

# SNACK BRANDS MANUFACTURING FACILITY

## Waste Management Plan

### Prepared for:

Snack Brands Australia  
2 Distribution Drive  
Orchard Hills  
NSW 2748

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## 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 Snack Brands Australia (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

Reference	Date	Prepared	Checked	Authorised
660.30099-R01-v1	29 June 2021	Chris Hambling	Andrew Quinn	Kate McKinnon
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- Appendix A Site Design Drawings
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# 1 Introduction

## 1.1 Overview

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Snack Brands Australia (SBA) to prepare a waste management plan (WMP) in support of a development application (DA) for the construction and operation of a food manufacturing facility on the subject site at 14 Distribution Drive, Orchard Hills (Lot 11, DP 271141) (the Project). The proposal intends to allow the consolidation of two existing SBA operational sites in Blacktown and Smithfield, into the one proposed facility.

This WMP applies to waste generated during site preparation, construction and operational stages of the Project, and has been prepared using drawings supplied by the Client and attached in Appendix A.

The Planning Secretary's Environmental Assessment Requirements (SEARs) issued on 27 May 2021 in relation to SSD-18204994 for the Project requires SBA to develop an environmental impact statement. Specific to waste, the SEARs require the WMP to include:

- Details of the quantities and classification of all waste streams to be generated on site during the development
- Details of waste storage, handling and disposal during the development
- Details of the measures that would be implemented to ensure that the development is consistent with the aims, objectives and guidance in the NSW Waste Avoidance and Resource Recovery Strategy 2014-2021.

Penrith City Council (Council) also provides specific requirements for waste management in the Penrith Development Control Plan 2014, with particular reference to Chapter 5 – Waste Management.

## 1.2 Objectives

The primary aim of this WMP is to identify potential wastes to be generated by the Project during site preparation, construction and operation. This includes a description of how waste will be handled, processed and reused, recycled or managed in accordance with both the SEARs and Council requirements.

The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste generation and maximisation of reuse, recycling and resource recovery, thus avoiding landfill disposal.
- To ensure the appropriate management of contaminated and hazardous waste.
- To assist in ensuring that any environmental impacts during the operational life of the Project comply with Council's development consent conditions, project SEARs and other relevant regulatory authorities.

## 1.3 Monitoring and review of WMP

The WMP is designed to be a live document, and should be reviewed and updated to ensure on going applicability and suitability for the Project and site operations. The WMP will be required and updated:

- To remain consistent with waste management regulations and guidelines

- Following changes to site waste management practices, or
- Where new technologies, innovations and methodologies can be applied.

Copies of the original WMP and subsequent versions should be retained by the site operations manager. Changes made to the WMP, including the rationale for the change, should be documented as part of the review process.

## 2 Project description

### 2.1 Overview of the proposed development

The proposed development seeks consent for the construction and operational use of a food manufacturing facility. This will include the extension and repurposing of the existing high and low bay warehouse facility on site to a manufacturing facility. Supporting the manufacturing facility and warehouse will be ancillary office space, car parking spaces and a waste water treatment plant. The proposed development will also include storage of dangerous goods.

In its existing state, the project site contains the newly constructed SBA warehouse and distribution facility, approved under SSD-9429. The northern part of the Project site is undeveloped however the land has been cleared and levelled. On this basis, it is assumed that land clearing activities will be limited.



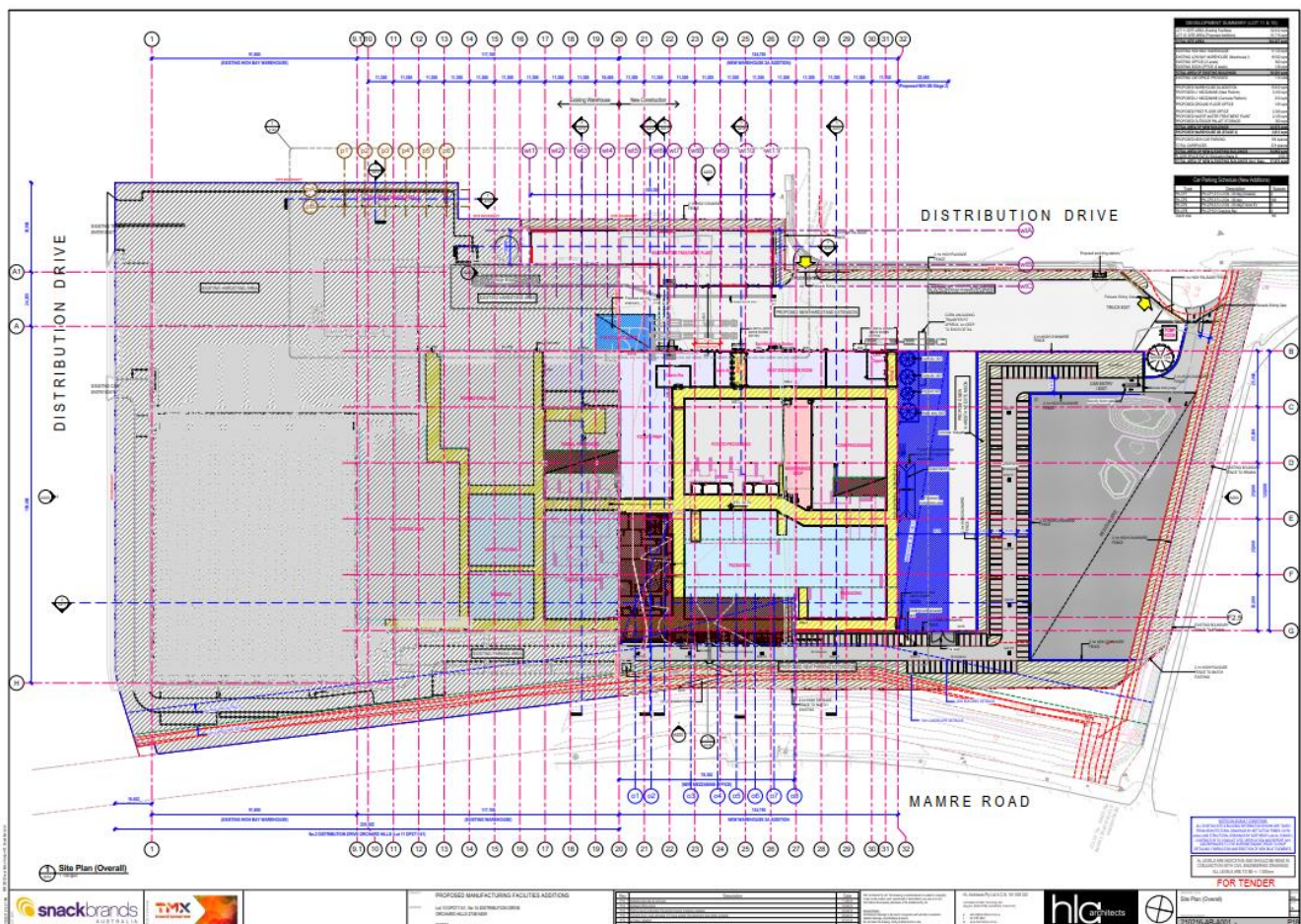
Figure 1 Site boundary (indicative) (Nearmap, 2021)



## 2.2 Proposed construction activities

A site plan for the final project form is show in **Figure 2**, and Appendix A. The anticipated construction activities are:

- Bulk earthworks involving cut and fill works
- Infrastructure comprising civil works and utilities servicing
- Construction of an industrial manufacturing facility 24,572m<sup>2</sup> comprising:
  - Warehouse area of 15,612m<sup>2</sup>
  - Second stage additional warehousing of 2,813m<sup>2</sup>
  - Ancillary office area of 2,475m<sup>2</sup>
  - 160 new car parking spaces
  - Wastewater treatment plant of 2,155m<sup>2</sup>
  - Mezzanine and other storage area 1,517m<sup>2</sup>.



**Figure 2** Proposed site plan (see Appendix A for full version)

## 2.3 Proposed operational activities

The proposed development is to be used for the purpose of a goods manufacturing facility, associated with the adjoining operations of the logistics and warehouse already completed at 2 Distribution Drive, Orchard Hills. The proposed operation will manufacture potato and corn products. The conceptual operational layout is presented in **Figure 3** below.

Operational Diagram



**Figure 3 Conceptual operational layout**

Operational activities relevant to this WMP include:

- Potato and corn product manufacturing processes
- Storage of dangerous goods, comprising:
  - Approximately 30 kL of Class 8 – Packing Group II
  - Approximately 10 kL of Class 2.2 (nitrogen)
- Office administrative activities
- Onsite wastewater processing and management.



## 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 4**, 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.

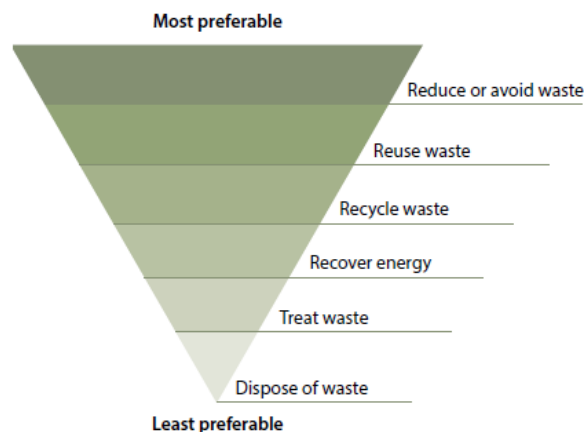


Image from NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21.

**Figure 4** 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, construction and operational phases of the Project.

**Table 1 Legislation and guidance**

Legislation and Guidance	Objectives
Council legislation and guidelines	
Penrith Local Environmental Plan (LEP) 2010 <sup>1</sup>	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 <sup>2</sup>	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 <i>Waste Avoidance and Resource Recovery Act 2001</i> . 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.
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 2019	The National Construction Code 2019 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 Waste and Sustainable Materials Strategy 2041	Replacing the <i>NSW Waste Avoidance and Resource Recovery Strategy (2014-21)</i> (see below) identifies a focus on the transition of NSW to a circular economy. The focus of the strategy is on minimising what is thrown away, and to use and reuse resources more efficiently, making them as productive as possible. The strategy identifies the need to identify infrastructure needs, the mandating of separation of some organic waste streams, and incentivising biogas generation from waste materials.
NSW EPA (2014) NSW Waste Avoidance and Resource Recovery Strategy 2014-21	The <i>NSW Waste Avoidance and Resource Recovery Strategy 2014-21</i> 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 wastes better, reduce litter and reduce illegal dumping. This Strategy remains relevant as council requirements have not yet been updated.

<sup>1</sup> <https://legislation.nsw.gov.au/#/view/EPI/2010/540>

<sup>2</sup> <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	<p>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 wastes that may be recovered for beneficial re-use. These wastes typically include those from demolition and construction works, as well as operational waste such as food waste.</p> <ul style="list-style-type: none"> <li>Resource recovery orders present conditions which generators and processors of waste must meet to supply the waste material for beneficial re-use.</li> <li>Resource recovery exemptions contain the conditions which consumers must meet to use waste for beneficial re-use.</li> </ul>
NSW EPA's Waste Classification Guidelines 2014	<p>The NSW EPA <i>Waste Classification Guidelines</i> 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 <i>POEO Act 1997</i> and is associated regulations.</p>
<i>Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011</i>	<p>The <i>POEO Act 1997</i> and <i>POEO Amendment Act 2011</i> 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 wastes generated during the demolition, construction and operational phases of a development, as well as the system for licencing waste transport and disposal.</p>
The Work Health and Safety Regulation 2017	<p>The Work Health and Safety Regulation 2017 provide detailed actions and guidance associated with the topics discussed in <i>The Work Health and Safety Act 2011</i>. 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.</p>
<i>Waste Avoidance and Resource Recovery Act 2001</i>	<p>The <i>Waste Avoidance and Resource Recovery Act 2001</i> aims to promote waste avoidance and resource recovery and repeals the <i>Waste Minimisation and Management Act 1995</i>. Specific objectives of the <i>Waste Avoidance and Resource Recovery Act 2001</i> include:</p> <ul style="list-style-type: none"> <li>encouraging efficient use of resources</li> <li>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</li> <li>ensuring industry and the community share responsibility in reducing/dealing with waste, and</li> <li>efficiently funding of waste/resource management planning, programs and service delivery.</li> </ul> <p>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.</p>

## 5 Site preparation and construction waste 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<sup>3</sup>) 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 FY19 were 77%.

The Penrith City Council Waste and Resources Strategy (2017-2026) has not yet been updated to reflect the recently updated Waste and Sustainable Materials Strategy and is based on the Waste Avoidance and Resource Recovery Strategy 2014-2021. Specifically, the Council Waste and Resources Strategy identifies a target for FY21-22 of:

- Increasing recycling rates to 80% for construction and demolition waste
- Increasing waste diverted from landfill to 75%

It is anticipated that the waste minimisation measures in the following sections will assist the Project to meet these targets. Waste reporting and audits can be used to determine the actual percentage of wastes that have been recycled during the construction and site preparation stage of the Project.

### 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
- Operational 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 below.

For further information on how to classify a waste type refer to the NSW EPA (2014) *Waste Classification Guidelines*<sup>4</sup>. Further information on managing site preparation and construction waste is available from the NSW EPA website<sup>5</sup>.

<sup>3</sup> NSW Government, Department of Planning, Industry and Environment (DPIE), 2021. NSW Waste and Sustainable Materials Strategy 2041. Stage 1: 2021-2027 ([https://www.dpie.nsw.gov.au/data/assets/pdf\\_file/0006/385683/NSW-Waste-and-Sustainable-Materials-Strategy-2041.pdf](https://www.dpie.nsw.gov.au/data/assets/pdf_file/0006/385683/NSW-Waste-and-Sustainable-Materials-Strategy-2041.pdf))

<sup>4</sup> Available online from <https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines>

<sup>5</sup> <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
<b>Site Clearance</b>		
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.
<b>Construction</b>		
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 <i>Treated</i> : reused for formwork, bridging, blocking, propping or second-hand supplier <i>Untreated</i> : 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

Waste Types	NSW EPA Waste Classification	Proposed Management Method
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal; contact <i>FluoroCycle</i> for more information <sup>6</sup>
Paint	Hazardous waste	Off-site recycling, Paintback collection <sup>7</sup> 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
<b>Plant Maintenance</b>		
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 Note: Discharge to sewer subject to Trade Waste Agreement with local Council
Air filters and rags	General solid waste (non-putrescible)	Off-site disposal
Drained Oil filters	General solid waste (non-putrescible)	Off-site recycling
Commercial lead acid or nickel cadmium Batteries	Hazardous waste	Off-site recycling, Contact the Australian Battery Recycling Initiative <sup>8</sup> for more information
<b>Packaging</b>		
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 <i>Business Recycling</i> for more information <sup>9</sup>
<b>Work Compound and Associated Offices</b>		
Food Waste	General solid waste (putrescible)	Dispose to landfill with general garbage

<sup>6</sup> Available online from <http://www.fluorocycle.org.au/> or <http://www.environment.gov.au/settlements/waste/lamp-mercury.html>

<sup>7</sup> Available online from <https://www.paintback.com.au/>

<sup>8</sup> <http://www.batteryrecycling.org.au/home>

<sup>9</sup> 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 <sup>10</sup>
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

The project comprises the utilisation of previously developed warehousing (approved under SSD-9429) which will be repurposed for manufacturing, with construction activities on the currently undeveloped northern portion of the site. This land has previously been prepared under approvals under SSD-7173 which relates to the sub-division and the creation of a number of lots across the wider area, as well as bulk earthworks, infrastructure and services, as well as modifications to then built internal roads and drainage works.

The proposal includes for bulk earthworks which are expected to include cut and fill works to provide a necessary construction platform. Council's Development Control Plan (DCP) requires notification to Council of the quantity, quality, method of transport and end management location if excess site won material is to be disposed off site. SLR recommends that excavated soil is classified by a specialist contaminated land consultant and separated based on this advice to promote reuse where appropriate.

Uncontaminated fill or excavated natural material should be retained on site and managed within earthworks where possible. If uncontaminated fill or ENM has to be sent off-site, it will be transported to an appropriately licensed facility in accordance with the Protection of the Environment Operations (Waste) Regulation 2014. Contaminated material management is considered further in Section 5.7.3 of this WMP.

### 5.4 Construction waste types and quantities

The Construction Site Manager will need to specify the types and quantities of waste produced during construction and on this basis, the numbers and capacity of bins can be determined.

In the absence of readily available construction waste generation rates from Council, SLR has adopted the 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. The waste generation rates listed in the Hills DCP include '2 Bedroom', '3 Bedroom', 'Block of Flats', 'Factory' and 'Office'. SLR has adopted the 'Factory' and 'Office' rates to measure waste expected from the Project, as the construction of a factory and office is the most relevant in representing the construction of the industrial warehouse and office precinct. In the absence of readily available published information for 'Carpark' construction waste generation rates, SLR has developed 'Carpark' construction rates based on the 'Office' rates by:

<sup>10</sup>Available online from <http://returnandearn.org.au/>

- Removing timber, bricks and gyprock as these materials are unlikely to be present in significant quantities in a modern carpark structure, and
- Increasing the rates for concrete, sand or soil, metal and 'other', in proportion, to maintain the total assumed tonnage per 1,000 m<sup>2</sup> of construction.

The waste generation rates are shown in **Table 3** below.

**Table 3 Waste generation rates for the construction of the Project**

Rate Type	Floor Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )						
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
Factory (warehouse)	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	--	30.6	--	--	14.3	4.5	8.1

The waste generation rates for 'Factory' are applied to calculate the waste quantities generated from the construction of the new warehouse and production facility, combining the two stages. The 'Office' waste generation rates are applied to calculate the waste quantities from all office administration areas. The 'Carpark' waste generation rates are applied to calculate the waste quantities from the construction of all external hard surface areas including carparks and heavy and light duty surfaces. The areas are based on the areas provided in the site plans attached in **Appendix A**.

Actual waste quantities and composition will vary; however, this estimate is provided so that the Construction Site Manager can make provision for on-site or off-site re-use and recycling opportunities.

The construction waste quantities anticipated from the construction are provided in **Table 4** below.

**Table 4 Estimated types and quantities of construction waste**

Project component	Area (m <sup>2</sup> )	Waste types and quantities (m <sup>3</sup> )						
		Timber	Concrete	Bricks	Gyprock	Sand and Soil	Metal	Other
WH2A (S1 Warehouse)	15,612	5	35	30	10	75	10	10
WH2B (S2 Warehouse)	2,813	5	10	5	5	15	5	5
Office space	2,475	15	50	25	25	25	10	15
New car parking	4,355	-	135	-	-	65	20	40
New hard standing	5,702	-	175	-	-	85	30	50
WWTP facility	2,155	5	5	5	5	15	5	5
<b>Total</b>	<b>33,112</b>	<b>30</b>	<b>410</b>	<b>65</b>	<b>45</b>	<b>280</b>	<b>80</b>	<b>125</b>

Waste estimates have been rounded up to the nearest 5 m<sup>3</sup>.

A waste management plan form provided by Council is attached in **Appendix B**. The form is also available on Council's website<sup>11</sup>. This is to be updated by the Site Manager once waste streams, estimated quantities, and final disposal locations and recycling services have been identified.

<sup>11</sup> [https://www.penrithcity.nsw.gov.au/images/documents/forms/Waste\\_Management\\_Plan\\_Application\\_Form.pdf](https://www.penrithcity.nsw.gov.au/images/documents/forms/Waste_Management_Plan_Application_Form.pdf)



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## 5.5 Waste avoidance

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

- Develop a purchasing policy based on the approximate volumes 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 exposure to bad weather or 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 waste that cannot be cost effectively reused or recycled are to be sent to landfill or appropriate disposal facilities.

**Table 2** presents an outline of the proposed reuse, recycling and disposal methods for site preparation and construction activity waste streams.

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

- Ensure the 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 waste 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 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 waste.
- 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 waste, if encountered, 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.

## 5.7 Waste storage and servicing

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.

#### 5.7.1 Waste storage areas

Construction 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 per Council's 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.

#### 5.7.2 Waste servicing and record keeping

The Construction 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 managed at an appropriately licensed facility.

### 5.7.3 Contaminated and hazardous waste management

A Phase 1 contaminated land investigation was undertaken to inform SSD-7173. No sources of contamination were found on site, and it was considered that there was low potential for subsurface contamination to be present. Should any contamination or other hazardous materials be identified during site preparation or construction works, SLR recommends that a qualified and certified contractor be engaged to remove all contaminated or hazardous materials, for example, asbestos, and dispose of all contaminated or hazardous waste at an appropriately licenced facility.

All asbestos and other hazardous waste must be handled according to appropriate legislation and regulation including the Work Health and Safety Regulation 2017.

In accordance with Council's DCP, hazardous waste management at the site may require a licence from the EPA and approval from Council. If hazardous waste is identified for removal, Council and NSW EPA are to be consulted prior to undertaking any hazardous waste removal.

## 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 waste
- 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<sup>12</sup> and should be used where applicable. A selection of signs prepared by NSW EPA is provided in **Figure 5**.



**Figure 5** Examples of NSW EPA labels for waste skips and bins

## 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 per Council's DCP, records of waste volumes 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.

<sup>12</sup> NSW EPA approved waste materials signage <https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs>

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 each week 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 Construction 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 Construction 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 number 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.
	Approval of off-site waste disposal locations and checking licensing requirements.
	Assessment of suspicious potentially contaminated materials, hazardous materials and liquid waste.
	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 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 commercial and industrial waste recovery rates in FY19 were 53%.

The Penrith City Council Waste and Resources Strategy (2017-2026) has not yet been updated to reflect the recently updated Waste and Sustainable Materials Strategy and is based on the Waste Avoidance and Resource Recovery Strategy 2014-2021. Specifically, the Council Waste and Resources Strategy identifies a target for FY21-22 of:

- Increasing recycling rates to 70% for commercial and industrial waste
- Increasing waste diverted from landfill to 75%.

It is anticipated that the waste minimisation measures in the following sections will assist the Project to meet these targets. Waste reporting and audits can be used to determine the actual percentage of wastes that have been recycled during the construction and site preparation stage of the Project.

### 6.2 Waste streams and classifications

SBA currently operate two manufacturing sites at Smithfield and Blacktown, alongside the existing warehouse facility at Orchard Hills. As part of these operations, SBA has prepared an operational waste minimisation and management plan covering these sites. The SBA WMP provides detail on the nature of waste generated from existing facilities. The Project will consolidate these facilities into the expanded Orchard Hills facility, and therefore can be used as a proxy to identify and classify waste arising from the operation of the Project.

The operation of the Project is anticipated to generate the following broad waste streams:

- Waste generated by employees, including food waste
- Bulk packaging waste, including polystyrene, plastic wrapping and cardboard boxes
- Office waste
- Food processing waste
- Waste associated with wastewater treatment
- Garden organic waste from landscaped areas
- Bulky waste items
- Stores, plant and general maintenance waste.

Potential ongoing waste types, their associated waste classifications, and management methods are provided in **Table 6**. For further information on how to determine a waste's classification, refer to the NSW EPA (2014) Waste Classification Guidelines. Suggestions for recycling drop off locations and contacts can be found on <https://businessrecycling.com.au/> for each waste type.

**Table 6 Potential waste types, classifications and management methods for operational waste**

Waste Types	NSW EPA Classification	Proposed Management Method
<b>General Operations</b>		
Clean office paper	General solid waste (non-putrescible)	Paper recycling at off-site licensed facility
Cardboard including bulky cardboard boxes	General solid waste (non-putrescible)	Cardboard recycling at off-site licensed facility
Recyclable beverage containers, glass and plastic bottles, aluminium cans, steel cans	General solid waste (non-putrescible)	NSW container deposit scheme 'Return and Earn', container recycling at off-site licensed facility
Food waste (staff/canteen)	General solid (putrescible) waste	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 the Mobile Muster program. Contact Mobile Muster for more information
Bulky polystyrene	General solid waste (non-putrescible)	Off-site recycling or disposal at landfill
Furniture	General solid waste (non-putrescible)	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
General garbage, including non-recyclable plastics and street sweepings	General solid (putrescible and non-putrescible) waste	Disposal at landfill
<b>Maintenance</b>		
Spent smoke detectors <sup>13</sup>	General solid waste (non-putrescible) or Hazardous waste (some commercial varieties)	Disposal to landfill, or off-site disposal at licensed facility
Glass, other than containers	General solid waste (non-putrescible)	Off-site recycling
Light bulbs and fluorescent tubes	Hazardous waste	Off-site recycling or disposal, contact FluoroCycle <sup>14</sup> or Lamp Recyclers <sup>15</sup> for more information

<sup>13</sup> The Australian Radiation Protection and Nuclear Safety Agency (ARPANSA) require that when more than 10 smoke alarms (particularly americium-241 sources) are collected for bulk disposal they must be treated as radioactive waste and the requirements of the National Health and Medical Research Council's Code of practice for the near-surface disposal of radioactive waste in Australia (1992) must be met.

<sup>14</sup> <https://www.fluorocycle.org.au/>

<sup>15</sup> <https://www.lamprecyclers.com.au/>



Waste Types	NSW EPA Classification	Proposed Management Method
Cleaning chemicals, solvents, area wash downs, empty oil or 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.
Garden organics - lawn mowing, tree branches, hedge cuttings, leaves	General solid waste (non-putrescible)	Reuse on-site or contractor removal for recycling at licenced facility
<b>Production waste</b>		
FFDC Dust (seasoning)	General solid waste (non-putrescible)	Off-site disposal at a licenced landfill facility.
Reject intermediate (loose) and single pack product	General solid (putrescible) waste	Off-site animal feed or worm farm production at suitably licensed reprocessing or recycling facility; or Off-site disposal at a licenced landfill facility.
Waste raw product and agricultural offal (potato) including peel	General solid (putrescible) waste	Transported under CA05 <i>Biosecure Transport and Treatment of Host Plant Material destined for recycling or waste</i> (DPI 2017, ref INT17/91995) due to risk of potato cyst nematode to suitably licensed facility for heat treatment before reuse or disposal.
Waste raw product and agricultural offal (corn)	General solid (putrescible) waste	Off-site disposal at a licenced landfill facility.
Waste water treatment plant sludge	Liquid waste	Transported under CA05 <i>Biosecure Transport and Treatment of Host Plant Material destined for recycling or waste</i> (DPI 2017, ref INT17/91995) due to risk of potato cyst nematode to suitably licensed facility for heat treatment before reuse/disposal.
Bulk Bags (woven polypropylene)	General solid waste (non-putrescible)	Off-site recycling at suitably licensed facility
Timber (pallets and other timber uses)	General solid waste (non-putrescible)	Off-site reuse or recycling at suitably licensed facility
Scrap metal (offcuts of plant, steel removed from plant or rebuild)	General solid waste (non-putrescible)	Off-site recycling at suitably licensed scrap metal recycling facility.
Oily sludge	Liquid waste	Off-site recycling at a suitably licensed oil recycling facility, or further treatment and disposal.

Waste Types	NSW EPA Classification	Proposed Management Method
Oils (mineral and vegetable)	Liquid waste	Off-site recycling at a suitably licensed oil recycling facility, or further treatment and disposal.

## 6.3 Estimated quantities of operational waste

SLR has adopted data provided by SBA for both current and predicted operational waste arisings. This has been supplemented with additional data and assumptions where appropriate as shown in Table 7 below.

**Table 7 Estimated quantities of operational general waste and recycling**

Waste type	Classification	Estimated generation rate (tonnes per year)
General waste from operations including FFDC dust, street sweepings, rejected product, empty containers	General solid waste (non-putrescible)	3,693
General recyclables from office	General solid waste (non-putrescible)	4
Cardboard / Fibreboard	General solid waste (non-putrescible)	1,128
Packed and unpacked product waste	General solid (putrescible) waste	7,283
Peel	General solid (putrescible) waste with biosecurity requirements	5,026
WWTP Sludge	Liquid waste or General solid (putrescible) waste with biosecurity requirements	7,694
WWTP Screenings	Liquid waste or General solid (putrescible) waste with biosecurity requirements	718
Empty intermediate bulk containers (IBC)	General solid waste (non-putrescible)	17
Stretch wrap (LDPE)	General solid waste (non-putrescible)	41
Bulk bags / containers	General solid waste (non-putrescible)	Minimal
Timber	General solid waste (non-putrescible)	Minimal
Scrap metal, wire, cabling	General solid waste (non-putrescible)	Minimal
Waste oil (fryer)	Liquid Waste	110

Note: Data provided by SBA as projection for 2024 year of operation based on volume of expected finished goods

In addition to the SBA estimates of waste generation, the Project also includes an office space, which will generate dry comingled recyclables. Adopting the rate of 10 L per 100 m<sup>2</sup> per day of recycling generation included in the Council's DCP Industrial and Mixed-Use Waste Management Guideline, it is estimated that the office (1,800 m<sup>2</sup>) will generate approximately 180 litres of recyclables per day.

SBA generates a significant proportion of cardboard waste through their operations. To minimise packaging waste generated in the recyclables stream, it is recommended that packing waste is returned to the suppliers where possible. Standard pallets are recommended to be returned to their owners and non-standard and broken pallets are to be stockpiled and collected as required by a private waste contractor.

As per Council's DCP, food scraps from any non-commercial kitchen, for example a staff canteen, should be placed in specialised bins and collected regularly. Processing food waste are sent off-site to an organic waste processing facility daily.

If additional collection services are required, such as secured document destruction, these can be organised with a private waste contractor who can provide additional bins and take collected waste to an off-site licenced facility.

The Project is anticipated to produce minimal quantities of garden organics. Less than 100 L of garden organics are estimated to be generated per week. This waste will be taken by a landscaping contractor who will dispose of it at an off-site licenced facility.

## 6.4 Waste storage area size

The operational project will generate a range of wastes that are required to be separated. The waste storage area must be large enough to adequately store all quantities of operational waste generated between collections. SBA has provided detail on the nature and type of current operational waste receptacles for reference. These have been compared to expected volumes of arising to determine the waste storage area size.

As outlined in the Penrith DCP, additional storage space for the bulky waste stream must be provided. This stream includes broken pallets, broken storage units, e-waste and other materials that cannot be disposed of in the general or recyclable waste stream, or other specific waste streams identified in this WMP. This has been allowed for in the calculations.

Hazardous waste is unlikely to be generated by Project operations. If hazardous waste is generated, SBA should follow Council's DCP and best practice waste management. This requires that hazardous waste at the site must be placed in specialised containment bins, clearly signposted and labelled, securely locked and may require a licence and consultation from the EPA and approval from Council. Hazardous waste removal is to be undertaken as needed by appropriately licensed specialised contractors.

A number of other wastes are identified in the waste management plan outside of those described in more detail previous. These are typically lower quantity or incidental wastes, as a result of specific process or maintenance event. The waste storage area should be designed to allow for other waste storage containers, such as skip bins, to be present for these wastes as needed, and for stockpiling of waste streams such as pallets.

### 6.4.1 Recommended waste storage for operations

Following assessment of storage needs for each of the waste streams estimated to be generated by the Project, the overall storage area to be allowed for in design should be at least 844 m<sup>2</sup>.

**Table 8 Total recommended storage area for operations at the Project**

Bin/Skip/Container	Estimated footprint (m <sup>2</sup> )	Waste Collected	Number of collections per week
RORO hook lift bin - 20 m <sup>3</sup>	57	WWTP Sludges	7
RORO hook lift bin - 15 m <sup>3</sup>	47	WWTP Screening	1
2 x RORO hook lift bin - 15 m <sup>3</sup>	93	Peel waste	7
Hook lift compactor - 32m <sup>3</sup>	64	Unpacked/packed product waste	7

Bin/Skip/Container	Estimated footprint (m <sup>2</sup> )	Waste Collected	Number of collections per week
Hook lift compactor - 32m <sup>3</sup>	64	General waste	4
Hook lift compactor - 30m <sup>3</sup>	64	Cardboard/fibreboard	2
Baler and bale storage	54	Stretch Wrap (LDPE)	1 x monthly
Skip bin - 10 m <sup>3</sup>	55	Scrap metal, wire, cabling	As required
Storage area (IBCs)	40	Waste Oil	As required
RORO hook lift bin - 30 m <sup>3</sup>	64	Bulky/other waste	1 x fortnightly
RORO hook lift bin - 32 m <sup>3</sup>	64	Rejected product	1
Front Load Bin - 3m <sup>3</sup>	18	General office recycling	1 x fortnightly
RORO hook lift bin - 32 m <sup>3</sup>	64	Processed cereal waste	7
General allowance for other waste storage	77	Spent solvents, cleaning spirits, bulkbags, other containers, timber, pallets and other waste.	As required
<b>TOTALS</b>	<b>844 m<sup>2</sup></b>		

**Note.**

1. Estimated GFA includes allowance for vehicle access to various skips and bins and a surrounding buffer.
2. Swept path analysis has not been undertaken.
3. This estimate does not include liquid waste which will be stored adjacent to the WWTP.

SLR recommends the waste storage areas for the project are shown on the architectural drawing attached in **Appendix A** in line with Council's requirements.

## 6.5 Waste storage area location

When choosing the location of the waste storage area, the architects and the Client can place the area wherever they believe it to be most suitable, provided Council's requirements are considered. These are listed below.

The waste storage area should be located so that:

- It is integrated wholly within the development
- It is a convenient, safe, functional and directly accessible to users of the site and for servicing collection staff, but inaccessible to the public.
- Collection vehicles must be able to enter and exit the collection area in a forward direction
- It avoids pedestrian or vehicular traffic hazards likely to be caused by waste collection and storage

As per Penrith DCP, the nominated collection areas for the processing plant is to be clearly nominated on site plans accompanying development applications. SLR recommends this WMP be updated when the waste storage areas are shown on the site plan, in accordance with Council requirements.

Design drawings should be updated to demonstrate the availability of sufficient storage space within the site.

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## 6.6 Waste storage area features

In accordance with better practice waste management and Penrith DCP, the Project's waste storage areas should have the following features:

- Blend in with the design of the wider development and the surrounding streetscape
- Adequate vermin prevention measures
- Reduce potential noise and odour impacts
- Enhance safety for the public
- Be connected to a water outlet for washing purposes
- Equipped with a hot and cold tap-based water supply centralised mixing valve
- Floor graded to a central drainage point which is connected to the sewer
- Have water discharge from washing flow to a sewer approved by the relevant authority
- Waterproofed and sealed non-slip floor constructed in accordance with the Building Code of Australia.
- Waste equipment is protected from theft and vandalism
- Adequate lighting and natural or mechanical ventilation in accordance with the Building Code of Australia
- Provide administrative management, including signage to ensure appropriate use
- Be screened from public areas to reduce the impacts of noise, odour and visual amenity, and
- Flexible in design to allow for future changes in operation.

## 6.7 Waste servicing

Based on the existing WMP, SLR understands that waste collections will be undertaken through a series of private contractors. The following general waste servicing access requirements should be implemented:

- Waste will be removed regularly.
- Arrangements should be in place so that the waste and recycling storage areas are not accessible to the general public.

In accordance with Penrith DCP, the following is required for the access provisions for of waste collection vehicles:

- Collection vehicles must be able to enter and exit the collection area in a forward direction
- Drawings must show the site's entry point, vehicle's route of travel and manoeuvring
- Swept path models must illustrate 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



- For rear loaded vehicles, an additional 2 m unobstructed loading zone is required behind the vehicle for the loading of 1,100 L bins. Additionally, a 0.5 m side clearance is required on either side of the vehicle for driver movements and accessibility
- Unobstructed access, adequate driveways and ramps of sufficient strength to support waste collection
- A structural engineer's report is to accompany the DA and confirm that all infrastructure used for vehicle ingress and egress movements can support the waste collection vehicle's weight. Council's DCP consists of dimensions for waste collection vehicles.
- For roll on, roll off vehicles collecting larger compactor or hook skip bins, access will be required comprising the entire length of the collection vehicle, estimated to be 9 m.

The collection vehicles required for the facility require at least 6.2 m height clearance to empty the bins. Therefore, front-lift bins or roll-on-roll-off bins are commonly used in outdoor areas with no restrictions on overhead clearance. For this reason, SLR recommends that the waste storage areas be in an outdoor area with no restrictions on overhead clearance. If overhead covering is required, design should take account of waste vehicle heights to ensure sufficient clearance is provided.

SLR recommends that the design of the Project is reviewed by a traffic specialist and that the drawings are updated to be in accordance with Council's servicing requirements listed above. This WMP should be updated to reflect those updates.

If hazardous waste produced at the site will be collected by appropriately licensed specialised services.

It is understood that SBA has existing arrangements with private waste contractors for collections at other facilities. Once a private waste contractor is engaged for the Project site, a valid waste and recycling collection contract is recommended for each waste stream being managed, to demonstrate disposal at a waste facility lawfully able to accept it. Written evidence of the valid contract should be kept on-site.

## 6.8 Waste avoidance, reuse and recycling measures

### 6.8.1 Waste avoidance

Waste avoidance measures include:

- Participating in take-back services to suppliers to reduce waste further along the supply chain
- Optimising food production processes to increase efficiency of operations and reduce waste in the food processing stage.
- Investigate opportunities for waste finished product to go to food-rescue charities.
- Avoiding printing where possible
- Review of packaging design to reduce waste but maintain 'fit for purpose'
- Providing ceramic cups, mugs, crockery and cutlery for staff rather than disposable items
- Purchasing consumables in bulk to avoid unnecessary packaging
- Presenting all waste reduction initiatives to staff as part of their induction program, and
- Investigating leased office equipment and machinery rather than purchase and disposal.

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### 6.8.2 Re-use

Re-use measures include:

- Sale and reuse of starch material produced during food manufacturing process.
- Reuse of wastewater
- Identification of other by-products from the manufacturing process that could be reused or sold as resources
- 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:

- Delivery and off-site processing of organic food processing waste at a suitably licensed organic waste processor, for example, composting and anaerobic digestion
- Recycling of oils and sludges
- Recycling of LDPE shrink wrap at off-site recycling
- Recycling of scrap metal and wire at off-site recycling facility
- Recycling and reuse of waste timber pallets
- Compact and bale cardboard to reduce number of bins required for recycling
- Paper recycling trays provided in office areas for scrap paper collection and recycling
- Collecting printer toners and ink cartridges in allocated bins for appropriate contractor recycling
- Collecting and recycling e-waste and
- Development of 'buy recycled' purchasing policy.

## 6.9 Communication Strategies

Waste management initiatives and management measures should be clearly communicated to building managers, owners, employees, customers and other site operatives, for example, cleaners. The 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 material, if implemented, and

- greater contribution to targets for waste reduction and resource recovery, the environment and heritage conservation.

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

- Use consistent signage and colour coding throughout the Project
- Ensure all staff are trained in correct waste separation and management procedures
- Provide directional signage to show location of and routes to waste storage area
- General waste and co-mingled recycling bins should be clearly labelled and colour-coded to ensure no cross contamination, where applicable
- Employees and cleaners should adhere to the WMP for compliance, in consultation with management, and
- Repair signs and labels promptly to avoid breakdown of communications.

## 6.10 Signage

As outlined in the Penrith DCP, the waste storage and collection areas should be provided with appropriate signage. These signs should clearly identify waste management procedures and provisions to contractors, tenants and visitors should be distributed around the Project.

Signs which clearly identify waste management procedures and provisions to staff and visitors should be distributed around the Project. Key signage considerations are:

- 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 6**
- 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 and system for signs throughout the Project, and
- Emergency contact information for reporting issues associated with waste or recycling management.

Colour-coded and labelled bin lids are necessary for identifying bins. All signage should conform to the relevant Australian Standard and use labels approved by the NSW EPA<sup>16</sup>. The design and use of safety signs for waste rooms and enclosures should comply with Australian Standard AS 1319 Safety Signs for the Occupational Environment and clearly describes the types of materials designated for each bin.

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<sup>16</sup> NSW EPA waste signage and label designs <http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm>



Figure 6 Example of bin labels for operational waste

## 6.11 Monitoring and Reporting

Monitoring is recommended to ensure waste and recycling management arrangements and provisions for the Project are functional, practical and are maintained to the standard outlined in this plan, at a minimum.

Visual assessments of bins and bin storage areas should be conducted by the building manager, at minimum:

- Weekly, in 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 to the standards outlined in this document.

In addition, audits should be conducted on a half-yearly basis to ensure WMP provisions are maintained.

Quantities of waste and recycling associated with disposal of waste and recycling, including dockets, receipts and other physical records should be recorded by the facility Environmental Manager. This is to allow reviews of the waste management arrangements and provisions at the site over time. Records of waste management should also be available to regulatory authorities such as the NSW Environmental Protection Authority, Australian Packaging Covenant Organisation and SafeWork NSW, upon request.

Any deficiencies identified in the waste management system, including, but not limited to, unexpected waste quantities, is to be rectified by the Site Manager and/or Environment Manager as soon as it is practical. Where audits show that on site separation or segregation of recycling streams is not carried out effectively, management should carry out additional staff training, signage re-examination and reviews of the waste management system where the audit or other reviewing body has deemed necessary. If this waste management plan no longer sufficiently meets the needs of the Project, review and updates to maintain suitability must be undertaken.

## 6.12 Roles and Responsibilities

It is the responsibility of the Building Manager, or equivalent role, to implement this WMP and a responsibility of all warehouse tenants and staff to follow the waste management procedures set out by the WMP. SLR recommends that all subcontractors enlisted by the Client are to have roles and responsibilities identified and the Project's waste management system clearly explained. A summary of recommended roles and responsibilities are provided in **Table 9**.

**Table 9 Operational waste management responsibility allocation**

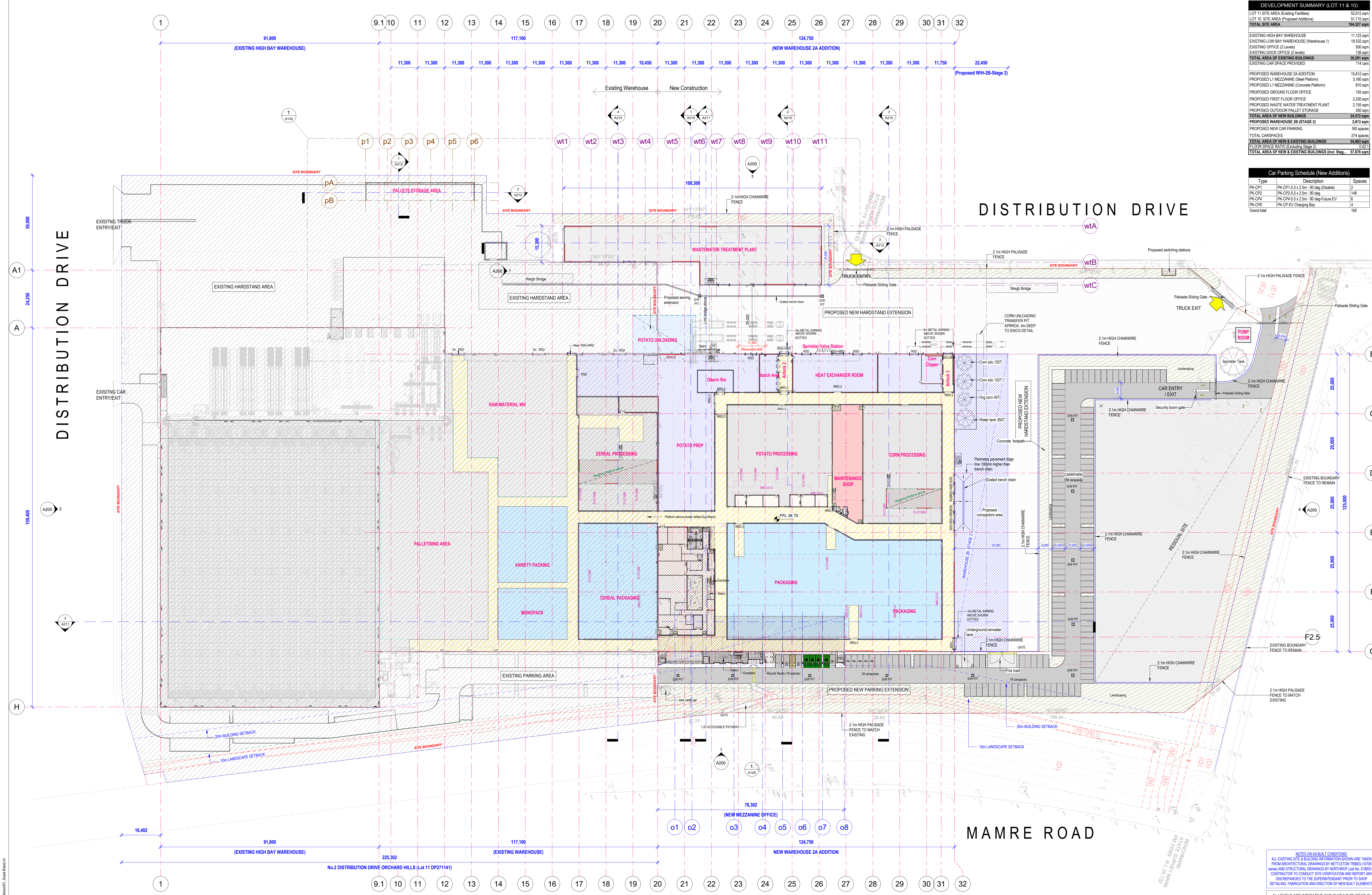
Responsible Person	General Tasks
Site Operational Management (delegated to Environmental Manager)	Ensure the WMP is implemented throughout the life of the operation.
	Update the WMP on a regular basis (e.g., annually) to ensure the Plan remains applicable.
	Undertake liaison and management of contracted waste collections.
	Organise internal waste audits on a regular basis.
	Manage any complaints and non-compliances reported through waste audits etc.
	Perform inspections of all waste storage areas and waste management equipment on a regular basis.
	Organise cleaning and maintenance requirements for waste management equipment.
	Monitor bins to ensure no overfilling occurs.
	Ensure effective signage, communication and education is provided to alert visitors, employees 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.
	Ensure waste and recycling storage rooms are kept tidy.
	Ensure that regular cleaning and daily transfer of bins is being undertaken by the cleaners
	Ultimately responsible for the management of all waste management equipment, cleaning requirements, waste transfer and collection arrangements.
Cleaners and Staff	Removal of general waste, recyclables, cardboard waste and hazardous waste from floor areas for transfer to centralised waste and recycling collection rooms daily or as required.
	Cleaning of all bins and waste and recycling rooms within office on a weekly basis or as required.
	Compliance with the provisions of this WMP.
Gardening Contractor, as applicable	Removal of all garden organics waste generated during gardening maintenance activities for recycling at an off-site location or reuse as organic mulch on landscaped areas.



# APPENDIX A

## Architectural Drawings





DEVELOPMENT SUMMARY (LOT 11 & 10)		
LOT 11 SITE AREA (Existing Facilities)	52,612 sqm	
LOT 10 SITE AREA (Proposed Additions)	51,715 sqm	
<b>TOTAL SITE AREA</b>	<b>104,327 sqm</b>	
EXISTING HIGH BAY WAREHOUSE	11,123 sqm	
EXISTING LOW BAY WAREHOUSE (Warehouse 1)	18,532 sqm	
EXISTING OFFICE (2 Levels)	500 sqm	
EXISTING DOCK OFFICE (2 Levels)	136 sqm	
<b>TOTAL AREA OF EXISTING BUILDINGS</b>	<b>30,291 sqm</b>	
EXISTING CAR SPACE PROVIDED	114 cars	
PROPOSED WAREHOUSE 2A ADDITION	15,612 sqm	
PROPOSED L1 MEZZANINE (Steel Platform)	3,160 sqm	
PROPOSED L1 MEZZANINE (Concrete Platform)	610 sqm	
PROPOSED GROUND FLOOR OFFICE	155 sqm	
PROPOSED FIRST FLOOR OFFICE	2,330 sqm	
PROPOSED WASTE WATER TREATMENT PLANT	2,155 sqm	
PROPOSED OUTDOOR PALLET STORAGE	300 sqm	
<b>TOTAL AREA OF NEW BUILDINGS</b>	<b>24,972 sqm</b>	
<b>TOTAL AREA OF NEW &amp; EXISTING BUILDINGS</b>	<b>55,263 sqm</b>	
PROPOSED WAREHOUSE 2B (STAGE 2)	2,813 sqm	
PROPOSED NEW CAR PARKING	160 spaces	
TOTAL CARSPACES	274 spaces	
<b>TOTAL AREA OF NEW &amp; EXISTING BUILDINGS</b>	<b>54,863 sqm</b>	
FLOOR SPACE RATIO (Excluding Stage 2)	0.52:1	
<b>TOTAL AREA OF NEW &amp; EXISTING BUILDINGS (incl. Stage 2)</b>	<b>57,676 sqm</b>	

Car Parking Schedule (New Additions)		
Type	Description	Spaces
PK-CP1	PK-CP1-5.5 x 2.5m - 90 deg (Disable)	2
PK-CP2	PK-CP2-5.5 x 2.5m - 90 deg (Future EV)	148
PK-CP3	PK-CP3-5.5 x 2.5m - 90 deg (Future EV)	8
PK-CP4	PK-CP4-5.5 x 2.5m - 90 deg (Future EV)	4
PK-CP5	PK-CP5 EV Charging Bay	160
Grand total		160

Site Plan (Overall)



# APPENDIX B

## 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?

.....  
.....  
.....

Briefly describe your proposed development

.....  
.....  
.....

Applicant Signature

Date

## 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 <sup>2</sup> or m <sup>3</sup> )	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				
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 <sup>2</sup> or m <sup>3</sup> )	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				
Concrete				
Timber (Please specify type/s)				
Plasterboard				
Metals (Please specify type/s)				
Other				



### 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)

## 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.

## ASIA PACIFIC OFFICES

### BRISBANE

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

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Canberra ACT 2600  
Australia  
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F: +61 2 9427 8200

### DARWIN

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Parap NT 0820  
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### GOLD COAST

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### WELLINGTON

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