OAKDALE WEST ESTATE

Lots 4C and 4D
Waste Management Plan

Prepared for:

Goodman Property Services (Aust) Pty Limited
The Hayesbery
1-11 Hayes Road
Rosebery NSW 2018

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PREPARED BY

SLR Consulting Australia Pty Ltd
ABN 29 001 584 612
Tenancy 202 Submarine School, Sub Base Platypus, 120 High Street
North Sydney NSW 2060 Australia

T: +61 2 9427 8100
E: sydney@slrconsulting.com www.slrconsulting.com

BASIS OF REPORT

This report has been prepared by SLR Consulting Australia Pty Ltd (SLR) with all reasonable skill, care and diligence, and taking account of the timescale and resources allocated to it by agreement with Goodman Property Services (Aust) Pty Limited (the Client). Information reported herein is based on the interpretation of data collected, which has been accepted in good faith as being accurate and valid.

This report is for the exclusive use of the Client. No warranties or guarantees are expressed or should be inferred by any third parties. This report may not be relied upon by other parties without written consent from SLR.

SLR disclaims any responsibility to the Client and others in respect of any matters outside the agreed scope of the work.

DOCUMENT CONTROL

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CONTENTS

CONTENTS

DOCUMENT REFERENCES

TABLES

FIGURES

CONTENTS

APPENDICES

1 Introduction

1.1 Overview

SLR Consulting has been engaged by Goodman Property Services (Aust) Pty Ltd to provide a waste management plan to support the Development Application for the proposed industrial buildings 4C and 4D at the Oakdale West Industrial Estate (OWIE).

The Development consists of two new warehouse buildings each with ancillary office facilities, external hardstand spaces, staff carparking, landscaping and solar panels.

Approval is requested for the construction, operation and use, and fit-out of the buildings.

Building 4C spans 30,020 m^2 of warehouse space and 1,200 m^2 of office space, creating a total gross lettable area of 31,220 m^2. The building has a proposed ridge height of 14.6m.

Building 4D spans 5,200 m^2 of warehouse space and 400 m^2 of office space, creating a total gross lettable area of 5,800 m^2. The building has a proposed ridge height of 14.6m.

Operations 24 hours a day seven days per week are proposed with a focus on warehouse and industrial use.

The proposed developments comply with MOD 12 of SSD 7348 Concept Plan that is currently with the Department of Planning and Environment for assessment.

The applications will be submitted to Penrith City Council as a local council development application.

The proposed buildings form part of the larger OWIE which comprises 154 ha of land in the Western Sydney Employment Area and is owned by a joint venture between Goodman and Brickworks Limited.

The subject sites are benched, serviced and ready for aboveground construction. SSD 7348 approved the infrastructure to these development pads.

1.2 Objectives

The principal objective of this WMP is to identify all potential waste likely to be generated at the Project site during the site preparation and construction phases, including a description of how waste would be handled, processed and disposed of, or re-used or recycled, in accordance with Council's requirements.

The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste production and maximisation of resource recovery.
- To ensure the appropriate management of contaminated and hazardous waste.
- To assist in ensuring that any environmental impacts during the construction of the Project comply with Council's development consent conditions and other relevant regulatory authorities.

1.3 Review of WMP

This WMP will be reviewed and updated:

- To remain consistent with waste and landfill regulations and guidelines
- If changes are made to site waste and recycling management, or
- To take advantage of new technologies, innovations and methodologies for waste or recycling management.

Copies of the original WMP and its future versions should be retained by the building manager. Changes made to the WMP, as well as the reasons for the changes made, should be documented by the building manager as part of the review process.

2 Project Description

2.1 Overview of Proposed Development

The development will consist of four warehouses. No current tenants are proposed so this is a speculative development. Goodman is aiming for a five star Green Star rating.

Designs for these warehouses are shown in Figure 1 below.

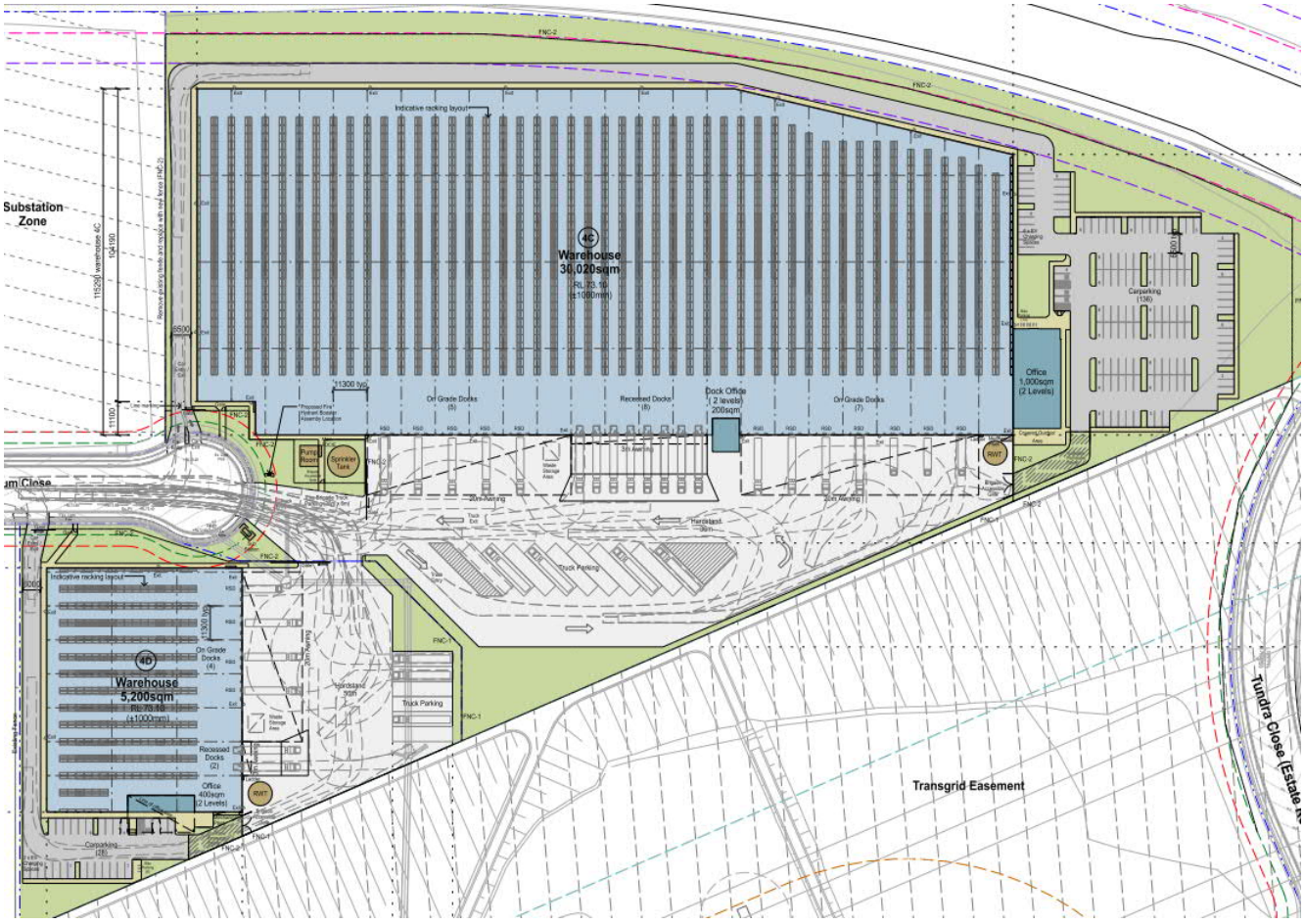

Figure 1 – Lots 4C and 4D

3 Better Practice Waste Management and Recycling

3.1 Waste Management Hierarchy

This WMP has been prepared in line with the waste management hierarchy shown in Figure 2, 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:

- Waste avoidance, prevention or reduction of waste generation. Achievable through better design and purchasing choices.
- Waste reuse, reuse without substantially changing the form of the waste.
- Waste recycling, treatment of waste that is no longer usable in its current form to produce new products.
- Energy recovery, processing of residual waste materials to recover energy.
- Waste treatment, reduce potential environmental, health and safety risks.
- Waste disposal, in a manner that causes the least harm to the natural environment.

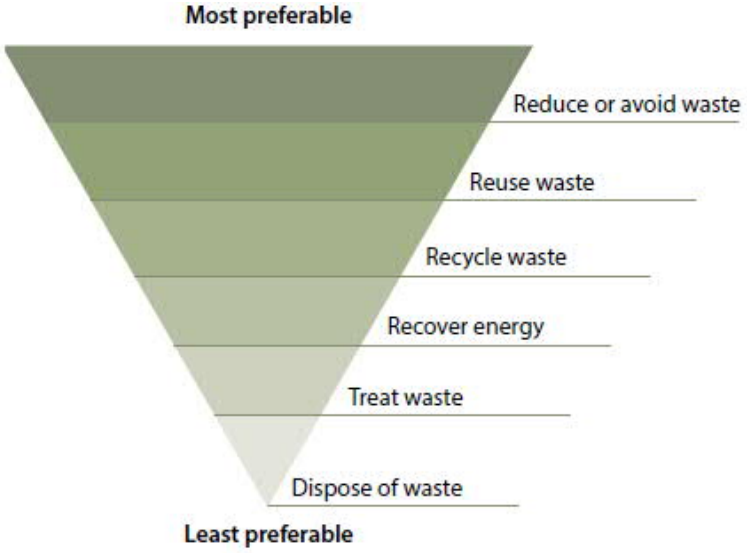

Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

Figure 2 - Waste management hierarchy

3.2 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:

- Improved reputation of an organisation due to social and environmental responsibility.
- Lowered consumption of non-renewable resources.
- Reduced environmental impact, for example, pollution, from materials manufacturing and waste treatment.
- Reduced expenses from lower waste disposal.
- Providing opportunities for additional revenue streams through beneficial reuse.

4 Waste Legislation and Guidance

The legislation and guidance outlined in Table 1 below should be referred to during the site preparation and construction phases of the Project.

Table 1 Legislation and guidance

Legislation and Guidance	Objectives
Council legislation and guidelines	
Penrith Local Environmental Plan (LEP) 2010[1]	The Penrith LEP came into force for the entire Penrith local government area on 25 February 2015 and provides the legal framework of the Penrith Development Control Plan, including land use and development permitted in a set zone. The LEP also contains provisions to conserve local heritage and protect sensitive land.
Penrith Development Control Plan (DCP) 2014[2]	The Penrith DCP came into effect on 17 April 2015 and supports provision of the LEP planning controls by providing detailed planning and design guidelines. The DCP has been prepared in accordance with the Waste Avoidance and Resource Recovery Act 2001. One of the objectives of the DCP is to assist in reducing Penrith's ecological footprint by encouraging the diversion of waste from landfill. This WMP specifically addresses Part C5 – Waste Management of the DCP and the Waste Management Guidelines for Industrial, Commercial and Mixed Use.
Penrith Council's Industrial, Commercial and Mixed-Use Waste Management Guidelines	This document provides further guidance on waste management in commercial and industrial developments.
Waste Strategy 2017-2026, Penrith City Council	Council's waste strategy sets out the waste management targets for the Penrith local government area including working towards reduced waste generation and increased landfill diversion. The strategy was prepared in consultation with the community and informed by waste audit results. The strategy defines the actions required to reach the targets, including actions for waste diversion from landfill, resource recovery, technology innovation, community education and resource recovery facilities.
State and National legislation and guidelines	
Building Code of Australia (BCA) and relevant Australian Standards	The BCA has the aim of achieving nationally consistent, minimum necessary standards of relevant health and safety, amenity and sustainability objectives efficiently.
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.
NSW EPA's Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012	These better practice guidelines present information on waste minimisation and resource recovery as well as information on commonly used waste management provisions. The guidelines also provide benchmarks for assessing waste production rates in Australia.
NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21	The NSW Waste Avoidance and Resource Recovery Strategy 2014-21 is aimed at ultimately "improving environment and community well-being by reducing the environmental impact of waste and using resources more efficiently" by presenting a framework intended to avoid and reduce waste generation, increase recycling, divert more waste from landfill, manage problem waste better, reduce litter and reduce illegal dumping.

[1] https://legislation.nsw.gov.au/#/view/EPI/2010/540

[2] https://www.penrithcity.nsw.gov.au/building-development/planning-zoning/planning-controls/development-control-plans

Legislation and Guidance	Objectives
NSW EPA Resource Recovery Orders and Resource Recovery Exemptions	The NSW EPA has issued a number of resource recovery orders and resource recovery exemptions under the POEO (Waste) Regulation 2014 for a range of waste that may be recovered for beneficial re-use. These waste typically include those from demolition and construction works, as well as operational waste such as food waste. • Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use. • Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.
NSW EPA's Waste Classification Guidelines 2014	The NSW EPA Waste Classification Guidelines assists 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 1997 and is associated regulations.
Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011	The POEO Act 1997 and POEO Amendment Act 2011 are administered by the NSW Environment Protection Authority (NSW EPA) to enable the NSW Government to establish instruments for setting environmental standards, goals, protocols and guidelines. They outline the regulatory requirements for lawful disposal of waste generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.
The Work Health and Safety Regulation 2011	The Work Health and Safety Regulation 2011 provide detailed actions and guidance associated with the topics discussed in The Work Health and Safety Act 2011. The primary aim of the regulation is to protect the health and safety of workers and ensure that risks are minimised in work environments. Workplaces are to ensure that they are compliant with the requirements specified in the regulations. The regulations discuss items such as actions that are prohibited or obligated in work environments, the requirements for obtaining licences and registrations, and the roles and responsibilities of staff in workplaces.
Waste Avoidance and Resource Recovery Act 2001	The Waste Avoidance and Resource Recovery Act 2001 aims to promote waste avoidance and resource recovery and repeals the Waste Minimisation and Management Act 1995. Specific objectives of the Waste Avoidance and Resource Recovery Act 2001 include: • encouraging efficient use of resources • minimising 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 • efficiently funding of waste/resource management planning, programs and service delivery. As of 2016, the addition to the Act of Part 5 defines the legislative framework for the "Return and Earn Container Deposit Scheme" whereby selected beverage containers can be returned to State Government authorities for a monetary refund.

5 Site Preparation and Construction Waste and Recycling Management

5.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPIE (2021) indicates that construction and demolition waste recovery rates in 2018-2019 were 77%.

Additionally, in the interests of Council's additional commitments to waste management controls, the construction and excavation procedures should endeavour to reach the following outlined target from the Penrith DCP:

- Reduce the volume of demolition, construction and fit out waste, including excavation, going to landfill by 76 %.

It is anticipated that the waste minimisation measures in the following sections will assist the Development to meet these targets. Waste reporting and audits can be used to determine the actual percentage of wastes that are being, or have been, recycled during the site preparation, demolition and construction stages of The Development.

5.2 Waste Streams and Classifications

The site preparation and construction of the Project is likely to generate the following broad waste streams:

- Site clearance waste
- Construction waste
- Plant maintenance waste
- Packaging waste, and
- Work compound waste from on-site employees.

A summary of likely waste types generated from site preparation and construction activities, along with their waste classifications and proposed management methods, is provided in Table 2.

For further information on how to classify a waste type refer to the NSW EPA (2014) Waste Classification Guidelines[3]. Further information on managing site preparation and construction waste is available from the NSW EPA website[4].

[3] Available online from https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines

[4] http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition

Table 2 Potential waste types and their management methods

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Site Clearance		
Green waste including timber, pine and particle board	General solid waste (non-putrescible)	Separated, some chipped and stored on-site for landscaping, remainder to landscape supplies or off-site recycling. Stumps and large trees to landfill.
Clean fill	General solid waste (non-putrescible)	On-site re-use
Contaminated fill	To be classified subject to the results of testing	Off-site treatment or disposal to landfill
Excavated natural material (ENM) or virgin excavated natural material (VENM)	General solid waste (non-putrescible)	On-site re-use of topsoil for landscaping of the site, off-site beneficial re-use or send to landfill site.
Construction		
Sediment fencing, geotextile materials	General solid waste (non-putrescible)	Reuse at other sites where possible or disposal to landfill
Concrete	General solid waste (non-putrescible)	Off-site recycling for filling, levelling or road base
Bricks and pavers	General solid waste (non-putrescible)	Cleaned for reuse as footings, broken bricks for internal walls, crushed for landscaping or driveway use, off-site recycling
Gyprock or plasterboard	General solid waste (non-putrescible)	Off-site recycling or returned to supplier
Sand or soil	General solid waste (non-putrescible)	Off-site recycling
Metals such as fittings, appliances and bulk electrical cabling, including copper and aluminium	General solid waste (non-putrescible)	Off-site recycling at metal recycling compounds and remainder to landfill
Conduits and pipes	General solid waste (non-putrescible)	Off-site recycling
Timber	General solid waste (non-putrescible)	Off-site recycling, Chip for landscaping, Sell for firewood Treated: reused for formwork, bridging, blocking, propping or second-hand supplier Untreated: reused for floorboards, fencing, furniture, mulched second hand supplier Remainder to landscape supplies.
Doors, Windows, Fittings	General solid waste (non-putrescible)	Off-site recycling at second hand building supplier
Insulation material	General solid waste (non-putrescible)	Off-site disposal
Glass	General solid waste (non-putrescible)	Off-site recycling, glazing or aggregate for concrete production
Asbestos	Hazardous waste	Off-site disposal at a licenced landfill facility.

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal; contact FluoroCycle for more information[5]
Paint	Hazardous waste	Off-site recycling, Paintback collection[6] or disposal
Synthetic Rubber or carpet underlay	General solid waste (non-putrescible)	Off-site recycling; reprocessed and used in safety devices and speed humps
Ceramics including tiles	General solid waste (non-putrescible)	Off-site recycling at a crushing and recycling company
Carpet	General solid waste (non-putrescible)	Off-site recycling or disposal; reused for landscaping, insulation or equestrian uses
Plant Maintenance		
Empty oil and other drums or containers, such as fuel, chemicals, paints, spill clean ups	Hazardous waste: Containers were previously used to store Dangerous Goods (Class 1, 3, 4, 5 or 8) and residues have not been removed by washing or vacuuming. General solid waste (non-putrescible): Containers have been 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.
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal
Oil filters	Hazardous waste	Off-site recycling
Batteries	Hazardous waste	Off-site recycling, Contact the Australian Battery Recycling Initiative[7] for more information
Packaging		
Packaging materials, including wood, plastic, including stretch wrap or LLPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling. Contact Business Recycling for more information[8]
Work Compound and Associated Offices		
Food Waste	General solid (putrescible) waste	Dispose to landfill with general garbage

[5] Available online from http://www.fluorocycle.org.au/ or http://www.environment.gov.au/settlements/waste/lamp-mercury.html
[6] Available online from https://www.paintback.com.au/
[7] http://www.batteryrecycling.org.au/home
[8] Available online from http://businessrecycling.com.au/search/

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Recyclable beverage containers including glass and plastic bottles, aluminium cans and steel cans	General solid waste (non-putrescible)	Co-mingled recycling at off-site licensed facility or deliver to local NSW container deposit scheme 'Return and Earn' facility[9]
Clean paper and cardboard	General solid waste (non-putrescible)	Paper and cardboard recycling at off-site licensed facility
General domestic waste generated by workers such as soiled paper and cardboard and polystyrene	General solid waste (non-putrescible) mixed with putrescible waste	Disposal at landfill

5.3 Site Preparation Waste Types and Quantities

Bulk earthworks, including for services, and estate road infrastructure have been completed at OWIE. The site for Buildings 4C and 4D is undeveloped and consists of grassy grazing land with some trees. All excavated soil will be retained on site for landscaping.

Section 5.3.1 of the Penrith DCP recommends that measures are taken to minimise site disturbance and limit unnecessary excavation. The Penrith DCP also states that if excess material is transported offsite, Council is to be informed of the quantity, quality, method of transport and where the material will be disposed.

5.4 Construction Waste Types and Quantities

The Penrith DCP does not provide waste generation rates for construction activities. In the absence of readily available construction waste generation rates from Council, SLR has adopted the 'Factory' and 'Office' waste generation rates from Appendix A of The Hills Development Control Plan (DCP) 2012 for estimating the type and quantities of waste generated from construction of the Project.

We have also referred to Light Duty Asphalt Pavements - Design, Specification and Construction 2002 published by the Australian Asphalt Pavement Association in calculating car park waste construction quantities.

The waste generation rates are shown in Table 3.

Table 3 Construction waste generation rates

Rate Type	Floor Area (m^2)	Waste types and quantities (m^3)								
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other	Asphalt	Granular Base
Factory	1,000	0.25	2.10	1.65	0.45	4.80	0.60	0.50		
Office	1,000	5.1	18.8	8.5	8.6	8.8	2.75	5		
Carpark	1,000		0.225						0.3	1.25
Hardstand	1,000		2.1			4.8	0.6	0.5		

[9] Available online from http://returnandearn.org.au/

These waste generation rates are used to estimate the waste generated from the construction of the Project. The anticipated construction waste quantities for the Project are shown in Table 4 below and are based on the following assumptions:

- The areas shown in drawings 22278_OWE_MOD_12_4C_&_4D_DA10_B_Site_&_Warehouse_Plan.pdf
- Operations will be seven days per week

The construction waste quantities anticipated are shown in Table 4 below.

Table 4 Estimated types and quantities of construction waste

Lot	Warehouse	Area (m^2)	Waste types and quantities (m^3)								
			Timber	Concrete	Bricks	Gyprock	Sand and Soil	Metal	Other	Asphalt	Granular Base
4C	Warehouse	30,020	75	630	495	135	1,441	180	150	-	-
	Offices	1,200	61	226	102	103	106	33	60	-	-
	Car park	7,391	-	17	-	-	-	-	-	22	92
	Hard stand	12,088	-	254	-	-	580	73	60	-	-
4D	Warehouse	5,200	13	109	86	23	250	31	26	-	-
	Office	400	20	75	34	34	35	11	20	-	-
	Car park	1,681	-	4	-	-	-	-	-	5	21
	Hard stand	4,685	-	98	-	-	225	28	23	-	-
Total		62,665	170	1,413	717	296	2,636	356	340	27	113

Council's completed waste management plan is attached in Appendix A.

5.5 Waste Avoidance

In accordance with the Penrith DCP and better practice waste management, the Building Contractor, Building Designer and/or equivalent roles should:

- Develop a purchasing policy based on the approximate quantities of materials to be used so that the correct quantities are purchased.
- Arrange for delivery of materials on an 'as needed' basis to avoid material degradation through weathering and moisture damage.
- Communicate strategies to handle and store waste to minimise environmental, health and amenity impacts.
- Select materials with a low environmental impact over the lifecycle of the building.
- Choose timber from certified plantations and avoid unsustainable timber imports including western red cedar, oregon, meranti, luan or merbau.
- Use leased equipment rather than purchase and disposal.
- Minimise site disturbance and unnecessary excavation.
- Incorporate existing trees and shrubs into the landscape plan.

- Grouping wet areas together to minimise the amount of pipe work required.
- Design the Project to require standard material sizes or make arrangements with manufacturing groups for the supply of non-standard material sizes.
- Design works for de-construction.
- Reduce packaging waste by:
  - Returning packaging to suppliers where practicable to reduce waste further along the supply chain
  - Purchasing in bulk
  - Requesting cardboard or metal drums rather than plastics
  - Requesting metal straps rather than shrink wrap, and
  - Using returnable packaging such as pallets and reels.
- Use prefabricated materials.
- Select materials for Project works with low embodied energy properties or materials that have been salvaged or recycled for the construction of the Project including concrete that utilises slag and fly ash content, structural and reinforced steel that uses recycled steel content or bulk insulation products that contain recycled content, such as recycled glass in glass-wool.
- Preferentially use paints, floor coverings and adhesives with low VOC (volatile organic compound) content.
- Reduce the use of polyvinyl chloride products.
- Implement measures to prevent the occurrence of windblown litter, dust and stormwater pollution.
- Ensure subcontractors are informed of and implement site waste minimisation and management procedures.

5.6 Reuse, Recycling and Disposal

Effective management of construction materials and construction and demolition waste, including options for reuse and recycling where applicable and practicable, will be conducted. Only wastes that cannot be cost effectively reused or recycled are to be sent to landfill or appropriate disposal facilities.

Refer to Table 2 for an outline of the proposed reuse, recycling and disposal methods for potential site preparation and construction waste streams generated by the Project.

In accordance with the Penrith DCP and best practice waste management, the following specific procedures should be implemented:

- Ensure the site's project management of the site includes minimising waste generation, requiring the appropriate storage and timely collection of waste materials, and maximising re-use or recycling of materials.
- Store wastes on site appropriately to prevent cross-contamination and guarantee the highest possible re-use value.
- Consider the potential of any new materials to be re-used and recycled at the end of the Project's life.
- Determine opportunities for the use of prefabricated components and recycled materials.

- Strip topsoil from areas designated for excavation and store it on site for reuse.
- Reuse excavation material will be on-site where possible.
- Re-use formwork where appropriate.
- Retain roofing material cut-offs for re-use or recycling.
- Retain used crates for storage purposes unless damaged.
- Recycle cardboard, glass and metal wastes.
- Recycle or dispose of solid waste timber, brick, concrete, asphalt and rock, where such waste cannot be re-used on site, to an appropriately licenced construction and demolition waste recycling facility or an appropriately licenced landfill.
- Dispose of all asbestos and/or hazardous wastes in accordance with SafeWork NSW and NSW EPA requirements.
- Deliver batteries and florescent lights to drop off-site recycling facility.
- Return excess materials and packaging to the supplier or manufacturer.
- Dispose of all garbage via a council approved system.

5.7 Waste Storage and Servicing

5.7.1 Waste Segregation and Storage

As outlined in the Penrith DCP, waste materials produced from site preparation and construction activities are to be separated at the source and stored separately on-site. It is anticipated that the Project will provide enough space on-site for separate storage, for example, separate skip bins or appropriately managed stockpiles, of the following waste types:

- Bricks, concrete and scrap metal
- Metal and steel, in a condition suitable for recycling at metal recycling facilities
- Timber
- Glass
- Hardstand rubble
- Uncontaminated excavation spoil, if present
- Contaminated excavation spoil, if present
- Hazardous waste, if present
- Paper and cardboard
- General co-mingled recycling waste, and
- Non-recyclable general waste.

If there is insufficient space on-site for full segregation of waste types, the Site Manager, or equivalent role, should consult with the waste and recycling collection contractor to confirm which waste types may be co-mingled prior to removal from the site.

5.7.2 Waste Storage Areas

Waste storage areas will be accessible and allow enough space for storage and servicing requirements. The storage areas will also be flexible in order to cater for change of use throughout the project. Where space is restricted, dedicated stockpile areas are to be delineated on the site, with regular transfers to dedicated skip bins for sorting.

All waste placed in skips or bins for disposal or recycling will be adequately contained to ensure that the waste does not fall, blow, wash or otherwise escape from the site. Waste containers and storage areas are to be kept clean and in a good state of repair.

As detailed in the Penrith DCP, areas designated for waste storage should:

- Allow unimpeded access by site personnel and waste disposal contractors
- Consider environmental factors which could potentially cause an impact to the waste storage, such as slope, drainage and the location of watercourses and native vegetation
- Allow enough space for the storage of garden waste and other waste materials on-site
- Employ adequate environmental management controls to prevent off-site migration of waste materials and contamination from the waste. For example, consideration of slope, drainage, proximity relative to waterways, stormwater outlets and vegetation
- Consider visual amenity, safety, accessibility and convenience in their selection, and
- Not present hazards to human health or the environment.

5.7.3 Waste Servicing and Record Keeping

The Site Manager or equivalent role is to:

- Arrange for suitable waste collection contractors to remove any construction waste from site
- Ensure waste bins are not filled beyond recommended filling levels
- Ensure that all bins and loads of waste materials leaving site are covered
- Maintain waste disposal documentation detailing, at a minimum:
- Descriptions and estimated amounts of all waste materials removed from site
- Details of the waste and recycling collection contractors and facilities receiving the waste and recyclables
- Records of waste and recycling collection vehicle movements, for example, date and time of loads removed, licence plate of collection vehicles, tip dockets from receiving facility, and
- Waste classification documentation for materials disposed to off-site recycling or landfill facilities.
- Ensure lawful waste disposal records are readily accessible for inspection by regulatory authorities such as Council, SafeWork NSW or NSW EPA, and
- Remove waste during hours approved by Council.

If skips and bins are reaching capacity, removal and replacement should be organised as soon as possible. All site generated building waste collected in the skips and bins will leave the site and be deposited in the approved site lawfully able to accept them.

5.8 Site Inductions

All staff, including sub-contractors and labourers, employed during the site preparation and construction phases of the Project must undergo induction training regarding waste management for the Site.

Induction training is to cover, as a minimum, an outline of the WMP including:

- Legal obligations and targets
- Emergency response procedures on-site
- Waste priorities and opportunities for reduction, reuse and recycling
- Waste storage locations and separation of waste
- Procedures for suspected contaminated and hazardous wastes
- Waste related signage
- The implications of poor waste management practices, and
- Responsibilities and reporting, including identification of personnel responsible for waste management and individual responsibilities.

It is the responsibility of the Site Manager or Building Contractor to notify Council of the appointment of waste removal, transport or disposal contractors.

5.9 Signage

Standard signage is to be posted in all waste storage and collection areas. All waste containers should be labelled correctly and clearly to identify stored materials.

Signs approved by the NSW EPA for labelling of waste materials are available online[10] and should be used where applicable. A selection of signs prepared by NSW EPA is provided in Figure 3.

Figure 3 - Examples of NSW EPA labels for waste skips and bins

[10] NSW EPA approved waste materials signage https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs

5.10 Monitoring and Reporting

The following monitoring practices are to be undertaken to improve site preparation and construction waste management and to obtain accurate waste generation figures:

- Conduct waste audits of current projects where feasible.
- Note waste generated and disposal methods.
- Look at past waste disposal receipts.
- Record this information to track waste avoidance, reuse and recycling performance and to help in waste estimations for future waste management plans.

As detailed in the Penrith DCP, records of waste quantities recycled, reused or contractor removed are to be maintained. This can include dockets or receipts verifying recycling and disposal in accordance with this WMP. This evidence should also be presented to regulatory bodies when required.

Daily visual inspections of waste storage areas will be undertaken by site personnel and inspection checklists and logs recorded for reporting to the Site Manager on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.

Waste audits are to be carried out by the Building Contractor to gauge the effectiveness and efficiency of waste segregation procedures and recycling and reuse initiatives. Where audits show that the above procedures are not carried out effectively, additional staff training will be undertaken and signage re-examined.

5.11 Roles and Responsibilities

All personnel have a responsibility for their own environmental performance and compliance with all legislation. It will be the responsibility of the Building Contractor to implement the WMP, and an employee and subcontractor responsibility to ensure that they always comply with the WMP.

Where possible, an Environmental Management Representative should be appointed for the Project. Suggested roles and responsibilities are provided in Table 5.

Table 5 Suggested roles and responsibilities for site preparation and construction waste management

Responsible Person	General Tasks
Construction Site Manager	Ensuring plant and equipment are well maintained.
	Ordering only the required amounts of materials.
	Keeping materials segregated to maximise reuse and recycling.
	Ultimately responsible for routinely checking waste sorting and storage areas for cleanliness, hygiene and safety issues, contaminated waste materials, and also ensuring that all monitoring and audit results are well documented and carried out as specified in the WMP.
Construction Environmental Manager or equivalent	Approaching and establishing the local commercial reuse of materials where reuse on-site is not practical.
	Establishing separate skips and recycling bins for effective waste segregation and recycling purposes.
	Ensuring staff and contractors are aware of site requirements.
	Provision of training of the requirements of the WMP and specific waste management strategies adopted for the Project.
	Contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements.

Responsible Person	General Tasks
	Approval of off-site waste disposal locations and checking licensing requirements.
	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid wastes.
	Monitoring, inspection and reporting requirements.

Daily visual inspections of waste storage areas may be delegated to other on-site staff. All subcontractors will be responsible for ensuring that their work complies with the WMP through the project induction and contract engagement process.

6 Operational Waste and Recycling Management

6.1 Targets for Resource Recovery

Targets for new development are expected to contribute to state-specific targets. The NSW Waste and Sustainable Materials Strategy 2041 (DPIE, 2021) sets a target of 80% average recovery rate from all waste streams by 2030. Analysis by DPIE (2021) indicates that the commercial and industrial waste recovery rate in 2019 was 53%.

It is anticipated that the waste minimisation measures in the following sections will assist the Development to achieve this recycling rate. Waste reporting and audits can be used to determine the actual percentage of wastes that are being or have been recycled during operation.

6.2 Council Requirements

6.2.1 Penrith Development Control Plan 2014

Section C5 Waste Management of the Penrith DCP provides the following specifications for this kind of development.

Applicants are to submit a waste management plan when lodging a development application. The Waste Management Plan must be supported by scaled waste management drawings that are to assist in demonstrating compliance with the provisions of the Plan and the Industrial, Commercial and Mixed-Use Waste Management Guidelines issued by Council.

The Waste Management Plan must include details of:

- The types and quantities of waste and recyclables likely to be generated
- How waste and recyclables will be stored and treated on site
- How the residual non-reusable or non-recyclable wastes and recyclables are to be disposed of
- How ongoing waste management will operate once the development is complete for the life of the development

Other relevant requirements specified in the DCP include:

- There must be a waste bin storage area that is of sufficient size to accommodate all required waste bins associated with the development.
- All waste streams must be catered for, including general waste, bulky waste and recyclable waste.

- Sufficient space must be provided onsite to ensure that adequate room is provided to manoeuvre, clean and maintain all waste and recycling bins for the development.
- The waste bin storage area is to be located where its use and operation will not adversely impact the amenity of development occupants in terms of noise and odour.
- The layout of the waste bin storage area is to be designed so that the area is free from obstructions so not to restrict the movement and servicing of the bins.
- Waste storage and collection areas should be:
  - Flexible in their design so as to allow for future changes in the operation, tenancies and uses
  - Located away from primary street frontages, where applicable
  - Suitably screened from public areas so as to reduce the impacts of noise, odour and visual amenity and
  - Designed and located to consider possible pedestrian and vehicular traffic hazards likely to be caused by the storage and collection of waste.
- Should a collection vehicle be required to enter the property, the driveway and manoeuvring area must be suitable for a collection vehicle in terms of both its strength and design.
- The system for waste management must be compatible with the collection service(s) to be used whether Council or private contractor.
- Swept paths demonstrating adequate manoeuvring area are to be provided with the application.

6.2.2 Penrith Council's Industrial, Commercial and Mixed-Use Waste Management Guidelines

This document provides further guidance on waste management in commercial and industrial developments.

New commercial and industrial developments should provide a waste management system that is responsive to the development's need.

To ensure new developments are able to access a waste service in an efficient and effective manner, the following will be taken into consideration in the assessment of development applications:

- Site planning of the development accommodates on-site waste collection and allows the waste collection vehicle to enter and exit, manoeuvre within the site and access the nominated collection point in a safe and efficient manner.
- Site planning of the development ensures amenity and safety of all users (tenants, caretakers, cleaners and waste collection staff) at all stages of the waste management process.
- Waste management system selection ensures that it is safe and convenient for tenant use; and
- Adequate waste storage areas are provided within the development to store all required waste bins.
- The collection vehicle must be able to safely and efficiently access the site and the nominated collection point to perform on-site waste collection.
- There must be sufficient manoeuvring area on-site to allow the collection vehicle to enter and exit the site in a forward direction and service the development efficiently with little or no need to reverse.

- Scaled architectural plans are required to support the development application which demonstrate the site's entry point, vehicle's route of travel and manoeuvring comply with a standard waste collection vehicle
- Swept path models to be provided illustrating how a standard waste collection vehicle will enter, service and exit the site. A 0.5 m unobstructed clearance is required from all obstructions for the vehicle's ingress and egress manoeuvres. The model to provide on-street parking on both sides of the road adjacent to the development to demonstrate unobstructed access during a 'business as usual' configuration.
- The route of travel of the collection vehicle to the designated loading bay is to satisfy the dimensions of standard waste collection vehicle.
- To support unobstructed access adequate driveways and ramps of sufficient strength are required to support waste collection vehicle movements.
- A structural engineer's report is required to be submitted accompanying the Waste Management Plan. The report to confirm all infrastructure used for vehicle ingress and egress movements can support the vehicle's 'gross weight'.
- All development applications to be submitted with accompanying 'Plan of Operations', outlining proposed; Bin Infrastructure Sizes, Collection Frequency, Waste Collection Vehicle Dimensions, Hours of Collection and Access to Waste Collection Room.

All developments must have a waste collection room integrated wholly within the development's built form. The waste storage area must also:

- Be large enough to accommodate all the bins required plus 0.2 m of space between bins to allow adequate manoeuvrability.
- Have 1.8 m unobstructed clearance zone between the stored bins and the entrance to permit access and manoeuvrability.
- Have a suitable dual door access for the service of bins with a minimum width of 1.8 m and accessed by a minimum 1.8 m unobstructed access corridor.
- Be located within close proximity to the on-site loading bay.
- Be fully enclosed, walled and not permit through access to other on-site waste infrastructure.
- Have a waterproofed, non-slip, sealed floor in accordance with the Building Code of Australia to permit the use of wash facilities.
- Have a graded floor a central drainage point connected to the sewer, enabling all waste to be contained and safely disposed of.
- Be partitioned and enclosed with a minimum 2.7 m unobstructed internal room height in accordance with the Building Code of Australia.
- Be provided with an adequate supply of water through a centralised mixing valve and hose cock.
- Have adequate lighting and natural or mechanical ventilation in accordance with the Building Code of Australia.

The Guidelines shows the dimensions of a rear-loading waste collection vehicle are the same as those for a standard heavy rigid vehicle as identified in Australian Standard 2890.2:2018 Parking facilities, Part 2: Off-street commercial vehicle facilities. These are shown in Table 6 below.

Table 6 Heavy vehicle dimensions

Vehicle Element	Rear Lift Specifications	Front Lift Specifications
Overall Length (m)	10.5	10.5
Operational Length (m)	12.5	12.5
Design Width (m)	2.8	2.8
Design Height (m)	3.7	4.1
Operational Height (m)		+4.5m (specific to bins proposed)[11]
Swept Circle (m)	22.5	22.5
Clearance (travel height) (m)	4.5	4.5
Roadway/ramp grade (max)	1:6.5 (15.4%)	1:6.5 (15.4%)
Rate of change of grade (max)	1:16 (6.25%) in 7.0 m of travel	1:16 (6.25%) in 7.0 m of travel
Gross Weight (max tonnes)	28.0	28.0
Front Chassis Clearance	13º	13º
Rear Chassis Clearance	16º	16º

These are also shown for rear lift vehicles in Figure 4 below and for front lift vehicles in Figure 5.

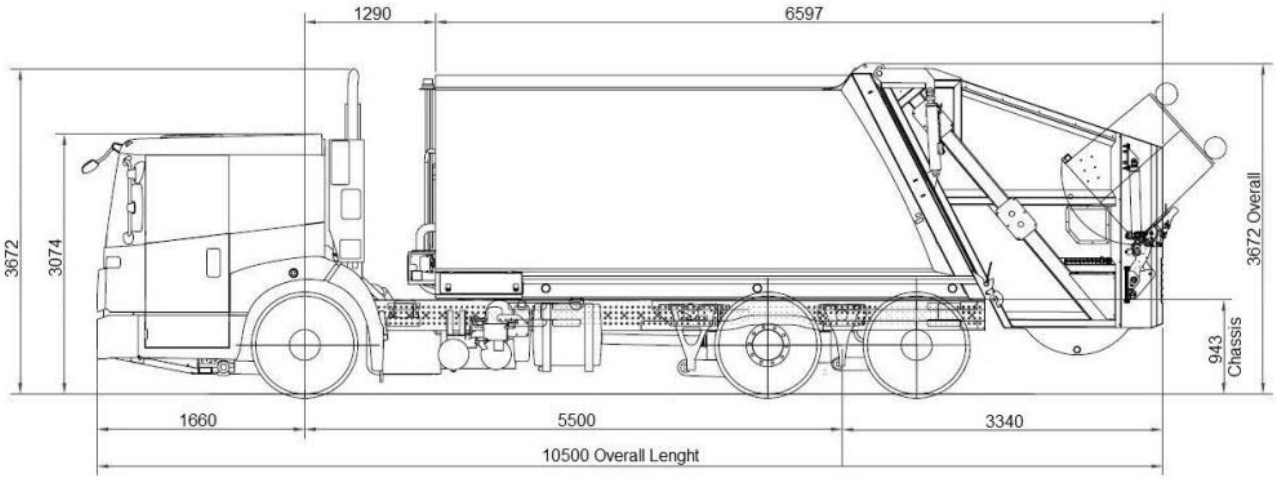

Figure 4 - Rear lift collection vehicle dimensions

[11] Front lift collection vehicles typically require at least 6.1 m overhead clearance

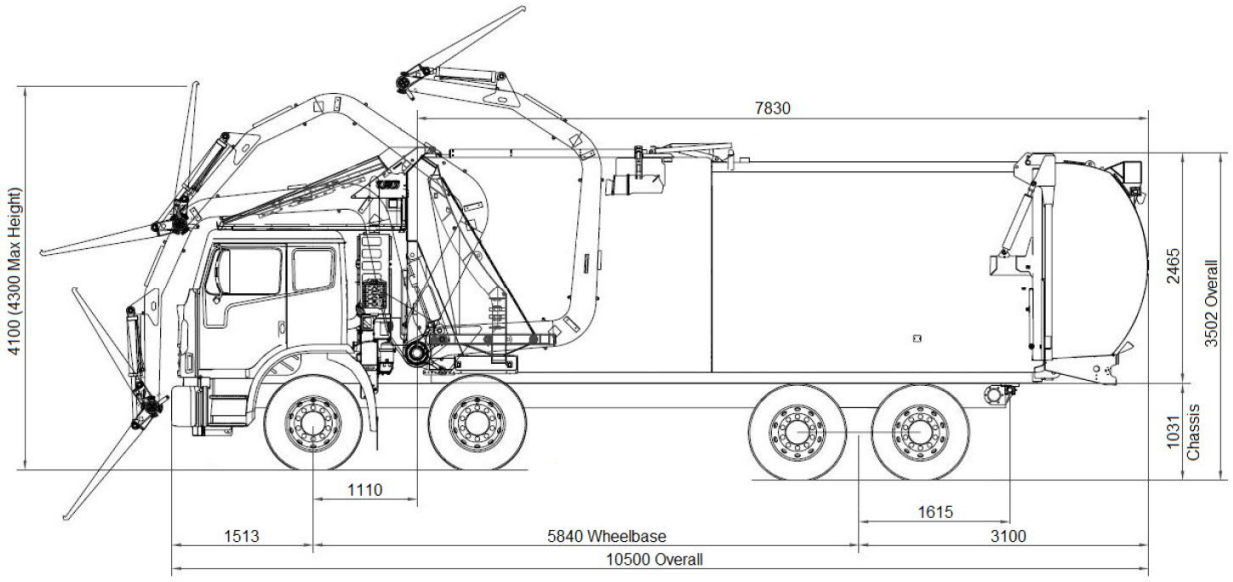

Figure 5 - Front lift collection vehicle dimensions

The dimensions for vehicles used by a particular contractor are likely to be similar but may differ in detail.

Please note that heavy vehicle compliance and access to the waste storage area should be undertaken by a traffic specialist.

6.3 Waste Streams and Classifications

The operation of the Development is likely to generate the following broad waste streams:

- Domestic type waste generated by employees, including food waste
- Bulk packaging waste, including polystyrene, plastic wrapping and cardboard boxes
- Office waste
- Garden organic waste from landscaped areas
- Bulky waste items such as furniture and e-waste.

Potential waste types, their associated waste classifications, and management methods are provided in Table 11. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines. Recycling drop off locations and contacts can be found on https://businessrecycling.com.au/ for each waste type.

Table 7 Potential waste types, classifications and management methods for operational waste

Waste Types	NSW EPA Classification	Proposed Management Method
Clean office paper	General solid (non-putrescible) waste	Paper recycling at off-site licensed facility
Cardboard including bulky cardboard boxes	General solid (non-putrescible) waste	Cardboard recycling at off-site licensed facility
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid (non-putrescible) waste	NSW container deposit scheme 'Return and Earn'; container recycling at off-site licensed facility

Waste Types	NSW EPA Classification	Proposed Management Method
Food waste	General solid (putrescible) waste	Donate, if suitable, alternatively compost on or off-site or dispose to landfill with general garbage
Batteries	Hazardous waste	Off-site recycling; alternatively contact the Australian Battery Recycling Initiative for more information
Mobile Phones	Hazardous waste	Off-site recycling; can be taken to several locations through the Mobile Muster program. Contact Mobile Muster for more information
Bulky polystyrene	General solid (non-putrescible) waste	Off-site recycling or disposal at landfill
Furniture	General solid (non-putrescible) waste	Off-site reuse or disposal to landfill
E-waste	Hazardous waste	Off-site recycling
Printer toners and ink cartridges	Hazardous waste	Off-site recycling, free disposal box or bags and pickup service exists for printer toners and ink cartridges
Packaging materials, including wood, plastic, including stretch wrap or LDPE, cardboard and metals	General solid waste (non-putrescible)	Off-site recycling
Wooden or plastic crates and pallets	General solid waste (non-putrescible)	Reused for similar projects, returned to suppliers, or off-site recycling.
Sanitary waste, nappies	General solid (putrescible) waste	Contractor disposal at licensed facility
General garbage, including non-recyclable plastics	General solid (putrescible and non-putrescible) waste	Disposal at landfill
Spent smoke detectors	General solid (non-putrescible) waste, or Hazardous waste (some commercial varieties)	Disposal to landfill, or off-site disposal at licensed facility
Glass, other than containers	General solid (non-putrescible) waste	Off-site recycling
Light bulbs and fluorescent tubes	Hazardous waste	Off-site recycling or disposal, contact FluoroCycle for more information
Air-conditioning parts and filters	General solid (non-putrescible) waste	Off-site recycling or disposal to landfill
Garden organics - lawn mowing, tree branches, hedge cuttings, leaves	General solid (non-putrescible) waste	Reuse on-site or contractor removal for recycling at licenced facility

6.4 Estimated Quantities of Operational Waste

SLR has adopted the 'Offices' and 'Warehouse' waste generation rates from Penrith Council's Industrial, Commercial and Mixed-Use Waste Management Guidelines for estimating the type and quantities of waste generated from the operational activities of the Project. The operational waste generation rates used are shown below in Table 8.

Table 8 Waste generation rates applied to the operations of the Project

Type of Premises	General Waste Generation (L/100 m^2/day)	Recycling Generation (L/100 m^2/day)
Warehouse	10	10
Offices	10	10

Using the waste generation rates in Table 8 above, the approximate weekly waste quantities for the Project have been calculated. The operational waste quantities were additionally calculated based on the assumptions below:

- The floor areas shown in the drawings in 22278_OWE_MOD_12_4C_&_4D_DA10_B_Site_&_Warehouse_Plan.pdf
- The composition of the warehouse recycling stream is 100% cardboard
- The composition of the office waste stream is 98% paper and 2% recyclable containers[12] and
- A week comprises seven days of operation.

The estimated quantities of operational waste generated by the Project are shown in Table 9.

Table 9 Estimated quantities of operational general waste and recycling

Warehouse	Project area	Area (m^2)	(L/day)		(L/week)			
			General Waste	Recycling	General Waste	Cardboard Recycling	Paper Recycling	Recyclable Containers
4C	Warehouse	30,020	3,002	3,002	21,014	21,014		
	Office	1,000	100	100	700		683	17
	Dock office	200	20	20	140		137	3
	Total	31,020	3,122	3,122	21,854	21,014	820	20
4D	Warehouse	5,200	520	520	3,640	3,640		
	Office	400	40	40	280		273	7
	Total	5,600	560	560	3,920	3,640	273	7

6.5 Waste Storage Area Size

6.5.1 Garbage and Recycling Bins

The waste storage area for the Project must be large enough to adequately store all quantities of operational waste and recycling between collections. Given the nature of the development and its size and scope, a front lift waste collection service is the most likely. The most common front lift bin capacity is 3 m^3 and these have been assumed when calculating bin numbers and storage space. We have also included 240 L bins for office paper, recyclable containers and batteries to comply with Green Star requirements to add an additional waste stream.

All waste storage area calculations have considered the bin dimensions listed in the Penrith DCP, as outlined in Table 10.

Table 10 Dimensions and approximate footprint of bins

Bin Capacity	Height (mm)	Depth (mm)	Width (mm)	Footprint (m^2)
3 m^3	1,540	1,520	2,060	3.13
240 L	1100	750	600	0.45

[12] Industry fact sheets - Commercial offices EPA 2012/0341 November 2012 ISBN 978-1-74293-876-9

To allow for ready movement of bins into and out of the bin storage area, the bin storage area is to provide a floor area of at least 200% of the total minimum bin footprint. This can also act as a contingency in the event of spikes in waste generation. Additionally, in accordance with the Penrith DCP, an additional 0.2 m is to be permitted between the bins to allow for manoeuvrability. This has been considered in the calculation of the waste storage area for each of the buildings in the Project.

The recommended storage areas do not include consideration for the storage of bulky waste. For the additional storage space for bulky waste, refer to Section 6.5.2.

The estimated number of bins required for weekly storage of operational waste and recycling generated by the Project are in Table 11 and are based on:

- The estimated quantities of operational waste and recycling as shown in Table 9
- Bin dimensions from the Penrith DCP as shown in Table 10.

Table 11 Recommended number of bins and storage area

Warehouse	Bin Capacity					Collection Frequency per Week					Number of Bins Required					Recommended Storage Area including Manoeuvring (m^2)
	Garbage	Cardboard Recycling	Office Paper	Recyclable Containers	Batteries	Garbage	Cardboard Recycling	Office Paper	Recyclable Containers	Batteries	Garbage	Cardboard Recycling	Office Paper	Recyclable Containers	Batteries	
4C	3 m^3		240 L			4	4	4	As required		2	2	1	1	1	27.7
4D	3 m^3		240 L			2	2	2			1	1	1	1	1	15.2

6.5.2 Bulky Waste

As outlined in the Penrith DCP, additional storage space for the bulky waste stream must be provided. This stream includes broken pallets, broken furniture, e-waste and other materials that cannot be disposed of in the general or recyclable waste stream.

Council's guidelines do not provide storage area dimensions for bulky waste. In the absence of dimensions provided by Council, SLR recommends 8 m^2 to be allocated for bulky waste storage for each warehouse. Therefore, in addition to the recommended waste storage area noted in Table 11, the total waste storage area recommended for the Project is identified in Table 12 below.

Table 12 Total recommended storage area for operations of the Project

Lot	Recommended Storage Area (m^2)		
	Waste and Recycling Bins	Bulky waste	Total Storage Area
4C	27.7	8	35.7
4D	15.2	8	23.2

This additional space can also act as a contingency in the event of spikes in waste generation and allow for additional bins. Depending on the Project's operations, this may include additional bins for the separate storage of items such as hard and soft plastics, timber, glass and metals and aluminium. Management may consider arranging a hook bins as required to remove bulky waste items.

6.6 Waste storage area locations

The drawings show waste storage areas for each of the four warehouses. There is more than enough space at each warehouses for each storage. The proposed storage locations are shown in Figure 6 below.

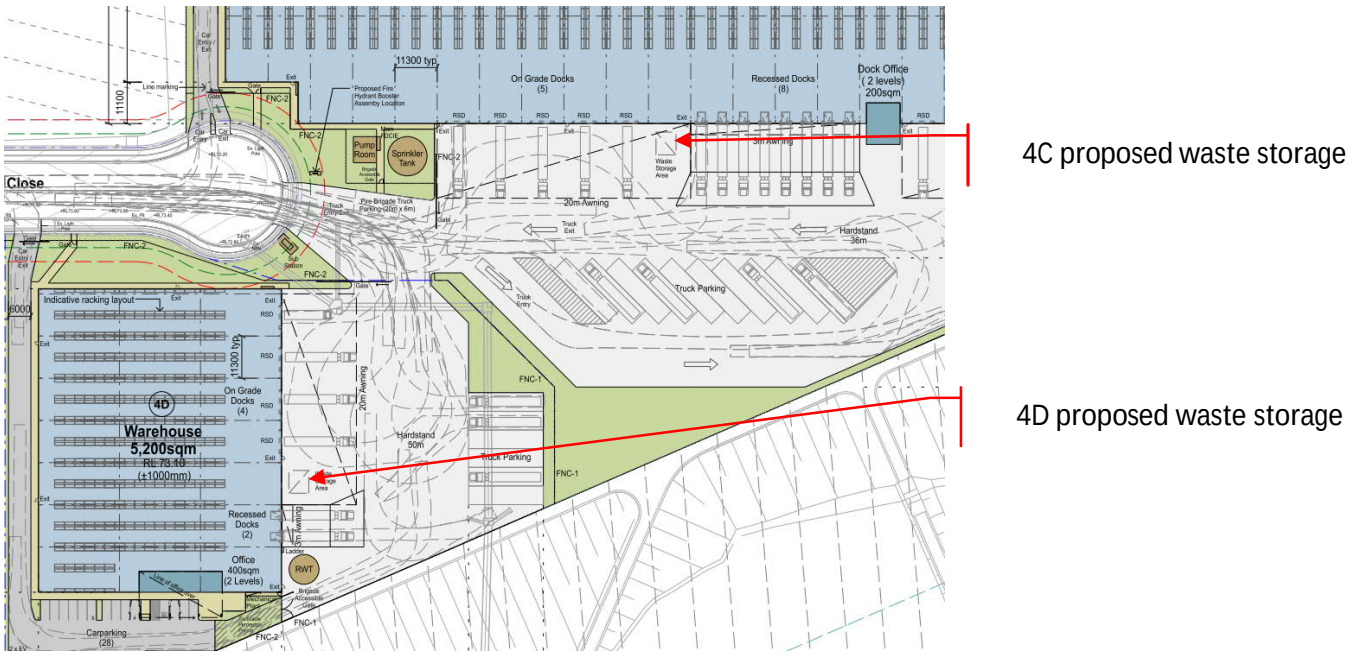

Figure 6 – Proposed waste storage areas

6.7 Waste Vehicle Access

The following access provisions will apply for collections:

- Collection vehicles will be able to enter and exit the site in a forward direction
- Unobstructed access, adequate driveways and ramps of sufficient strength to support waste collection vehicle have been allowed for.

6.8 Waste Avoidance, Reuse and Recycling

6.8.1 Waste avoidance

Waste avoidance measures include:

- Returning packaging materials like cardboard to the suppliers through the services of the supplier delivery trucks, allowing the reduction of waste further along the supply chain
- Providing ceramic cups, mugs, crockery and cutlery rather than disposable items
- Bulk purchasing and the purchasing of items that use minimal packaging
- Presenting all waste reduction initiatives to staff and tenants as part of their induction program, and
- Leasing equipment and machinery rather than outright purchase and disposal.

6.8.2 Re-use

Possible re-use opportunities include establishing systems with in-house and supply chain stakeholders to transport products in re-useable packaging where possible.

6.8.3 Recycling

Recycling opportunities include:

- Collecting and recycling e-wastes
- Printer toners and ink cartridges, if purchased, are collected in allocated bins for appropriate contractor recycling
- Paper recycling trays provided in communal and staff areas for scrap paper collection and recycling
- Providing separate receptacles for general waste, recycling and paper and cardboard throughout public areas, as well as within staff areas, to encourage source-separation of waste streams
- Work with tenants to investigate opportunities for the use of recycled paper bags or reusable bags in place of plastics bags
- Separating, by a reasonable distance, the storage areas for recyclables from the general waste storage areas to avoid cross contamination, and
- Development of 'buy recycled' purchasing policy.

6.9 Communication Strategies

Education and communication on waste management initiatives and measures will be regularly and clearly conveyed to staff, cleaners and visitors. 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 which can incur a collection contractor penalty fee
- Increased recovery of recyclables and organics material, if implemented, and
- Greater contribution to state-wide targets for waste reduction and resource recovery.

To realise these benefits, the following communications strategies are recommended for the Facilities Manager:

- Use consistent signage and colour coding throughout the Development
- Ensure all staff are informed of correct waste separation and management procedures
- Provide directional signage to show locations and routes to waste storage areas
- Repair signs and labels promptly to avoid a breakdown in communication
- Clearly label general and comingled waste bins to ensure no cross contamination and to identify the types of waste that may be disposed of in each bin, and

- Educate all staff and contractors associated with the Development, ensuring they adhere to this WMP.

6.10 Signage

Signs which clearly identify waste management procedures and provisions to contractors, staff and visitors will be posted at the Development as appropriate.

The design and use of safety signs will comply with Australian Standard AS 1319 Safety Signs for the Occupational Environment and clearly describe the types of materials designated for each bin.

Colour-coded and labelled bin lids are necessary for identifying bins and the Australian Standard AS 4123.7-2006 (R2017) Mobile waste containers Part 7: Colours, markings, and designation requirements provides recommendations for the designated colours for waste bins depending on the type of waste the bins are to receive.

All bin signage should also follow the NSW EPA's standard signage.

Other key signage considerations include:

- Clear and correct labelling on all waste and recycling bins, indicating the correct type or types of waste that can be placed into a given bin, as shown in Figure 7 below
- Signposts and directions to location of waste storage areas
- Clear signage in all waste storage areas to instruct users how to correctly separate waste and recycling
- Maintaining a consistent style colour scheme that complies with AS 4123, and a system for signs throughout the Development, and
- Emergency contact information for reporting issues associated with waste or recycling management.

Figure 7 - Example NSW EPA labels for ongoing waste

6.11 Roles and Responsibilities

It is the responsibility of the Facilities Manager, or equivalent role, to implement this WMP and a responsibility of all tenants and staff to follow the waste management procedures set out by the WMP. SLR recommends that all subcontractors have the roles and responsibilities of all waste management personnel identified and The Development's waste management system clearly explained. A summary of recommended roles and responsibilities are provided in Table 13.

Suggested roles and responsibilities for site preparation, demolition and construction waste management

Table 13 Suggested operational waste-related roles and responsibilities

Responsible Person	General Tasks
Facilities Manager or equivalent role	Ensure the WMP is implemented throughout the life of the operation.
	Update the WMP as needed to ensure the plan remains applicable to the site.
	Undertake liaison and management of contracted waste and recycling collections with Council, contractors and any relevant authorities.
	Regularly conduct waste audits to review system performance and identify any additional materials that could be recovered.
	Manage any complaints and non-compliances reported through waste audits and other sources.
	Ensure all monitoring and audit results are well documented and conducted as specified in this WMP.
	Conduct regular waste sorting, physical condition and cleanliness inspections of bins, waste storage rooms and all other waste management equipment for functionality, hygiene and safety.
	Organise cleaning and maintenance requirements for waste management equipment as required.
	Ensure waste and recycling storage rooms are kept tidy.
	Monitor bins to ensure no overfilling occurs and manage unexpected waste quantities to mitigate waste overflow in storage areas
	Ensure effective signage, communication and education is provided to alert visitors, employees, site management staff and cleaners about the provisions of this WMP and waste management equipment use requirements.
	Monitor and maintain signage to ensure it remains clean, clear and applicable.
	Manage ongoing education on correct source separation and waste management at least every three months.
	Ensure that regular cleaning and daily transfer of bins is correctly being undertaken by the cleaners.
	Ensure all waste compactors and balers are maintained and operational.
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
Cleaners and caretakers	Transfer general waste, recyclables, cardboard waste and hazardous waste from public spaces to the waste and recycling storage areas on a daily basis or as required.
	Maintain and operate compactors and balers, if in use, and ensure no overfilling occurs.
	Cleaning of all bins and waste and recycling area as per the direction of the site manager, or equivalent role.
	Monitor bins to ensure no overfilling occurs.
	Ensure bins and waste storage areas are kept tidy and clean.
	Compliance with the provisions of this WMP.
Tenants	Transfer general waste, recyclables, cardboard waste and hazardous waste to allocated waste and recycling storage areas in the loading docks.
	Adhere to all waste management directions and comply with the Development's waste management provisions as outlined by the Facilities Manager.

APPENDIX A

Council Waste Management Plan Form

WASTE MANAGEMENT PLAN
DEMOLITION, CONSTRUCTION AND USE OF PREMISES

If you need more space to give details, you are welcome to attach extra pages to this form.

PLEASE COMPLETE ALL PARTS OF THIS FORM THAT ARE RELEVANT TO YOUR DEVELOPMENT APPLICATION (DA).

IF YOU NEED MORE SPACE TO GIVE DETAILS, YOU ARE WELCOME TO ATTACH EXTRA PAGES TO THIS FORM.

Council will assess the information you provide on this form along with your attached plans. We will take into account the types and volumes of waste that could be produced as a result of your proposed development, and how you are planning to:

- minimise the amount of waste produced
- maximise re-use and recycling
- store, transport and dispose of waste safely and thoughtfully.

APPLICANT DETAILS

First name

Surname

Postal Address
Street No.

Street name

Suburb

Post code

Contact phone number

Email address

DETAILS OF YOUR PROPOSED DEVELOPMENT

Street No.

Street name

Suburb

Post code

What buildings and other structures are currently on the site?

The site is currently vacant

Briefly describe your proposed development

The proposed development is at Lots 4C and 4D Oakdale West Industrial Estate. Two industrial warehouses and offices are proposed along with associated site hardstands and car parking

Applicant Signature

Date

PENRITH
CITY COUNCIL

SECTION 1: DEMOLITION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3)	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)				
Green waste				
Bricks	No demolition required			
Concrete				
Timber (Please specify type/s)				
Plasterboard				
Metals (Please specify type/s)				
Other				

SECTION 2: CONSTRUCTION

*Please include details on the plans you submit with this form, for example location of on-site storage areas/ containers, vehicle access point/s.

Materials		Destination		
		Re-use and recycling		Disposal
Material	Estimated volume (m^2 or m^3)	ON-SITE* Specify proposed re-use or on-site recycling	OFF-SITE Specify contractor and recycling facility	Specify contractor and landfill site
Excavation (eg soil, rock)		Please refer to Section 5 of the attached		
Green waste				
Bricks	717 m3			
Concrete	1413 m3			
Timber (Please specify type/s)	170 m3			
Plasterboard	296 m3			
Metals (Please specify type/s)	356 m3			
Other	340 m3			

SECTION 3: WASTE FROM ON-GOING USE OF PREMISES

If relevant, please list the type/s of waste that may be generated by on-going use of the premises after the development is finished.	Expected volume (average per week)
Garbage	25.8 m3
Cardboard	24.7 m3
Paper	1.1 m3
Recyclable containers	27 litres

SECTION 4: ON-GOING MANAGEMENT OF PREMISES

If relevant, please give details of how you intend to manage waste on-site after the development is finished, for example through lease conditions for tenants or an on-site caretaker/manager. Describe any proposed on-site storage and treatment facilities. Please attach plans showing the location of waste storage and collection areas, and access routes for tenants and collection vehicles.

Please refer to Section 6 of the attached waste management plan for further detail

ASIA PACIFIC OFFICES

BRISBANE
Level 2, 15 Astor Terrace
Spring Hill QLD 4000
Australia
T: +61 7 3858 4800
F: +61 7 3858 4801

CANBERRA
GPO 410
Canberra ACT 2600
Australia
T: +61 2 6287 0800
F: +61 2 9427 8200

DARWIN
Unit 5, 21 Parap Road
Parap NT 0820
Australia
T: +61 8 8998 0100
F: +61 8 9370 0101

GOLD COAST
Level 2, 194 Varsity Parade
Varsity Lakes QLD 4227
Australia
M: +61 438 763 516

MACKAY
21 River Street
Mackay QLD 4740
Australia
T: +61 7 3181 3300

MELBOURNE
Level 11, 176 Wellington Parade
East Melbourne VIC 3002
Australia
T: +61 3 9249 9400
F: +61 3 9249 9499

NEWCASTLE
10 Kings Road
New Lambton NSW 2305
Australia
T: +61 2 4037 3200
F: +61 2 4037 3201

PERTH
Ground Floor, 503 Murray Street
Perth WA 6000
Australia
T: +61 8 9422 5900
F: +61 8 9422 5901

SYDNEY
Tenancy 202 Submarine School
Sub Base Platypus
120 High Street
North Sydney NSW 2060
Australia
T: +61 2 9427 8100
F: +61 2 9427 8200

TOWNSVILLE
12 Cannan Street
South Townsville QLD 4810
Australia
T: +61 7 4722 8000
F: +61 7 4722 8001

WOLLONGONG
Level 1, The Central Building
UoW Innovation Campus
North Wollongong NSW 2500
Australia
T: +61 2 4249 1000

AUCKLAND
68 Beach Road
Auckland 1010
New Zealand
T: 0800 757 695

NELSON
6/A Cambridge Street
Richmond, Nelson 7020
New Zealand
T: +64 274 898 628