CLEANAWAY
Making a sustainable future possible

Operational Waste Management Plan (OWMP)

Erskine Park Resource Management Facility
Stage 1 – Waste Transfer Station

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Prepared by: SLR Consulting Australia Pty Ltd
Updated by: Cleanaway Pty Ltd
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Document Control

Reference	Date	Prepared	Checked	Authorised
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APPENDICES[1]

Appendix A - Development Consents

Appendix B – Leachate Management Protocol

[1] Appendices are managed separately to the Erskine Park OEMP, but referred to in this document.

1. INTRODUCTION

The Independent Planning Commission of NSW (IPCN) (formerly Planning Assessment Commission [PAC]), acting as delegate for the Minister for Planning, approved an application for the Erskine Park Waste and Resource Management Facility (WRMF) Staged Development Application (SSD 7075) on the 4 October 2016, comprising:

- A concept proposal for a Waste and Resource Management Facility with a maximum processing capacity of 300,000 tpa. All waste received at the WRMF shall enter the Waste Transfer Station (Stage 1), up to 150,000 tpa of this waste may be recycled at the Resource Recovery Facility (Stage 2); and
- Construction and operation of the Stage 1 Waste Transfer Station with a maximum processing capacity of 300,000 tpa.

The WRMF will be developed in two stages, the first being a Waste Transfer Station (WTS) and the second being a Resource Recovery Facility (RRF). An Environmental Impact Statement (EIS) was prepared to support the application for the WRMF Concept Proposal and the Stage 1 WTS. A separate EIS for the Stage 2 RRF will be developed at a later date.

Four modifications to the Development Consent have been submitted under Section 4.55 (1A) of the Environmental Planning and Assessment Act, 1979 (EP&A Act), and approved by the Department of Planning and Environment (DPE):

- Modification 1 (Mod 1 – approved in August 2017) - made changes to the staging of the development, layout of car parking / truck parking / load outbays, capacity of the stormwater management system, reduction in overall site levels and changes to the ramps accessing the landfill;
- Modification 2 (Mod 2 – approved in Feb 2018) - made minor changes to the site levels, the interface with landfill access ramps and car parking;
- Modification 3 (Mod 3 – approved Oct 2018) - sought approval to install a manual sorting line on the floor of the WTS, to increase the number of carparks onsite, to extend the site hardstand area to the North of the WTS and to provide a driver rest area;
- Modification 4 (Mod 4 – approved Oct 2018) - sought approval to amend the construction hours by modifying Table 3 of Condition B28 “Construction and Operation Hours”; and
- Modification 5 (Mod 5 – approved July 2023) – sought approval to permit the acceptance of 35,000 tpa of glass waste, 3,000 t at any one time and removal of manual sort line.

The WTS will receive commercial waste from the Western Sydney region which would subsequently be transported to a licenced waste management facility off site. A proportion of the waste received at the WTS would be diverted to the RRF for recycling and recovery of saleable products. The design capacity of the completed WRMF is 300,000 tonnes per annum, inclusive of both stages.

1.1 OWMP Context

SLR Consulting Australia Pty Ltd (SLR) was engaged by Cleanaway Waste Management Pty Ltd (Cleanaway) to prepare an Operational Waste Management Plan (OWMP) and a Waste Management Strategy to meet the requirements of Development Consent SSD 7075 (the Approval). Cleanaway Pty Ltd have since updated this OWMP to ensure the currency of the document.

This OWMP applies to waste generated from the operations based at the Stage 1 WTS and the site offices, located within the Erskine Park WRMF site (**Figure 1 - 2**). Waste management for the operational stage of the overall Development is therefore described in **Section 4**.

1.2 Site Identification

The Development site is located approximately 11 kilometres south-east of Penrith in Western Sydney, NSW (see **Figure 1 - 2**). It is addressed as 85-87 Quarry Road, Erskine Park NSW, and is identified as Lot 1 in Deposited Plan (DP) 1140063 in the Penrith Local Government Area (LGA). The title comprises approximately 3 hectares. As shown the site is west of and adjacent to the existing Erskine Park Landfill that is located adjacent to the site (Lot 4, DP 1094504).

Figure 1 – Erskine Park WRMF site

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Figure 2 – Erskine Park WRMF site layout

1.3 OWMP Objectives

This OWMP has been prepared to satisfy the conditions of the Approval and the EIS Statement of Commitments. As such, the objectives of this OWMP are:

- To establish waste monitoring procedures that meet the conditions of the Approval;
- Assess predicted waste generated from the development during operation, including:
    - Classification of waste in accordance with the current guidelines;
    - Handling of waste including measures to facilitate segregation and prevent cross contamination;
    - Management of waste including estimated location and volume of stockpiles;
    - Waste minimisation and reuse;
    - Lawful recycling or disposal locations for each type of waste; and
    - Contingencies for the above, including managing unexpected waste volumes.
- To provide advice on how the classified wastes should be handled, processed and disposed of (or re-used / recycled) in accordance with Council requirements and better practice waste minimisation principles;
- To assist the WTS with achieving Federal and State Government waste minimisation targets;
- To facilitate safe and practical operational waste collection options at the WTS for Council waste collection staff and / or private waste collection contractors;
- Maximisation of resource recovery;
- To ensure the appropriate management of hazardous waste; and
- To identify procedures and chain of custody records for waste management.

Appendix A indicates the sections within the OWMP that specifically address each of the relevant SSD 7075 Conditions and Statement of Commitments relating to waste management.

2. Better Practice for Waste Management and Recycling

2.1 Waste Management Hierarchy

This OWMP has been prepared in line with the waste management hierarchy (**Figure 3**), which summarises the objectives of the Waste Avoidance and Resource Recovery Act 2001.

The waste management hierarchy comprises the following principles, from most to least preferable (with respect to waste minimisation):

1. Waste **avoidance**, through prevention or reduction of waste generation. Waste avoidance is best achieved through better design and purchasing choices;
2. Waste **reuse**, without substantially changing the form of the waste;
3. Waste **recycling**, through the treatment of waste that is no longer usable in its current form to produce new products;
4. Energy **recovery**, through processing of residual waste materials;
5. Waste **treatment**; and
6. Waste **disposal**, in a manner that causes the least harm to the natural environment.

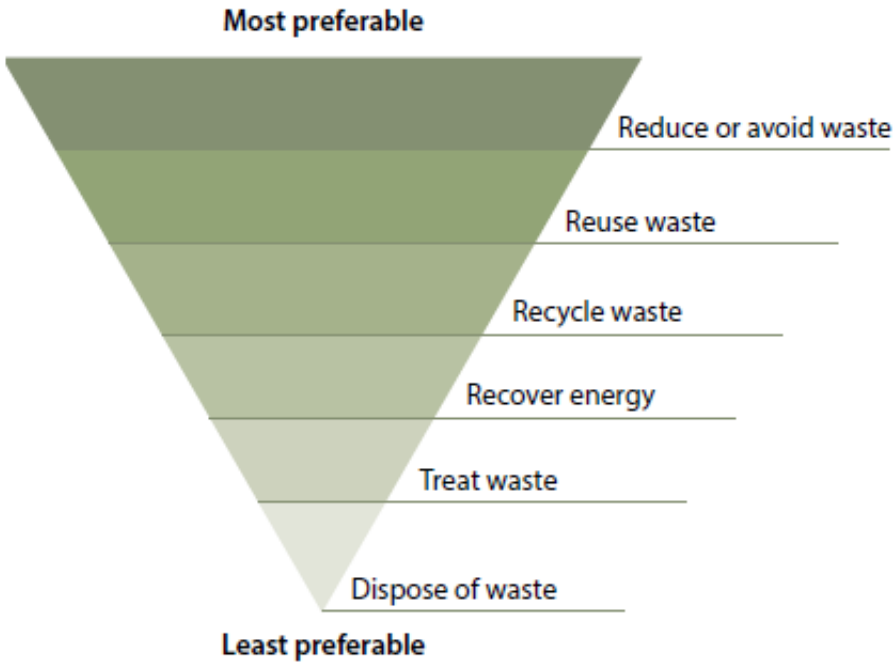

Figure 3 – Waste Management Hierarchy

2.2 Benefits of Adopting Better Practice

Adopting better practice principles in waste minimisation offers significant benefits for organisations, stakeholders and the wider community. Benefits from better practice waste minimisation include:

- Enhances social and environmental reputation of an organisation;
- Reduces consumption of non-renewable resources;

- Reduces pollution generated from materials manufacturing and waste treatment;
- Reduces financial burden associated with waste disposal; and
- Provides opportunities for additional revenue streams through beneficial reuse.

2.3 Waste Avoidance, Re-use and Recycling

2.3.1 Waste Avoidance

Waste avoidance measures may include:

- Buy materials and office products with less packaging;
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items;
- Presenting all waste reduction initiatives to staff as part of their induction program; and
- Investigating reused office equipment, machinery and other equipment rather than purchase and disposal.

2.3.2 Re-use

Establish systems with in-house and supply chain stakeholders to transport products in re-useable packaging (where possible) and/or reuse stationary, equipment or assets where safe to do so.

2.3.3 Recycling

Recycling opportunities include:

- Plastic film (usually in the form of shrink pallet wrap) is light weight and compactable. If kept clean and separated from other plastics it is potentially recyclable and can be used to make items such as outdoor furniture;
- Flatten or bale cardboard to minimise storage space requirements prior to recycling;
- Paper recycling trays provided in office areas for scrap paper collection and recycling;
- Printer toners / ink cartridges are collected in allocated bins for appropriate contractor disposal;
- Development of 'buy recycled' purchasing policy; and
- Providing recycling collections within each office (e.g. plastics, cans and glass).

3. Waste Legislation and Guidance

The legislation and guidance documents outlined in **Table 1** should be referred to during the operational phase of the Development. This list should be updated as necessary to reflect changes in legislation and guidance.

Table 1 - Waste Legislation and Guidance

Legislation / Guidance	Objectives
Development Consent SSD 7075 (issued October 2016), MOD 1 (issued August 2017), MOD 2 (issued February 2018), MOD 3 (issued Oct 2018), MOD 4 (issued Oct 2018) & MOD 5 (issued July 2023).	The OWMP specifically addresses the requirements of waste management conditions.
Penrith City Council Development Control Plan (DCP) 2014*	The Penrith City Council's Development Control Plan (DCP) 2014 came into effect on 17 April 2015 and supports the provisions of the Penrith Local Environmental Plan (PLEP) planning controls by providing detailed planning and design guidelines. Council's DCP has been prepared in accordance with section 74C of the Environmental Planning and Assessment Act 1979 and clause 16 of the Environmental Planning and Assessment Regulation 2000. This OWMP specifically addresses Section C5 and Section D4.6 of the DCP, and sets out the waste management, site specific controls and arrangements for accessing and servicing the site.
Western Sydney Employment Area (WSEA) State Environmental Planning Policy (SEPP)**	The WSEA SEPP 2009 provides for coordinated planning, development and rezoning of land for employment or environmental conservation purposes.
Western Sydney Regional Waste Avoidance and Resource Recovery Strategy 2014-2017	The Western Sydney Regional Waste Avoidance and Resource Recovery Strategy 2017–2021 helps Western Sydney Councils to work together to reduce waste produced and send to landfill. The strategy has 7 main targets: • Promote waste avoidance • Increase recycling • Divert more waste from landfill • Reduce litter • Tackle illegal dumping • Manage problem wastes better • Improve regional governance.
Western Sydney Regional Waste Group (WSRWG) Strategy Targets	The Regional WARR Strategy targets have been developed in line with the NSW targets: • Work towards reducing regional waste generation from current generation of 7.8kg/capita/week to 7.5kg/capita/week by 2021; • Gradually improve the regional resource recovery rate from the current 53% to 58% by 2017 and 70% by 2021; • Work towards achieving the WARR target by 2021; • Build, upgrade or facilitate 10 community recycling centres and innovative solutions for households by 2021; • Partner with the State to establish a baseline for 2015 and work towards reducing the incidence of litter by 2017; and • Partner with the State to establish a baseline for and work towards reducing the incidence of illegal dumping by 10% in 2017.

Legislation / Guidance	Objectives
Penrith Waste and Resource Strategy (2017-2026)	Council adopted the Penrith Waste and Resource Strategy (2017-2026) in September 2017, to develop systems and practices that: • Reduce waste generation to 7.5 kg/capita/week by 2021; • Achieve 70% diversion of waste from landfill by 2021; • Provide solutions for household problem waste by 2021; • Reduce incidence of litter; • Reduce incidence of illegal dumping; and • Participate in regional contracts and services where appropriate. The strategy details a staged approach to introducing waste services and waste treatment processes to meet the waste service needs of the community, increase environmental outcomes and reduce the financial impact of waste management on the community.
Penrith City Strategy	The Strategy seeks to help build a sustainable future for the City and community, by summarising the key issues facing Penrith City Council over the next 10-20 years, and outlining how Council will respond. It identifies a number of goals that encompass' waste management: • Essential resource recovery infrastructure is provided by the state government; • Over-consumption and waste is reduced; • Resource recovery rates are increased, and markets identified; and • Sustainable shopping is encouraged.
National Waste Policy 2019	The National Waste Policy provides a national framework for waste and resource recovery in Australia. It also highlights the importance of working together and outlines the roles and responsibilities for everyone - businesses, governments, communities and individuals. The policy outlines the five key principles for waste management that will enable Australia to transition to a circular economy. These include: • Avoid waste • Improve resource recovery • Increase use of recycled material and build demand and markets for recycled products • Better manage material flows to benefit human health, the environment and the economy • Improve information to support innovation, guide investment and enable informed consumer decisions The 2019 National Waste Action Plan drives implementation of our seven ambitious targets, including: • Regulate waste exports • Reduce total waste generated by 10% per person by 2030 • Recover 80% of all waste by 2030 • Significantly increase the use of recycled content by governments and industry • Phase out problematic and unnecessary plastics by 2025 • Halve the amount of organic waste sent to landfill by 2030 • Provide data to support better decisions

Legislation / Guidance	Objectives
Waste Avoidance and Resource Recovery Act 2001	To promote extended producer responsibility in place of industry waste reduction plans. Specific objectives include: • To encourage efficient use of resources; • To minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste; • Ensuring industry and the community share responsibility in reducing / dealing with waste; and Efficient funding of waste / resource management planning, programs and service delivery.
Protection of the Environment Operations Act (POEO) 1997 & Amendment Act 2011	Administered by the Environmental Protection Authority (EPA) to enable the Government to establish instruments for setting environmental standards, goals, protocols and guidelines. The owner of a premise, the employer or any person carrying on the activity which causes a pollution incident is to *immediately* notify the relevant authorities when material harm to the environment is caused or threatened. A list of each relevant authority is provided in the POEO Amendment Act and will be noted in the Site's incident register.
POEO (Waste) Regulation 2014	Contains provisions relating to the waste levy, waste tracking and management requirements for certain waste types, payment schemes for local councils, consumer packaging recycling and other miscellaneous provisions.
Waste and Resource Recovery Amendment (Container Deposit Scheme) Act 2016	The Act established a Container Deposit Scheme (CDS) that was to be rolled out across NSW from 1 July 2017. This date was extended to 1 December 2017.
NSW EPA's Waste Classification Guidelines (Part 1) 2014	To assist waste generators to effectively manage, treat and dispose of waste to ensure the environmental and human health risks associated with waste are managed appropriately and in accordance with the POEO Act and is associated regulations.
Council of Australian Governments National Construction Code 2016	The National Construction Code 2016 sets the minimum requirements for the design, construction and performance of buildings throughout Australia.
EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	The EPA's Better Practice Guidelines (2012) encourage efficient waste minimisation and resource recovery for commercial and industrial facilities and is used as a benchmark document when assessing waste production rates within Australia and details a range of waste management provisions.
NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21	A key component of the State Government's vision for the environmental and economic future of the state that will be supported financially by the *Waste Less, Recycle More* funding initiative providing long-term targets for six key result areas including reduced illegal dumping.
Building Code of Australia (BCA) and relevant Australian Standards (AS)	The BCA (and AS) have the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
Australian Packaging Covenant	Each building should be encouraged to establish an Action Plan to demonstrate their contribution to the achievement of the Australian Packaging Covenant's (APC) goals. The three main performance goals of the APC are: Design: Optimise packaging to use resources efficiently and reduce environmental impact without compromising product quality/safety. Recycling: Efficiently collect and recycle packaging. Product Stewardship: Demonstrate commitment of all signatories.

*In accordance with the provisions of the State Environmental Planning Policy (State and Regional Development) (SRD SEPP), a DCP is not relevant in this case given the Development is a State Significant Development. However, this OWMP has been designed to take into consideration the requirements of the DCP.

**Penrith City Council Local Environment Plan (LEP) is not relevant to the site as Clause 8 of the WSEA SEPP states that the WSEA SEPP prevails over relevant LEPs.

4. Operational Waste Management Plan

4.1 Targets for Resource Recovery

The waste management performance of the Development should contribute to the overall NSW State target for recycling, which is expected to increase from 52% (2010 to 2011) for municipal solid waste and 57% for commercial / industrial waste to 70% (by 2021 to 2022) of the total waste generation per capita (NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21).

The Penrith Waste and Resource Strategy (2017 - 2026) also establishes the same targets as the state-wide strategy for the Council Local Government Area.

4.2 Waste Streams and Classifications

The general operation of the site will generate the following broad waste streams:

- General waste (putrescible & non-putrescible) and comingled recycling;
- Office wastes;
- Packaging wastes, including cardboard, paper, plastic / shrink wrap and pallets;
- Bulky waste items, such as furniture and e-waste;
- Liquid waste (leachate);
- Glass Fines and Glass cullet (CDS material);
- Organic food waste; and
- General maintenance wastes.

Potential waste types, their associated waste classifications, and management methods are provided in **Table 2**. Management of leachate (liquid waste) is covered by the Leachate Management Protocol, attached to this OWMP as **Appendix B**.

Table 2 - Potential waste types, classifications and management methods – operational waste

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
General		
General garbage (including non-recyclable plastics)	General solid (putrescible and non-putrescible) waste	Disposal at landfill
Recyclable beverage containers (glass and plastic bottles, aluminium cans), tin cans	General solid (non-putrescible) waste	NSW container deposit scheme "Return and Earn" sent to CSR Insulation & Visy Penrith Comingled recycling at off-site licensed facility
Organic food waste	General solid (putrescible) waste	Off-site processing
Furniture	General solid (non-putrescible) waste	Off-site processing or disposal to landfill
E-waste, printer toners and ink cartridges	Hazardous waste	Off-site recycling (free disposal box / bags and pickup service exists for printer toners and ink cartridges)

Waste Types	NSW Classification	Proposed Reuse / Recycling / Disposal Method
Batteries	Hazardous waste	Off-site recycling (Contact the *Australian Battery Recycling Initiative* for more information[2] if required)
Cardboard/bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at off-site licenced facility
Bulky polystyrene	General solid (non-putrescible) waste	Disposal at landfill
Mobile Phones	Hazardous waste	Off-site recycling (Contact *MobileMuster* for more information if required)[3]
Maintenance		
Spent Smoke Detectors	General solid (non-putrescible) waste OR Hazardous waste (some commercial varieties)	Disposal to landfill, or off-site disposal at licensed facility
Light bulbs / fluorescent tubes	Hazardous waste	Off-site recycling or disposal (contact *FluoroCycle* for more information[4] if required)
Cleaning chemicals, solvents, lubricants, area wash downs, empty oil/paint drums/chemical containers	Hazardous waste if containers used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid (non-putrescible) waste if containers cleaned by washing or vacuuming.	Transport to comply with the transport of Dangerous Goods Code applies in preparation for off-site recycling or disposal at licensed facility. Discharge to sewer likely to be subject to Trade Waste Agreement with Sydney Water.

For further information on how to determine a waste's classification, refer to the NSW EPA (2014) *Waste Classification Guidelines.*[5]

4.3 Waste Management Overview

4.3.1 Waste Transfer Station (WTS)

The Development will receive commercial and household waste from the Western Sydney region which will subsequently be transported to a licenced waste management facility outside of the region, in accordance with waste management regulations (SLR, 2015). The majority of the material received is waste from commercial waste collection trucks, stationary compactor (packer) hook lift loads, NSW Container Deposit Scheme (CDS) collection trucks and side-loader collections (e.g. 240L mobile garbage bin collections from commercial premises).

Waste delivery vehicles will enter the site from the adjoining Quarry Road, weighing on the incoming weighbridge located adjacent to the office. Delivery vehicles then proceed to the eastern side of the building where they align with one of the roller shutter door entrances on the eastern elevation. The vehicles reverse through one of the rapid acting roller shutter doors, discharge their waste and then drive out of the building, down a ramp and proceed to the south of the transfer station towards the outgoing weighbridge, exiting the site onto Quarry Road.

[2] http://www.batteryrecycling.org.au/home

[3] https://www.mobilemuster.com.au/

[4] http://www.fluorocycle.org.au/ or http://www.environment.gov.au/settlements/waste/lamp-mercury.html

[5] Available online from http://www.epa.nsw.gov.au/wasteregulation/classify-guidelines.htm

Waste offloaded on the tipping floor would be separated into four categories; putrescible, non-putrescible (incl. wood, masonry, rigid plastics, and old corrugated cardboard), CDS material (i.e. glass bottles) and organic food waste. The non-putrescible waste would be sorted for recycling, while the remaining non-putrescible waste would be consolidated with the putrescible waste and transferred into transfer vehicles by a front-end loader which would lift the material over a wall opening for top loading. CDS material will be separated into glass fines and glass cullet, then taken offsite for re-use / recycling (i.e. CSR Insultation and Visy Penrith). The organic food waste is transferred to transfer vehicles for processing. Waste will be transferred from site using B-Doubles, single trailers or via dog and trailer to an appropriately licensed waste management facility in accordance with relevant waste management regulations.

When the RRF is operational, waste deemed suitable (recyclable) would be diverted to the RRF for recycling and recovery of saleable products.

A Waste Monitoring Program will be implemented while the Development operates. Incoming and outgoing waste will be tracked from the site's "In" and "Out" weighbridges. The quantity and type (being either C&I, MSW, CDS or C&D) of waste received will be tracked. The quantity and type of material (targeted recyclables) diverted away from landfill and recovered by the sorting line, will also be tracked. All waste that is monitored via Cleanaway's weighbridge recording system will have the appropriate documentation to report on volume throughput at any given time.

If hazardous or other prohibited waste, such as asbestos, is received at the site, it will be disposed of in accordance with SafeWork NSW, Comcare and NSW Environment Protection Authority (EPA) requirements. Cleanaway staff will receive adequate training in order to be able to recognise, handle and report any hazardous or other prohibited waste received at the site.

4.3.2 Office, Amenity and Maintenance Waste

Operational waste management is proposed to comprise:

- General waste is to be initially collected from within the site office and then placed (daily) in 240 L capacity mobile garbage bins (MGBs) in designated waste storage areas;
- Recycling bins will be provided in the lunch room and beside printers. Printer toner / ink cartridge recycling collection receptacles will be stored for use in designated locations;
- Additional bins will be placed in the changing rooms and amenities areas for general waste collection;
- The 240L bins storing waste or recyclable materials will be located adjacent to the site office for collection by Cleanaway; and
- Recyclable materials will be collected in the site office and then transferred to 240 L co-mingled recycling bins, stored near the general waste bins.

Due to the anticipated small volume of operational waste and recyclable materials to be generated from the site (Table 4), waste and recycling will be collected by Cleanaway once per week, or on an as needed basis. Also, with such small volumes of waste to be collected from the site, waste does not require mechanical compaction.

For servicing convenience and safety, a single, centralised waste storage area positioned outside of the site office is used.

4.4 Estimated Maximum Quantities of Operational Waste

4.4.1 Waste Transfer Station (WTS)

In accordance with the Approval and EPA Environment Protection Licence (EPL) No.20986, the design capacity of the WRMF is 300,000 tonnes per annum, inclusive of the WTS and RRF. The WTS has an approved maximum receiving capacity of 300,000 tpa and the RRF can recycle a maximum of 150,000 tpa of waste. Specific data for the site is managed via the onsite weighbridge.

4.4.2 Office, Amenity and Maintenance Waste

For the purposes of this assessment, SLR adopted the general waste and recycling needs per "Offices", "Café' and "warehouse" as presented in Council's Commercial Waste Generation Rates Guideline (**Table 3**) to estimate the quantities of operational waste and recycling to be generated from the operation of the Development (**Table 4**).

Table 3 Estimated Waste Generation Rates for Different Types of Premises

Type of Premises	Waste	Recycling
Offices	10L / 100m² floor area / day	10L / 100m² floor area / day
Takeaway/Café (pre-packaged food)	150L / 100m² floor area / day	150L / 100m² floor area / day
Warehouse (office)	10L / 100m² floor area / day	10L / 100m² floor area / day

Source: Penrith City Council *Commercial Waste Generation Rates Guideline*

The estimated quantities of operational waste and recycling generated by the Development (**Table 4**) are based on:

- The number and type of offices as presented on the WRMF architectural drawings;
- The waste and recyclable material generation rates presented in **Table 3**;
- The use of 240 L MGBs for weekly waste storage in the office waste storage areas;
- MGB dimensions as per Appendix B of EPA's Better Practice Guidelines for Waste and Recycling Management in Commercial and Industrial Facilities (2012); and
- Once-a-week frequency of waste and recycling collection.

Table 4 Estimated quantity of operational waste and recycling generated weekly

Area	Waste (L)	Recycling (L)
Offices	35	35
Kitchen	20	20
Warehouse	380	380
Total Waste	**435**	**435**

4.5 Waste and Recycling Storage Areas

4.5.1 Waste and Recycling Storage Size and Location

After consideration of the estimated quantities of operational waste and recycling, 240 L MGBs will be appropriate for waste storage and recycling.

The waste / recycling storage area will be of an adequate size to accommodate all waste and recycling associated with operation of the Development. In accordance with Council's DCP, enough space will be provided to allow for the storage, access and manoeuvring of waste bins to facilitate ease of use and servicing.

To allow for ready movement of bins in and out of waste storage areas, a floor area of at least 150% of the total minimum bin Ground Floor area (GFA) should be provided. This also allows for provisional contingency in the event of a surplus of waste occurrence.

If 240 L MGB are used, approximately four x 240 L MGB would be required for weekly operational waste. The dimensions and GFA of an individual 240 L MGB are:

- Height: 1,080 mm;
- Depth: 715 mm;
- Width: 580 mm; and
- GFA of 0.42 m2 (rounded to 0.5 m2)

To accommodate weekly collection of four x 240 L MGB of waste and recycling bins, a minimum area of 3 m2 to 5 m2 is recommended to be designated for storage.

4.5.2 Waste and Recycling Storage Location

The site office will have its own waste and recycling storage area where the waste and recycling MGBs will be stored prior to collection. The storage area will be located adjacent to the site office and will be identified with appropriate signage.

In accordance with Council's DCP, the waste storage area will be located so that it:

- Allows for ease of access for waste collection contractors;
- Is separated from the car parking area and the circulation path of other vehicles;
- Is convenient and accessible to all Cleanaway staff members; and
- Is discreetly located away from public spaces.

4.5.3 Waste and Recycling Storage Design Considerations

In accordance with Council's DCP, the waste and recycling storage will:

- Provide sufficient manoeuvring area on site to allow collection vehicles to enter and leave the site in a forward direction and service the Development efficiently with little or no need to reverse;
- Allows 240 litre bins to be wheeled over the surface, with a maximum grade of 7%.
- Has access to a water outlet for washing purposes, with used wash water discharging to an approved sewer outlet; and
- Suitably signposted so as to ensure appropriate use.

4.5.4 Additional Storage

An additional bulky goods storage area, separately delineated and signposted from operational waste and recycling storage areas, may be established at the Development site. This additional storage area can be utilised for:

- Recyclable electronic goods (e.g. batteries, fluorescent tubes);
- Reusable, bulky items (e.g. crates and pallets); and
- Liquid waste (oils etc). Liquid waste storage areas are to be enclosed, bunded, and drained to an appropriate treatment device or offsite facility, in accordance with the requirements of Sydney Water.

Alternatively, the site manager may consider organising a skip bin to remove separated e-waste as required, or engage a contractor to collect and transport these items for recycling at an NSW EPA licensed facility.

4.6 Waste Separation and Storage

Operational waste from the Development should be separated into a least three (3) primary waste streams, comprising:

- Paper and cardboard;
- Other recyclables; and
- General waste

Separate, dedicated MGBs will be provided at the waste storage area for collection of recyclables. MGBs will be appropriately colour-coded and labelled to enable users to easily identify which waste is to be placed into which bins.

The Standards Australia AS 4123.7-2006 (R2017) Mobile waste containers Part 7: Colours, markings and designated requirements provides recommendations for designated colours for waste bins depending on the type of waste the bins are to receive. The colours that apply to operational waste generated by the Development are:

- Blue: Paper and cardboard;
- Yellow: Recyclables (other than paper and cardboard); and
- Red: General waste.

Each MGB will also be labelled according to the waste they are to receive. Labels approved by the NSW EPA for labelling of waste materials are available online, as are Cleanaway approved labels and these will be used as applicable. A selection of labels prepared by NSW EPA and anticipated to be applicable to operational waste generated by the Development is provided in **Figure 4**.

Figure 2 - Example of labels for MGBs for operational waste

4.7 Communication Strategies

Waste Management initiatives and management measures will be clearly communicated to Cleanaway employees and contractors including cleaners. Benefits of providing this communication include:

- Improved satisfaction with services;
- Increased ability and willingness to participate in recycling;
- Improved amenity and safety;
- Improved knowledge and awareness through standardisation of services;
- Increased awareness or achievement of environmental goals and targets;
- Reduced contamination of recyclables stream;
- Increased recovery of recyclables and organics (where implemented) material; and
- Greater contribution to state-wide targets for waste reduction and resource recovery.

To realise the above benefits, the following communication strategies should be considered by the site manager:

- Use consistent signage and colour coding throughout the development;
- Ensure all employees are informed of correct waste separation and management procedures;
- Provide directional signage to show locations/routes to waste storage areas;
- Clearly label general / comingled waste bins to ensure no cross contamination and to identify the types waste that may be disposed of in each bin; and
- Educate all employees / contractors conducting work on the property ensuring they adhere to this OWMP.

Signs approved by the NSW EPA for labelling of bins and waste storage areas are available online (http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm).

4.8 Monitoring and Reporting

Auditing and visual monitoring of bins and bin storage areas should be undertaken by the site manager (or delegate) at the following frequencies:

- Weekly, within the first two months of operation to ensure the waste management system is sufficient for the operation; and
- Every six months, to ensure waste is being managed appropriately.

Any deficiencies identified in the waste management system, including (but not limited to) unexpected waste volumes, should be rectified by the site manager (or delegate) as soon as practicable.

Otherwise, all waste received via the WTS building will be monitored via the existing weighbridge system onsite.

4.9 Roles and Responsibilities

It is the responsibility of the site manager (or delegate) to implement this OWMP and the responsibility of all employees and contractors to follow the waste management procedure set out by the OWMP. A summary of roles and responsibilities is provided in **Table 5**.

Table 5 Suggested roles and responsibilities

Responsible Person	General Tasks
Site Manager (or delegate)	Ensure the OWMP is implemented throughout the life of the operation.
	Update the OWMP as needed to ensure the plan remains applicable.
	Undertake liaison with and management of waste and recycling collections by contractors.
	Conduct inspections of bins and waste storage areas on a regular basis for condition and cleanliness.
	Organise cleaning and maintenance requirements for all bins and waste storage areas as required.

Responsible Person	General Tasks
	Manage any complaints and non-compliances reported through waste audits etc.
	Ensure effective signage, communication and education is provided to alert new management staff and visitors about the provisions of this OWMP.
	Monitor and maintain signage to ensure it remains clean, clear and applicable.
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
	Manage unexpected waste volumes to mitigate waste overflow in storage areas.
	Responsible for ensuring statutory record-keeping, monitoring and reporting requirements are complied with.
Environmental Management Representative (EMR)	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes.
Cleaners Caretaker	Monitor bins to ensure no overfilling occurs.
	Ensure bins and waste storage areas are kept tidy.
	Transfer waste from offices to waste storage areas as required.
	Cleaning of bins and waste storage areas per Site Manager direction.
Employees	Adhere to all waste management directions as given by the Site Manager (or delegate)

5. OWMP Review

This OWMP will be reviewed and, if necessary, revised in the following circumstances:

- Submission of an Annual Review;
- Submission of a Significant Incident Report;
- Submission of an IEA; or
- Modification to the Development Consent (SSD 7075).

If no changes to the document are required post any of the above, the existing version of the document will remain current and not be replaced.

Appendix A - Development Consents

Table 6 lists the sections within the OWMP that specifically address each of the relevant SSD 7075 Conditions and Statement of Commitments relating to waste management.

Table 6 SSD 7075 Conditions and Statement of Commitments Pertaining to Waste

Condition/Commitment No.	Condition/Commitment	Section Addressing Condition/Commitment
SSD 7075		
B2	From the commencement of operation, the Applicant shall implement a Waste Monitoring Program for the Development. The program must:	Section 4
	a) be prepared by a suitably qualified and experienced person(s) prior to the commencement of operation;	Section 1
	b) include suitable provision to monitor the:	
	(i) quantity, type and source of waste received on-site; and	Section 4
	(ii) quantity, type and quality of the outputs produced on-site.	Section 4
	c) ensure that:	
	(i) all waste that is controlled under a tracking system has the appropriate documentation prior to acceptance at the Site; and	Section 4
	(ii) staff receive adequate training in order to be able to recognise, handle and report any hazardous or other prohibited waste, including asbestos.	Section 4
Statement of Commitments		
EIS Section 7.12.4	An operation WMP will be implemented throughout the life of the operation and will be updated on a regular basis (e.g. annually) to ensure the Plan remains applicable.	This Management Plan Section 5

Appendix B – Leachate Management Protocol