal/recycling fate. Quantities of resources and materials required during construction would be managed as detailed in Section 5.

TABLE 5 ANTICIPATED WASTE STREAMS FOR RECYCLING / OFF-SITE DISPOSAL AND EXAMPLE CLASSIFICATIONS

Waste Stream	Waste Classification	Estimated Quantities to be Generated	Waste fate
<b>Asbestos</b>	Special Waste	Nil	Off-site disposal
<b>Concrete</b>	General Solid Waste (non-putrescible)	1,000 tonnes	Recycled
<b>Reclaimed Asphalt Pavement</b>	General Solid Waste (non-putrescible)	50 tonnes	Recycled / Beneficial reuse under an RRO/RRE
<b>General recyclables (glass, cans, paper, cardboard)</b>	General Solid Waste (non-putrescible)	500 tonnes	Recycled
<b>Office waste (food waste, paper, cardboard, plastics, glass, printer cartridges)</b>	General Solid Waste (putrescible)	150 tonnes	Off-site disposal / Recycled
<b>General mixed construction waste</b>	General Solid Waste (non-putrescible)	3,000 tonnes	Recycled
<b>Metal waste/ off cuts (i.e., steel reinforcement), wire waste / off cuts, PVC waste/ off cuts (e.g., piping and conduits), timber waste / off cuts</b>	General Solid Waste (non-putrescible)	1,000 tonnes	Recycled
<b>Green waste</b>	General Solid Waste (non-putrescible)	500 tonnes	Recycled / Beneficial reuse under an RRO/RRE
<b>Potentially contaminated spoil</b>	General Solid Waste, Restricted Solid Waste or Hazardous Waste.	50 tonnes	Off-site disposal
<b>Waste oil</b>	Liquid Waste	150 litres	Recycled
<b>Wastewater</b>	Liquid Waste	200,000 litres	Recycled
<b>Septic</b>	Liquid Waste	5,000 litres	Off-site disposal
<b>Waste tyres</b>	Special Waste	60	Recycled

## 4.2 Potential Impacts

Potential waste and resources impacts during construction of the SSTOM Works would include:

- Waste being directed to landfill due to its inadequate collection, handling, classification and disposal, which would deplete available landfill capacity within the Sydney region
- Contamination of soil, surface and/or groundwater from the inappropriate storage, transport and disposal of liquid and solid wastes
- An increase in vermin from the incorrect storage, handling, and disposal of putrescible waste from construction sites
- Incorrect classification and/or disposal of waste, including the incorrect storage, handling and disposal of contaminated soil and other hazardous materials (for example, asbestos)
- Excessive amounts of materials being ordered, resulting in a large amount of leftover, unused resources
- Lack of identification of feasible options for recycling or reuse of resources.

The above issues are manageable through standard mitigation measures, as per Table 7 and those detailed in the Sustainability Management Plan (SMWSASSM-PLD-INL-PC-PLN-000064).

## 5 Waste Management and Recycling

### 5.1 Waste Hierarchy

In accordance with Condition E122, during delivery of SSTOM Works waste will be prioritised according to the principles of a resource management hierarchy embodied in the WARR Act as listed below:

- Waste generation will be avoided and where avoidance is not reasonably practicable, waste generation must be reduced (refer to Section 5.3)
- where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered (refer to Section 5.5.2)
- Where re-using, recycling, or recovering waste is not possible, waste must be treated or disposed.

The management of waste during the delivery of SSTOM Works will be undertaken in accordance with the objectives of the WARR Act, and the legislation and guidelines as detailed in Section 3.

See Figure 2 for visual representation of waste hierarchy management.

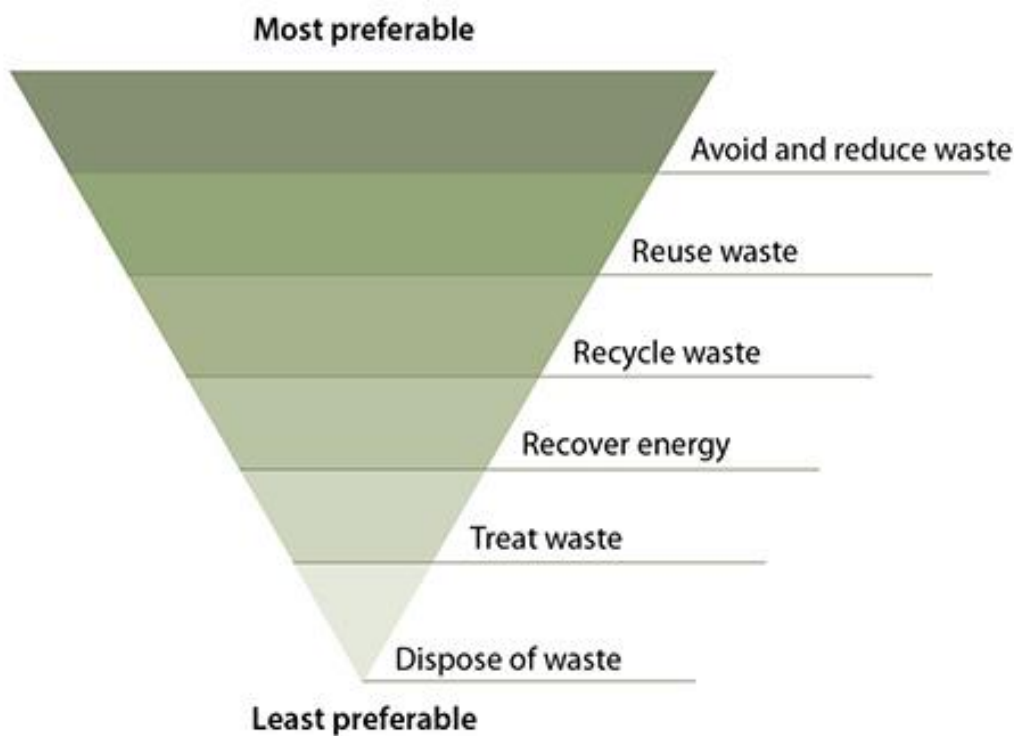


FIGURE 2 THE WASTE HIERARCHY (SOURCE EPA - NSW)



## 5.2 Waste Classification

All waste generated on the site will be assessed and classified in accordance with the Waste Classification Procedure in Appendix B, which incorporates the Waste Classification Guidelines (Part 1: Classifying Waste) which requires waste material to be classified into waste classes as defined in Clause 49 of Schedule 1 of the POEO Act as either:

- Special waste
- Liquid Waste
- Hazardous Waste
- Restricted Solid Waste
- General Solid Waste (putrescible)
- General Solid Waste (non-putrescible).

In situ classification of spoil material and any material that has not been previously classified and is unexpectedly encountered during excavation will be managed in accordance with the Soil and Water Management Sub-plan (SMWSASSM-PLD-1NL-PC-PLN-000020).

## 5.3 Waste Avoidance and Minimisation

Parklife Metro D&C's resource consumption, minimisation and material reuse maximisation strategies are detailed in the Sustainability Management Plan (SMWSASSM-PLD-INL-PC-PLN-000064) including material selection and procurement strategies. Strategies that will be employed by Parklife Metro D&C include:

- Efficient resource planning regarding the delivery and storage of resources to avoid surplus stock and waste
- Planning and coordination across worksites to maximise usage and avoid waste
- Procurement strategies that manage effective identification of quantity / volume and where possible, take back arrangements.

### 5.3.1 Reuse and Recycling Initiatives

Where avoidance and/or minimisation is not possible, Parklife Metro D&C will reuse waste on or off site, including resource recovery via:

- Resource recovery exemptions (RRE) / resource recovery orders (RRO)
- Approved recycling facility
- Approved notice under Section 143 of the POEO Act.

Specific measures to reuse and recycle waste during construction will include:

- Reuse of green waste and topsoil for site landscaping (excluding non-native / weeds)
- 100% reuse of useable spoil
- 95% reuse of general demolition waste
- 95% reuse of construction waste
- Minimum 60% of office waste re-cycled
- Reuse of native trees and vegetation
- Water reuse in accordance with the Water Reuse Strategy
- General waste (office/crib) – appropriate receptacles will be provided to maximise recycling.

TABLE 6 POSSIBLE REUSE OPTIONS FOR MATERIAL GENERATED DURING SSTOM CONSTRUCTION

Waste Material	Possible reuse option
<b>Spoil</b>	Reuse spoil for landscaping, structural fill, general fill, fill embankments and mounds within the site. Beneficial reuse of spoil on external projects under resource recovery exemptions / orders.
<b>Water</b>	Treated wastewater and harvested rainwater will be reused on site for dust suppression, landscape watering or other on-site use.
<b>Vegetation</b>	Vegetation removed as part of the works will be mulched and reused on site for erosion and/or sediment control purposes, such as for soil stability on bare areas or bunds to reduce the erosive energy of flows.

## 5.4 Waste Handling and Storage

Where waste, including waste from plant and equipment maintenance, and commissioning and testing activities that is required to be handled and stored onsite prior to onsite reuse or offsite recycling/disposal, Parklife Metro D&C will implement the following measures:

- Spoil, topsoil and mulch are to be stockpiled onsite in allocated areas identified in Environmental Control Maps, where appropriate, and mitigation measures for dust control and surface water management will be implemented in accordance with the Air Quality Management Sub-plan (SMWSASSM-PLD-1NL-PC-PLN-000028) and the Soil and Water Management Sub-plan (SMWSASSM-PLD-1NL-PC-PLN-000020)
- Contaminated spoil will be managed in accordance with the Soil and Water Management Sub-plan and PASS/ASS will be managed in accordance with the Soil and Water Management Sub-plan. (SMWSASSM-PLD-1NL-PC-PLN-000020)
- Liquid wastes are to be stored in appropriate containers in bunded areas until transported offsite. Waste fuel, oils and other hazardous material will be stored in a ventilated, bunded area prior to recycling or disposal by a licensed contractor
- Special or/and hazardous waste will be segregated, contained, and stored separately in an appropriately bunded area. Further detail on management of special or hazardous waste management is within the Project Health and Safety Plan/s
- Management of unexpected finds of asbestos will be managed in accordance with the Unexpected Contaminated Land and Asbestos Finds Procedure in the Soil and Water Management Sub-plan (SMWSASSM-PLD-1NL-PC-PLN-000020).

Waste management areas will be established during construction, at which waste (including recyclables) will be stored. Most construction waste will be stored in co-mingled bins for processing offsite to maximise resource recovery. Office waste will be segregated to maximise resource recovery. Stockpiles and bins will be appropriately labelled, managed, and monitored.

The waste storage areas will also allow for the separation of waste streams based on their management requirements, and will therefore include:

- Wheeled bins
- “Skip” bins
- Bunded bulk storage for fuels and oils.

Monitoring of the above waste handling and storage strategies will be undertaken primarily through the implementation of environmental inspections as detailed further in Section 7.3.

### 5.4.1 Asbestos Management

If an unexpected asbestos find occurs, it will be managed in accordance with the Safety Management Plan, as well as in accordance with the Contamination and Asbestos Unexpected Finds Procedure provided in Appendix E of the SWMP, and the following steps as a minimum:

- The area is to be signed 'Asbestos', demarcated, works in the area to cease and workers warned
- Notify the Site Supervisor who will notify the Project Manager
- Control dust with dust suppression or by covering the area if feasible
- Asbestos stockpiles shall be covered until removed from site
- Arrange for testing of the suspected asbestos and air monitoring of the area (if required)
- Engage a licensed asbestos removalist (Class B) to provide recommendations to treat the area, as required
- Obtain a clearance certificate on completion of removal from a licensed asbestos assessor. If the find is asbestos (either friable or bonded) in soil, clearance and a validation report will be required from a suitably qualified contaminated land consult
- The area is to be made safe.

## 5.5 Waste Transport and Disposal

Material that is unable to be reused or recycled on site will be transported to an offsite facility following waste classification. Wastes that are unable to be reused or recycled or retained will be disposed of offsite to an NSW EPA approved waste management facility following classification in accordance with the POEO Act and the WARR Act (See Other Conditions of Approval, REMMs and CEMF requirements relevant to this Sub-plan) Parklife Metro D&C will implement a hold point to ensure that material that is unable to be reused or recycled on site will be exported to a site licenced by the EPA to accept the waste, or in accordance with a valid RRE or RRO, or to any other site that can lawfully accept such waste. Refer to Section 3.1 of the CEMP for the register of hold points. Waste disposal will involve:

- Disposal to site licenced by the EPA to accept the waste, or
- Disposal to another site that can lawfully accept such waste under Section 143 of the POEO Act.

Waste management facilities situated in the Western Sydney region will be utilised for reuse, recycling, recovery, and treatment of waste generated by SSTOM Works activities. Prior to waste being taken to a waste disposal facility, the Environmental Manager (or delegate) will review and approve the proposed waste facility as a hold point. The hold point includes the following steps:

- Review and approval of the completed Section 143 documentation if the material is going to a receiving site not licensed by the EPA
- Review of receiving sites development application, planning approval or EPL to ensure the site holds the correct licence and/or approval to receive such material. A list of licenced waste disposal facilities in proximity to SSTOM Works has been developed and will be updated to include any other disposal or beneficial reuse sites identified during SSTOM Works (Appendix D).

Disposal of the material will not occur until the Environment Manager has released the hold point. Approved waste sites, both EPL licensed or beneficial reuse sites, will be included on the waste disposal register (Appendix D) and material taken to this location will be tracked as described in Section 5.5.1. All material moved from SSTOM Works will be tracked from cradle to grave using a Waste Tracking Register (refer to Section 5.5.1) and Appendix C.

All heavy vehicle used for spoil haulage must be clearly marked on the sides and rear with the project name and application number to enable identification by a person from 20 metres distance.

### 5.5.1 Waste Tracking and Reporting

All waste disposals undertaken by licenced contractors will be tracked by the receipt of waste disposal dockets. Quantities and types of wastes and the reuse or disposal will be collated in a Waste Tracking Register (Appendix C) The Waste Tracking Register will include the following information:

- Date transported
- Haulage contractor
- Material type
- Waste classification
- Quantity
- Waste receipt location
- EPL / Approval Reference
- Truck registration
- Docket numbers (haulage, receipt, weighbridge).

Waste dockets associated with removal and disposal of waste (including spoil) from the SSTOM Works are to be retained and referenced in the Waste Tracking Register. Where available, soil classification reports are also to be retained. In addition, waste reporting requirements (including reporting of spoil reuse and recycling statistics) are addressed in the Sustainability Management Plan (SMWSASSM-PLD-INL-PC-PLN-000064).

Parklife Metro D&C will supply data on waste and recycling to Sydney Metro in the agreed Sustainability Reporting template and within an agreed timeframe. Reporting will be undertaken with a one-month lag to ensure the accuracy of data. Data will be maintained within TeamBinder.

### 5.5.2 Waste Exemptions

Clause 92 of the Waste Regulation enables the NSW 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 under Clause 93 of the Waste Regulation, that do not require further approval. The current exemptions and orders that may be applicable to the SSTOM Works include:

- Excavated natural material order 2014 / Excavated natural material exemption 2014
- Excavated public road material order 2014 / Excavated public road material exemption 2014
- Reclaimed asphalt pavement order 2014 / Reclaimed asphalt pavement exemption 2014
- Recovered aggregate order 2014 / Recovered aggregate exemption 2014
- Recovered railway ballast order 2014 / Recovered railway ballast exemption 2014.

A specific exemption may be granted where an application is made to the EPA. Where materials are to be removed from site, a review of the applicable EPA waste exemptions will be undertaken to determine if the material classifies as specific exemption and if a suitable receiving site can be identified.

## 6 Environmental Control Measures

Parklife Metro D&C will implement mitigation measures that address Planning Approval Conditions, CEMF requirements and REMMs and manage potential impacts associated with the SSTOM Works (refer to Table 7). Refer to the Sustainability Management Plan (SMWSASSM-PLD-INL-PC-PLN-000064) for measures related to resource consumption.

TABLE 7 WASTE MITIGATION MEASURES

Reference	Measure	Timing	Source	Responsibility
<b>WMM1</b>	Waste generated during construction will be managed in accordance with the following waste management hierarchy: 1. Avoidance 2. Resource recovery (including reuse, reprocessing recycling, and energy recovery) 3. Disposal.	During construction	CEMF Section 14.1(a) Condition E122	Environment Manager Sustainability Manager Site Supervisor
<b>WMM2</b>	The Site Environmental Induction will include waste minimisation and reuse measures.	Preconstruction	Best practice	Environment Manager
<b>WMM3</b>	In-situ waste classification of material will be undertaken prior to commencement of excavation. Excavation will target areas of exposure risk as a priority.	Preconstruction, During construction	Best practice	Environment Manager Site Supervisor
<b>WMM4</b>	Classification of material will be undertaken by a contamination specialist in accordance with the NSW Waste Classification Guideline.	Preconstruction, During construction	Condition E124	Environment Manager Site Supervisor
<b>WMM5</b>	Prior to transporting wastes to a receiving site where an EPA licence is not required (such as a beneficial reuse site), the Environment Manager will review and approve the receiving site as having the appropriate licences / approvals to receive the waste.	During construction	REMM WR3 CEMF Section 14.1(a)	Environment Manager Project Engineers
<b>WMM6</b>	The use of raw materials (noise hoarding, site fencing, etc) will be reused or shared, between worksites sites where feasible and reasonable.	During construction	CEMF Section 14.3(a)	Site Supervisor Environmental Manager Environmental Coordinator
<b>WMM7</b>	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities.	During construction	CEMF Section 14.1(a) REMM WR2	Site Supervisor Environmental Manager
<b>WMM8</b>	A central waste area (or areas) would be established, at which waste (including recyclables) would be stored or stockpiled. Stockpiles and bins would be appropriately labelled, managed, and monitored till being removed from site.	Preconstruction, During construction	CEMF Section 14.1(a)	Site Supervisor Environmental Manager
<b>WMM9</b>	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging	Preconstruction, During construction	REMM WR1	Project Engineers Site Supervisor Sustainability Manager Environmental Manager
<b>WMM10</b>	Waste will be tracked using a Waste Tracking Register.	During construction	REMM WR3	Environment Manager
<b>WMM11</b>	A hazardous materials analysis would be carried out prior to stripping and demolition of structures and buildings which are suspected of containing hazardous materials (particularly asbestos) Hazardous materials and special waste (such as asbestos) would be	Pre construction	REMM HR3	Site Supervisor Safety Manager

Reference	Measure	Timing	Source	Responsibility
	removed and disposed of in accordance with the relevant legislation, codes of practice and Australian Standards (including the Work Health and Safety and Regulation 2011 (NSW))			
<b>WMM12</b>	Only employ the services of waste contractors and waste processing facilities that meet Green Star requirements in accordance with Green Star's Construction & demolition waste reporting criteria (2022).	During construction	Best practice	Site Supervisor Environment Manager Sustainability Manager
<b>WMM13</b>	Any asbestos identified on site will be managed in accordance with applicable regulatory requirements	During Construction	CEMF 12.3(vii)	Site Supervisor Environment Manager

## 6.1 Cumulative Impacts

Parklife Metro D&C will manage the potential for cumulative waste management impacts via coordination and engagement with key stakeholders and other SSI projects in accordance with the Sydney Metro Construction Cumulative Impacts Management Plan (developed in accordance with REMM C1) and the Community Communications Strategy.

Proposed consultation forums that will facilitate interface during construction and allow for proactive identification and management of cumulative impacts will include:

- Internal construction meetings
- Interface/coordination meetings between other projects
- Environment and Approvals Working Group with Sydney Metro
- Environment and Planning meetings with Sydney Metro.

If the potential for cumulative impacts is identified, adaptive management will be applied. Parklife Metro D&C will ensure the controls within this Plan are sufficient to address the potential for cumulative impacts and/or identify of additional measure are required to be applied, including the requirement for increased environmental monitoring.

The Sydney Metro Cumulative Impacts Plan has been developed to manage the interface of projects under construction at the same time, including the following stakeholders:

- Western Sydney Airport
- Transport for NSW
- Department of Planning, Industry and Environment
- Western parkland City Authority
- Emergency service providers
- Utility providers.

## 7 Compliance Management

Effective implementation of this plan will assist Sydney Metro and relevant contractors to achieve compliance with necessary environmental regulatory and policy requirements in a systematic manner with an outcome of continual environmental management performance.

### 7.1 People and Responsibilities

The environmental roles and responsibilities of key project personnel are outlined in Section 3.5 of the CEMP. The Environment Manager, Construction Manager and Project Managers are accountable for the implementation of this Sub-plan.

Responsibilities specific to the implementation of this Sub-plan are identified as part of the responsibilities detailed in Table 7.

### 7.2 Training

Parklife Metro D&C will ensure that SSTOM Works personnel can competently perform their duties and meet environmental obligations. All personnel working on SSTOM Works will undertake a site induction developed in accordance with Section 3.11 of the CEMF, which will provide initial training on various environmental aspects, including waste management. It will cover the requirements of this Sub-plan including:

- Potential waste streams and management of waste streams
- Waste handling and storage
- Impacts to the environment and surrounding community
- Mitigation measures.

Toolbox talks will be utilised to reinforce key management requirements and lessons learnt. Toolbox talks will be held regularly during construction with key site personnel on waste management measures. The Environment Manager, and Environment Coordinators will be responsible for delivery.

### 7.3 Monitoring and Inspections

All staff, employees and subcontractors will actively drive compliant environmental performance during the SSTOM Works. Monitoring and inspections will be in accordance with section 3.16 of the CEMF.

Environmental monitoring will be undertaken as required and in accordance with the frequency described in Section 3.9 of the CEMP, and will ensure:

- Monitoring of all waste and associated volumes is carried out for the duration of construction.
- Waste management is in accordance with the Waste Management Hierarchy from the *Waste Avoidance and Resource Recovery Act 2001* which describes the most desirable action to least desirable action
- Waste segregation will occur at the worksites and segregation will be undertaken off site by the licenced waste contractor.

Environmental inspections will include:

- Surveillance of environmental mitigation measures by the Site Foreman
- Weekly inspections by the Environmental Manager (or delegate) to verify the adequacy of all environmental mitigation measures. This will be documented in a formal inspection record.

## 7.4 Complaints

All communications and complaints management will be implemented and managed in accordance with Section 3.7 of the CEMP and the Community Communications Strategy.

## 7.5 Audits

Refer to Section 3.9 of the CEMP for environmental auditing requirements, including internal audits, independent audits, and audits to be undertaken by contractors.

Parklife Metro D&C will undertake internal environmental audits, which will include:

- Compliance with any approval, permit or licence conditions
- ISC requirements, including 6-monthly audits of waste receiving facilities and recycling facilities including transportation (waste to final destination)
- Ensuring Green Star requirements are met, in accordance with Green Star's Construction & demolition waste reporting criteria (2022), including ensuring that waste contractors and waste processing facilities that have been independently verified for compliance with minimum standards of reporting
- Compliance with the EMS CEMP, SMP, sub-plans and procedures
- Community consultation and complaint response
- Environmental training records
- Environmental monitoring and inspection results.

Parklife Metro D&C will undertake weekly inspections consisting of checking on the waste storage facilities on site and appropriate waste tracking, using waste tracking docketts.

## 7.6 Hold Points

Hold points relevant to the management of waste and resources during delivery of the SSTOM Works are detailed in

TABLE 8 WASTE MANAGEMENT HOLD POINTS

Hold Point	Release of Hold Point	Responsibility
<b>Prior to offsite disposal of waste or resources</b>	<ul style="list-style-type: none"> <li>• Review and approval of the completed Section 143 documentation if the material is going to a receiving site not licensed by the EPA; and</li> <li>• Review of receiving sites development application, planning approval or EPL to ensure the site holds the correct licence and/or approval to receive such material.</li> </ul>	Parklife Metro D&C Environmental Manager, or delegate

## 7.7 Reporting and Records

Refer to Section 3.9 of the CEMP for all recording and reporting requirements. Parklife Metro D&C will retain records specific to waste management including:

- Environmental inspections relating to waste storage areas and waste management processes (such as waste tracking register and waste docketts)
- WARR reporting requirements
- WRAPP reporting requirements
- ISC and Green Star reporting requirements, including Green Star Construction and Demolition Waste Reporting Criteria (13 April 2022)



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- Waste management recording within Sydney Metro Sustainability Reporting (refer to the Sustainability Management Plan).
  - Purchasing and procurement records (refer to the Sustainability Management Plan).

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## 8 Review and Improvement

### 8.1 Non-Compliances and Incidents

A non-compliance is a breach of the Parklife Metro D&C EMS, which requires a system improvement action. The Parklife Metro D&C Environment Manager will record any non-compliances that are identified during observations, inspection or audits or as a result of a complaint or environmental incident in an Environmental Non-Compliance Register. Where rectification works are required, an appropriate person will be identified by the Environment Manager who will be issued a corrective or preventative action to implement, and a timeframe by when this should be completed. The action will remain open until the Environment Manager has reviewed the supplied evidence and confirmed the non-compliance has been adequately addressed. Environmental non-compliances will form part of the ongoing EMS continual review and improvement process.

In the event that a non-compliance is identified, Sydney Metro, the ER, and the appropriate regulatory agency will be notified immediately. Refer to Section 3.9 of the CEMP for further details on the management and types of non-compliances.

In addition to this, environmental incidents will be classified and reported in accordance with the Sydney Metro Environmental Incident and Non-compliance Reporting Procedure, which describes specific requirements based on the incident classification and is included in Appendix E of the CEMP. Internally, within Parklife Metro D&C, incidents will be reported, managed and tracked through the use of Glaass Pro, which is a software platform used to manage project management systems. Refer to Section 3.8 of the CEMP for further details on incident management and reporting.

### 8.2 Continuous Improvement

Parklife Metro D&C will continually improve environmental systems and performance through the implementation of an audit and review program. Refer to Section 3.9 of the CEMP.

### 8.3 Sub-plan Update and Amendment

A formal review of the management systems by the Parklife Metro D&C Senior Management Team will also occur on an annual basis, as a minimum. This review shall generate actions for the continual improvement of the systems and supporting management plans. Refer to Section 3.11 of the CEMP.

Where the plan is to be updated it will be submitted to the ER for approval in accordance with CoA C3 and C8.

# Appendices

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## **Appendix A      Other Conditions of Approval, REMMs and CEMF Requirements Relevant to this Sub-plan**

Note: additional Conditions relevant to the preparation and approval of this Plan are included in Table 2.

## Minister's Conditions of Approval (23 July 2021) SSI 10051

Reference	Requirement	Where addressed
A46	All heavy vehicles used for spoil haulage must be clearly marked on the side and rear with the project name and application number to enable immediate identification by a person viewing the Heavy Vehicle standing 20 metres away.	Section 5.5
C3	The CEMP(s) not requiring the Planning Secretary's approval must be submitted to the ER for endorsement no later than one (1) month before the commencement of construction or where construction is staged no later than one (1) month before the commencement of that stage. That CEMP must obtain the endorsement of the ER as being consistent with the conditions of this approval and all undertakings made in the documents listed in Condition A1.	Section 0
C6	The CEMP Sub-plans must state how: <ul style="list-style-type: none"> <li>(a) the environmental performance outcomes identified in the documents listed in Condition A1 will be achieved;</li> <li>(b) the mitigation measures identified in the documents listed in Condition A1 will be implemented;</li> <li>(c) the relevant terms of this approval will be complied with; and</li> <li>(d) issues requiring management during construction (including cumulative impacts), as identified through ongoing environmental risk analysis, will be managed through SMART principles</li> </ul>	Section 2 Section 5
C8	The CEMP Sub-plans not requiring the Planning Secretary's approval must obtain the endorsement of the ER as being in accordance with the conditions of approval and all relevant undertakings made in the documents listed in Condition A1. Any of these CEMP Sub-plans must be submitted to the ER with, or subsequent to, the submission of the CEMP but in any event, no later than one (1) month before construction or where construction is staged no later than one (1) month before the commencement of that stage.	Section 0
E99	The Unexpected Contaminated Land and Asbestos Finds Procedure must be implemented throughout construction.	Soil and Water Management Sub-plan
E122	Waste generated during construction and operation must be dealt with in accordance with the following priorities: <ul style="list-style-type: none"> <li>(a) waste generation must be avoided and where avoidance is not reasonably practicable, waste generation must be reduced;</li> <li>(b) where avoiding or reducing waste is not possible, waste must be re-used, recycled, or recovered; and</li> <li>(c) where re-using, recycling or recovering waste is not possible, waste must be treated or disposed of.</li> </ul>	Section 5.1
E123	The importation of waste and the storage, treatment, processing, reprocessing or disposal of such waste must comply with the conditions of the current EPL for the CSSI, or be done in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, as the case may be.	Section 5
E124	Waste must only be exported to a site licensed by the EPA for the storage, treatment, processing, reprocessing or disposal of the subject waste, or in accordance with a Resource Recovery Exemption or Order issued under the Protection of the Environment Operations (Waste) Regulation 2014, or to any other place that can lawfully accept such waste.	Section 5.5
E125	All waste must be classified in accordance with the EPA's Waste Classification Guidelines, with appropriate records and disposal docketts retained for audit purposes.	Section 5.5.1

## Revised Environmental Management Measures

Reference	Requirement	Where addressed
SC5	<p>An unexpected finds procedure would be developed and implemented as part of the project Soil and Water Management Plan, outlining a set of potential contamination issues which could be encountered, and detailing the management actions to be implemented. The unexpected finds procedure would include a process for chemical and asbestos contamination and would generally include:</p> <ul style="list-style-type: none"> <li>• Cessation of works within the affected area until inspection of the suspected contamination by a qualified contaminated lands consultant</li> <li>• Collection of soil samples for chemical or asbestos analysis, where required, based on observations</li> <li>• Assessment of results against applicable land use or waste classification criteria in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority management of the contamination in accordance with statutory guidelines made or endorsed by the NSW Environment Protection Authority</li> <li>• The unexpected finds procedure for on-airport construction would be consistent with the Western Sydney Airport unexpected finds procedure detailed in the Western Sydney Airport Soil and Water Construction Environmental Management Plan</li> </ul>	Soil and Water Management Sub-plan
WR1	Construction waste would be minimised by accurately calculating materials brought to the site and limiting materials packaging	Section 5.3
WR2	Waste streams would be segregated to avoid cross-contamination of materials and maximise reuse and recycling opportunities	Section 5.5
WR3	A material tracking system would be implemented for material transferred between construction sites	Section 5.5
HR3	A hazardous materials analysis would be carried out prior to stripping and demolition of structures and buildings which are suspected of containing hazardous materials (particularly asbestos) Hazardous materials and special waste (such as asbestos) would be removed and disposed of in accordance with the relevant legislation, codes of practice and Australian Standards (including the Work Health and Safety and Regulation 2011 (NSW))	Section 5.2

Reference	Requirement	Where addressed
12.3a	viii. A remedial action plan and unexpected finds protocol would be established to facilitate the quarantining, isolation and remediation of contamination identified throughout the construction programme. Any asbestos identified on site would be managed in accordance with applicable regulatory requirements.	Soil and Water Management Sub-plan
14.1a	<p>The following waste objectives will apply to construction:</p> <p>i. Minimise waste throughout the project life cycle;</p>	Section 5

	<p>ii. Waste management strategies for off-airport works will be implemented in accordance with the Waste Avoidance and Resource Recovery Act 2001 management hierarchy as follows:</p> <ul style="list-style-type: none"> <li>• Avoidance of unnecessary resource consumption</li> <li>• Resource recovery (including reuse, reprocessing, recycling, and energy recovery); and</li> <li>• Disposal.</li> </ul> <p>iii. Consistent with the Western Sydney Airport Waste and Resource Construction Environmental Management Plan, waste management strategies for on-airport works will also be aligned with the NSW Waste Avoidance and Resource Recovery Strategy under the NSW Waste Avoidance and Resource Recovery Act 2001; and</p> <p>iv. For on-airport works, the Sydney Metro Western Sydney Airport Waste and Resources CEMP will detail all the waste management objectives and will be consistent with the WSA Waste and Resources CEMP including all appendices to the CEMP.</p>	
<b>14.1b</b>	Targets for the recovery, recycling or reuse of construction waste, and beneficial reuse of spoil will be provided by the Principal Contractor.	Section 5.3.1
<b>14.2a</b>	<p>On-airport management of waste and resources will be achieved through the implementation of the SMWSA Waste and Resources CEMP, and Principal Contractors will develop and implement a Waste Management Plan for all off-airport works. Both plans will include as a minimum:</p> <p>i. The waste management mitigation measures as detailed in the planning approval documentation;</p> <p>ii. The responsibilities of key project personnel with respect to the implementation of the plan;</p> <p>iii. Waste management monitoring requirements;</p> <p>iv. A procedure for the assessment, classification, management, and disposal of waste in accordance with Waste Classification Guidelines; and</p> <p>v. Compliance record generation and management.</p>	<p>Waste Management Sub-plan</p> <p>Section 6</p> <p>Section 7.1</p> <p>Section 7.3</p> <p>Appendix B</p> <p>Section 7</p>
<b>14.2b</b>	<p>Principal Contractors will undertake the following waste monitoring as a minimum:</p> <p>i. Weekly inspections will include checking on the waste storage facilities on site; and</p> <p>ii. All waste removed from the site will be appropriately tracked from 'cradle to grave' using waste tracking docketts.</p>	Section 7.3
<b>14.2c</b>	Principal Contractors will report all necessary waste and purchasing information to Sydney Metro as required for Sydney Metro to fulfil their WRAPP reporting requirements.	Section 7.7
<b>14.2d</b>	Compliance records will be retained by the Principal Contractors in relation to waste management including records of inspections and waste docketts for all waste removed from the site.	Section 7.7
<b>14.3a</b>	<p>The on-airport Waste and Resources CEMP and the off-airport Waste Management Plan will include the following waste management mitigation measures as well as relevant Conditions:</p> <p>i. A central waste area (or areas) would be established, at which waste (including recyclables) would be stored or stockpiled. Stockpiles and bins would be appropriately labelled, managed, and monitored till being removed from site;</p> <p>ii. All waste materials removed from the sites will be directed to an appropriately licensed waste management facility;</p> <p>iii. The use of raw materials (noise hoarding, site fencing, etc...) will be reused or shared, between sites and between construction contractors where feasible and reasonable; and</p> <p>iv. Recyclable wastes, including paper at site offices, will be stored separately from other wastes.</p>	Waste Management Sub-plan

## **Appendix B Waste Classification Procedure**



# 1 Waste Classification Procedure

## 1.1 Waste Assessment and Classification

Classifying wastes into groups that pose similar risks to the environment and human health facilitates their management and appropriate disposal. It is the responsibility of those who generate waste to classify that waste.

To assist waste generators, classify the wastes they produce, the EPA has developed the Waste Classification Guidelines ('the Guidelines') which are a step-by-step process for classifying waste, provided in Table B1.

This part of the Waste Classification Guidelines (the Guidelines) covers the classification of wastes into groups that pose similar risks to the environment and human health. The following classes of waste are defined in clause 49 of Schedule 1 of the *Protection of the Environment Operations Act 1997* (POEO Act):

- Special waste
- Liquid waste
- Hazardous waste
- Restricted solid waste
- General solid waste (putrescible)
- General solid waste (non-putrescible).

Waste that is not pre-classified must be sampled, analytically tested and a waste classification provided in advance of disposal locations being identified.

TABLE B1 WASTE CLASSIFICATION PROCESS (EPA, 2014)

Classification Step	Description
<b>Step 1: Is it 'special waste'?</b>	<p>Establish if the waste should be classified as 'special waste'. Special wastes are:</p> <ul style="list-style-type: none"> <li>• Clinical and related waste</li> <li>• Asbestos waste</li> <li>• Waste tyres</li> <li>• Anything classified as special waste under an EPA gazettal notice.</li> </ul> <p>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.</p>
<b>Step 2: If not special, is it 'liquid waste'?</b>	<p>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, other than special waste, that:</p> <ul style="list-style-type: none"> <li>• has an angle of repose of less than 5° above horizontal</li> <li>• becomes free flowing at or below 60° Celsius or when it is transported</li> <li>• is generally not capable of being picked up by a spade or shovel</li> <li>• is classified as liquid waste under an EPA gazettal notice.</li> </ul>
<b>Step 3: If not liquid, has the waste already been pre-classified by the NSW EPA?</b>	<p>The EPA has pre-classified several commonly generated wastes in the categories of hazardous, restricted solid waste, general solid waste (putrescibles) and general solid waste (non-putrescible). If a waste is listed as 'pre-classified', no further assessment is required.</p>

Classification Step	Description
<b>Step 4: If not pre-classified, is the waste hazardous?</b>	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, gases, flammable solids, substances liable to spontaneous combustion, substances liable to emit flammable gases when in contact with water, oxidizing agents, toxic substances, and corrosive substances.
<b>Step 5: If the waste does not have hazardous characteristics, undertake chemical assessment to determine classification.</b>	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).
<b>Step 6: Is the general solid waste putrescible or non-putrescible?</b>	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).

## 1.2 Proposed sampling and testing

Once a waste classification has been established under a particular pre-classification, the material has that classification and must be managed accordingly. Waste classification will be determined following the process detailed in Section 1.1 And in Figure B2.

If required, waste materials will be chemically assessed in accordance with Step 5 of the Waste Classification Guidelines to determine the waste classification. This will only be required where it has not been classified under Steps 1–4 of the Guidelines.

Chemical assessment of waste is undertaken by a suitably qualified and experienced contaminated land professional 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 (refer to the EPA Waste Classification Guidelines for SCC and TCLP (NSW EPA 2104), including consideration of the Addendum to Part 1: Classifying Waste (NSW EPA 2016). If a waste's SCC test value exceeds the contaminant threshold value set for general solid waste further assessment using the TCLP test may be used.

Sampling and testing will be carried out by a suitably qualified, experienced and/or trained personnel.

## 1.3 Waste Management and Disposal

Opportunities for the use of valid Resource Recovery Exemptions or Orders (RRE/RRO) will be explored for all wastes that are unable to be reused or recycled. Where material does not meet the requirements for RRE or RROs, and cannot be reused or recycled, it will be disposed of at a facility licenced to receive the material.

Prior to material being transported to offsite locations under an RRE or RRO, the material receiver must provide evidence in writing that the site can legally accept the material and provide documentation in accordance with the applicable RRE / RRO. Material will be tracked in accordance with the RRE/RRO restrictions.

Record of material and waste movements off site will be maintained in a register, which will detail, at a minimum:

- Source of the material
- Material receiving site

- Material or waste classification
- Details of stockpile or excavation location
- The date of the transfer
- Quantity of material being transferred
- Acceptance of the material at the receiving destination.

For movement of hazardous material, a suitably licenced waste transporter will be utilised, and a consignment authorisation will be obtained from the facility receiving the waste, where required. details of hazardous material movement and docket evidence will be maintained for a minimum of four years.

Where material is rejected by the receiving facility or site, the transporter will return to site and material segregated for reclassification in accordance with the NSW Waste Classification Guidelines.

# Waste flows for common construction and demolition waste



**Key**

- A** Testing requirements
  - Classified in accordance with the Waste Classification Guidelines
  - If applicable:
    - Compliance with relevant Resource Recovery Order for the waste
    - Compliance with relevant Resource Recovery Exemption for the waste
- B** Transport requirements may apply:
  - WasteLocate (asbestos waste and waste tyres)
  - Waste tracking required for wastes listed in schedule 1 of the POED Waste Regulation
- C** Receival facility must have planning approval and may require an EPL for that waste type
- D** Required development consent
- E** SEPP 55 - land use suitability criteria and CLM Act applies
- F** Waste levy applies

Note: Waste tracking also required for wastes generated in the MLA and transported interstate.

FIGURE B1 WASTE FLOWS FOR COMMON CONSTRUCTION AND DEMOLITION WASTE

### Waste Classification

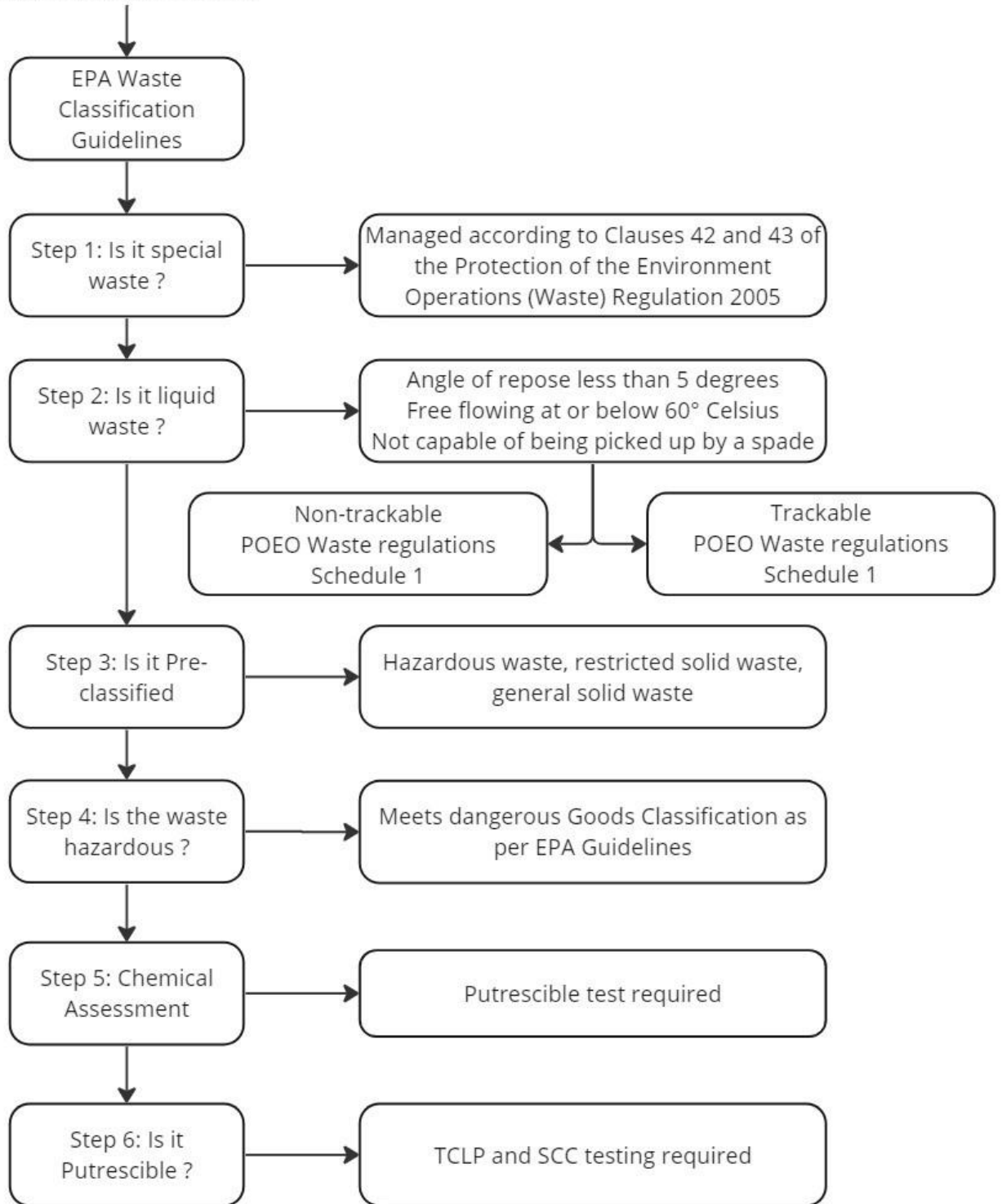


FIGURE B2 WASTE CLASSIFICATION FLOWCHART

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## Appendix C Example Waste Tracking Register

Date / time	Description of material (e.g., concrete, asphalt)	Place of origin	Volume of material (tonnes)	Use (e.g., re-use onsite, stockpiled, offsite disposal)	Waste classification and WAC # (If offsite disposal)	Location place of reuse	Transporter and waste transport license (if required)	Facility to receive	Invoice no / docket reference

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# Appendix D      Indicative Waste Disposal Locations Register



Waste/Reuse Facility	Address	Waste Type Accepted	EPL Number
<b>Cleanaway Kemps Creek</b>	1725 Elizabeth Drive, Kemps Creek. NSW 2178	<ul style="list-style-type: none"> <li>Asbestos</li> <li>Biosolids</li> <li>General solid waste (non-putrescible)</li> <li>Restricted Solid Waste</li> <li>Waste tyres</li> </ul>	EPL 4068 EPL 12889
<b>Dial-A-Dump (EC) PTY LTD - Genesis Eastern Creek</b>	Honeycomb Drive Eastern Creek	<ul style="list-style-type: none"> <li>Asphalt waste</li> <li>Building and demolition waste</li> <li>Garden waste</li> <li>General solid waste (non-putrescible)</li> <li>Waste tyres</li> <li>Wood waste</li> </ul>	EPL 20121
<b>Hi-Quality Kemps Creek</b>	1503 - 1519 Elizabeth Drive, Kemps Creek. NSW 2178	<ul style="list-style-type: none"> <li>Building and demolition waste</li> <li>ENM</li> <li>VENM</li> </ul>	EPL 20593
<b>Patons Lane Resource Recover Centre</b>	123-129 Patons Lane, Orchard Hills, NSW 2748	<ul style="list-style-type: none"> <li>Asbestos</li> <li>Asphalt waste</li> <li>Building and demolition waste</li> <li>General solid waste (non-putrescible)</li> <li>Glass, plastic, rubber, plasterboard, ceramics, bricks, concrete, or metal</li> <li>Office and packaging waste</li> <li>Paper or cardboard</li> <li>Wood waste</li> </ul>	EPL 20814 EPL 21259
<b>Suez Eastern Creek</b>	Walgrove Road Eastern Creek, NSW 2766	<ul style="list-style-type: none"> <li>Garden Waste</li> <li>Wood waste</li> </ul>	EPL 12517
<b>Wanless Sydney Recycling Park</b>	16-23 Clifton Ave, Kemps Creek NSW 2178	<ul style="list-style-type: none"> <li>Asbestos</li> <li>General solid waste (non-putrescible)</li> <li>Liquid waste</li> </ul>	EPL 12901