WASTE MANAGEMENT PLAN

42-52 Raymond Avenue, Matraville

Prepared for: Hale Capital Group Pty Ltd Level 13, 333 George Street Sydney, NSW 2000

SLR[©]

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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 Hale Capital Group Pty Ltd (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	
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1 Introduction

1.1 Overview

SLR Consulting Australia Pty Ltd (SLR) has been commissioned by Hale Capital Group Pty Ltd. (the Client) to prepare a waste management plan (WMP) in support of a state significant development application (SSDA) for a multi-level warehouse located at 42-52 Raymond Avenue, Matraville. This WMP applies to the waste generated from the site preparation, construction and operational stages of the Development and has been prepared using architectural drawings supplied by the Client and attached in Appendix A.

The WMP complies with the Secretary's Environmental Assessment Requirements (SEARs) relevant to this project. The relevant requirements of the SEARs issued for SSD-31552370 addressed in this report are shown in Table 1.

Table 1SSD-31552370 Conditions for Waste Management

SSD- 31552370 Conditions for Waste Management	Relevant Sections in this WMP
Details of the quantities and classification of all waste streams to be generated on site during the development.	Section 5
Details of waste storage, handling, and disposal during the development	Section 6

We have also referred to Randwick Development Control Plan 2013 (DCP) *Section B6 Recycling and Waste Management* as a guide to waste management requirements.

1.2 Objectives

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

The specific objectives of this WMP are as follows:

- To encourage the minimisation of waste production and maximisation of resource recovery.
- To assist in ensuring that any environmental impacts during the operational life of the Development comply with the SEARs development consent conditions and other relevant regulatory authorities.

1.3 Review of WMP

This WMP is not a static document. It is a working document that requires review and updating to ensure ongoing suitability for the proposed on-going operations at the site.

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 Development Description

2.1 Overview of Proposed Development

The site is located at 42 Raymond Avenue in the Randwick local government area and is legally referred to as Lot 1 in Deposited Plan 369888, Lot 32 Section B Deposited Plan 8313 and Lot 1 Deposited Plan 511092 and Lot 2 in Deposited Plan 1082623 The Development will comprise a two-level warehouse, ancillary office space, landscaping, car and bicycle parking areas. There is also 2250 m² dedicated for soft and hard landscaping. The total redevelopment of the site comprises 19,460 m² gross floor area (GFA). This will include 17,789 m² of warehouse and distribution GFA and 1,671 m² GFA ancillary office space.

2.2 Overview of Proposed Construction Work

Development works are expected to include demolition, site preparation and construction activities. See Appendix A for site plans of the Development.

The site preparation and construction activities for the Development will seek consent for the following:

- Site clearing
- Bulk earthworks
- Construction of a two-storey warehouse and distribution buildings for storage, handling, and distribution of items each comprising:
 - Primary warehouse floor areas
 - Ancillary office areas
 - Provision of loading docks and associated roller shutter doors
- Provision of 11 bicycle parking spaces and 101 car parking spaces at ground
- Provision of one additional access crossover from Raymond Avenue
- Provision of internal vehicle access route
- Landscaped areas including extensive tree plantings.

2.3 Overview of Proposed Operations

Based on communication with the Client, SLR understands the Development will function as standard warehouses with distribution operations.



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 1, 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 1 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 2 below should be referred to during the site preparation, construction and operational phases of the Development.

Legislation and Guidance	Objectives
Council legislation and guidelines	
Secretary's Environmental Assessment Requirements (SEARs)	SEARs provide the addition requirements that must be completed when a critical state significant infrastructure project is submitted in a DA in NSW. The objective of SEARs submissions is to achieve better environmental outcomes by focusing on environmentally sensitive areas and areas of the greatest community concern. The provisions of the SEARs must be met for DA approval including the provision of a construction and operational waste management plan.
Randwick Development Control Plan 2013 (RDCP)	The RDCP came into effect in 2013 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 Council's ecological footprint by encouraging the diversion of waste from landfill.
Waste Management Strategy 2017- 2030 Randwick City Council	Council's waste strategy sets out the waste management targets for the Randwick 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 Environmental Planning Policy (Three Ports) 2013	The Policy is the principal environmental planning instrument that sets the land use planning and assessment framework for appropriate development at the three ports. SEPP's deal with the matters of State or regional environmental planning significance. They apply planning controls to certain land and types of development and provide for the development assessment pathway and environmental assessment the is required.
State and National legislation and	l 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: Stage 1 – 2021-2027	Replacing the <i>NSW Waste Avoidance and Resource Recovery Strategy (2014-21)</i> , the NSW Waste and Sustainable Materials Strategy 2041 focuses on the transition of NSW to a circular economy. The strategy focuses 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.

Table 2Legislation and guidance



Legislation and Guidance	Objectives				
NSW EPA Resource Recovery	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 wastes such as food waste.				
Exemptions	• 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 <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.				
Protection of the Environment Operations Act (POEO) 1997 and Amendment Act 2011	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.				
The Work Health and Safety Regulation 2017	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.				
	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				
Waste Avoidance and Resource	 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 				
Recovery Act 2001	 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 Demolition, 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%.

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 waste 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 Development 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 3.

For further information on how to classify a waste type refer to the NSW EPA (2014) *Waste Classification Guidelines*¹. Further information on managing site preparation and construction waste is available from the NSW EPA website².

¹ Available online from https://www.epa.nsw.gov.au/your-environment/waste/classifying-waste/waste-classification-guidelines ² http://www.epa.nsw.gov.au/your-environment/waste/industrial-waste/construction-demolition



Table 3Potential 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.		
Demolition and 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 <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		
Asbestos	Special waste	Off-site disposal at a licenced landfill facility.		
Fluorescent light fittings and bulbs	Hazardous waste	Off-site recycling or disposal; contact <i>FluoroCycle</i> for more information ³		
Paint	Hazardous waste	Off-site recycling, Paintback collection ⁴ 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 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	Commercial Lead acid or Nickel cadmium Batteries Hazardous waste			
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 <i>Business Recycling</i> for more information ⁶		
Work Compound and Associated (Offices			
Food Waste	General solid (putrescible) waste	Dispose to landfill with general garbage		

³ Available online from <u>http://www.fluorocycle.org.au/</u> or <u>http://www.environment.gov.au/settlements/waste/lamp-mercury.html</u>



⁴ Available online from <u>https://www.paintback.com.au/</u>

⁶ Available online from <u>http://businessrecycling.com.au/search/</u>

⁶ Available online from <u>http://businessrecycling.com.au/search/</u>

Waste Types	NSW EPA Waste Classification	Proposed Management Method		
Recyclable beverage containers including glass and plastic bottles, aluminium cans and steel cans		Co-mingled recycling at off-site licensed facility or deliver to local NSW container deposit scheme 'Return and Earn' facility ⁷		
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 Demolition and Site Preparation

The quantities of demolition waste for this development are estimated to be minimal as the existing concrete slab will generally remain in place.

In accordance with best practice waste management, records of the actual waste quantities recycled, reused or removed off-site are to be maintained. Details of how this waste will be re-used, recycled or disposed of and the name and contact details for each receiving waste facility should be kept.

Where possible, all disassembled materials will be reused on-site. Where not possible, parts will be sent for recycling and reuse off-site. Delivery of items to an appropriately licenced landfill is to be considered as a last resort. For reuse and recycling recommendations for demolition materials, refer to Table 2 above.

5.4 Asbestos and asbestos contaminated material

The following documents refer to asbestos and contaminated soil and are included as appendices to the SSDA final lodgement report prepared for this project:

- Appendix Q Results of Detailed Geotechnical Investigation Pells Sullivan Meynink (PSM) Report by Juno Liang, Ronald Tan
- Appendix U Detailed Site Investigation EMM Report by Lachlan Lewis, Susan Dillon
- Appendix V Remediation Action Plan EMM Report by Andrew Treasure, Susan Dillon
- Appendix W Interim Environmental Management Plan JBS&G Report by John De Martin, Grag Dasey
- Appendix X Draft Long Term Environmental Management Plan JBS&G Report by John De Martin, Grag Dasey
- Appendix Y Remediation Validation Report EMM Report by Lachlan Lewis, Victoria Buchanan.

Any contamination encountered on site, should be dealt with in accordance with the Contaminated Soil and Asbestos Management Strategy outlined in Appendix W and X.



⁷Available online from <u>http://returnandearn.org.au/</u>

5.5 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 skip 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 Development. SLR has adopted the 'Factory' rates to measure waste expected from the Development, as the construction of a factory 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' and 'Hardstand area' construction waste generation rates, SLR has developed 'Carpark' and 'Hardstand area' construction the 'Office' rates by:

- 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 1000 m² of construction.

The waste generation rates are shown in Table 4.

Rate Type	Floor Area (m²)	Waste types and quantities (m ³)						
		Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
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		30.6			14.3	4.5	8.1

Table 4 Waste generation rates for the construction of the Development

The waste generation rates for 'Factory' are applied to calculate the waste quantities generated from the construction of the building areas. The 'Carpark' waste generation rates are applied to calculate the waste quantities from the construction of all external hard surface areas including carparks, heavy and light duty surfaces, and paths and accessways. The areas are based on the areas provided in the architectural 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 of the Development are provided below in Table 5.



Drojecteres	$\Lambda roo (ro^2)$	Waste types and approximate quantities (m ³)						
Project area	Area (m²)	Timber	Concrete	Bricks	Gyprock	Sand or Soil	Metal	Other
Total Warehouse areas	17,789	4	37	29	8	85	11	9
Office areas	1,671	9	33	15	15	15	5	9
Hardstand area	4,500	-	138	-	-	64	20	36
Carpark	965	-	30	-	-	14	4	8
Total	24,925	13	237	44	23	178	40	62

Table 5Estimated types and quantities of construction waste

At the time of preparing this plan, architectural drawings with storage details for construction waste were not available. This is to be updated by the site manager once waste streams, estimated quantities, and final disposal locations and recycling services have been identified.

The Building Contractor, Building Architect and/or those in equivalent roles should follow better practice waste management and the principles of Ecologically Sustainable Development.

Recommendations for the Building Architect include:

- Using prefabricated components
- Using low formaldehyde wood products, post-consumer reused timber and/or Forest Stewardship Council certified timber
- Using fittings and furnishings that have been recycled, are made from or incorporate recycled materials and have been certified as sustainable or environmentally friendly by a recognised third-party certification scheme
- Preferentially using building materials, fittings and furnishings, including structural framing, roofing and façade cladding, that have longer life and better re-use and recycling potential
- Reducing the use of polyvinyl chloride products
- Preferentially using paints, floor coverings and adhesives with low VOC (volatile organic compound) content
- Avoiding unsustainable timber imports
- Selecting materials based on low embodied energy properties that suit the Project, such as recycled materials including recycled steel and glass-wool insulation, or concrete with slag and fly ash content
- Centralising wet areas together to minimise piping, and
- Designing for deconstruction rather than demolition.

Recommendations for the Building Contractor include:

- Applying practical building designs and construction techniques
- Minimising excavation works
- Investigating leased equipment and machinery rather than purchase and disposal
- Sorting and segregating site preparation and construction waste to ensure efficient recycling of waste



- Preferentially selecting building materials, fittings and furnishings, including structural framing, roofing and façade cladding, that have longer life and better re-use and recycling potential
- Store waste on-site appropriately to prevent cross-contamination and/or mixing of different waste types
- Reducing 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.
- Arranging deliveries 'as needed' to mitigate degradation, weathering or moisture damage, and
- Ensure subcontractors are informed of and implement site waste minimisation and management procedures.

5.6 Re-use, Recycling and Disposal

Effective management of 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 will be sent to landfill or appropriate disposal facilities.

In accordance with good practice waste management, the following specific procedures will be implemented:

- On-site source separation to ensure efficient recycling
- Concrete, tiles and bricks reused or recycled off-site
- Steel recycled off-site, and all other metals recycled where economically viable
- Framing timber recycled off-site
- Windows, doors and joinery off-site, where possible
- All glass that can be economically recycled will be recycled
- All solid waste timber, brick, concrete, rock that cannot be reused or recycled will be taken to an appropriate facility for treatment to recover further resources or for disposal to landfill in an approved manner
- Re-use of materials on-site where possible
- Separate waste bins for recyclable and non-recyclable general waste
- Assess excavation spoil for contamination status and beneficial re-use
- Retain used crates for storage purposes unless damaged
- Recycle cardboard, glass and metal waste
- Provide sufficient space for storage of garden waste and other waste materials on-site
- Dispose of all asbestos, hazardous and/or intractable waste in accordance with SafeWork NSW and NSW EPA requirements



- All used crates will be stored for reuse unless damaged
- Deliver batteries to drop off-site recycling facility, and
- Where source separation is utilised, materials are to be kept uncontaminated to guarantee the highest possible re-use value.

5.7 Waste Separation, Storage and Servicing

5.7.1 Waste Separation and Storage

Waste materials produced from site preparation and construction activities will be separated at the source and stored separately on-site.

It is anticipated that there will be enough space on-site for separate storage in, 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 separation 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 before removal from the site.

5.7.2 Waste Storage Areas

Waste storage areas will be accessible and allow sufficient 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 will 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 waste does not fall, blow, wash or otherwise escape from the site. Waste containers and storage areas will be kept clean and in a good state of repair.

Applicable weather protection measures should be considered for storage spaces.

In accordance with good practice waste management, areas designated for waste storage will:

- Allow unimpeded access by site personnel and waste disposal contractors
- Take into account 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 sufficient 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 and accessibility 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 will:

- 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 approved hours.

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

5.7.4 Waste Servicing and Transport

The frequency of the waste removal will, in most cases, be dictated by the quantities of material being deposited into each of the dedicated skip bins. All skips leaving the site will be covered with a suitable tarpaulin to ensure that the spillage of waste from the skips while in transit is eliminated.



5.8 Contaminated and Hazardous Waste

All asbestos and other hazardous waste must be handled according to appropriate legislation and regulation including the Work Health and Safety Regulation 2011 and disposed of in accordance with the SafeWork NSW and relevant EPA requirements.

For further details on asbestos handling and storage, refer to the Western Sydney Recycling Directory – Construction and Demolition Waste 2017.⁸

5.9 Signage

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

Signs approved by the NSW EPA for labelling of waste materials are available online⁹ and should be used where applicable. A selection of the EPA's signs is shown in Figure 2.



Figure 2 Examples of NSW EPA labels for waste and skip bins



^{8 &}lt;u>https://www.blacktown.nsw.gov.au/files/content/public/services/waste/demolition-and-construction-waste/western-sydney-recycling-directory-cd-updated-nov-2017.pdf</u>

⁹ NSW EPA approved waste materials signage <u>https://www.epa.nsw.gov.au/your-environment/recycling-and-reuse/business-government-recycling/standard-recycling-signs</u>

5.10 Site Inductions

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

Induction training will 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.

5.11 Monitoring and Reporting

During the demolition and construction phases, the following monitoring practices will be undertaken to improve demolition 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.

Records will be maintained for all waste quantities that are recycled, reused or removed by a contractor. All demolition and construction waste dockets will be kept which show which facility received the material for recycling or disposal.

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 or equivalent role on a weekly basis or as required. These inspections will be used to identify and rectify any resource and waste management issues.

Waste audits should be carried out by the building contractor or equivalent role 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 will be re-examined.



5.12 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 site manager, or equivalent role, to implement the WMP, and the responsibility of employees and subcontractors to ensure that they comply with the WMP at all times.

Suggested roles and responsibilities for waste management at the site are provided in Table 6. Where possible, a construction environmental manager, or equivalent role, should be appointed for the site preparation and construction work. An equivalent construction environmental manager role is defined to be a person dedicated to overseeing the environmental compliance and performance of a development. Where a construction environmental manager is not appointed, responsibilities in Table 6 for the construction environmental manager will become those of the site manager.

Table 6Suggested roles and responsibilities for site preparation, demolition and construction waste
management

Role	Responsibilities
Site Manager	Ensuring plant and equipment are well maintained
	Ordering only the required amount of materials
	Keeping materials segregated to maximise reuse and recycling
	 Ensuring that waste sorting and storage areas are maintained in a tidy and functional state and do no present hazards to human health or the environment
	Ensure hazardous or contaminated materials are appropriately managed and disposed
	Ensure site records and documentation is kept and is complete
	Ensure this WMP are implemented, and
	Liaise with Council and regulatory authorities as required.
Construction	Ensuring staff and contractors are aware of site requirements for waste management
Environmental Manager or	• Establishing separate skips and stockpiles and recycling bins for effective waste segregation and recycling purposes
oquiraion.	 Developing or identifying, and using, local commercial opportunities for re-use of materials where re- use on-site is impractical
	Facilitate correct waste collection
	Engage suitable waste collection and disposal contractors
	Approval of off-site waste disposal locations and checking licensing requirements
	Arranging for the assessment of potentially hazardous or contaminated materials
	• Arranging for appropriate contaminated waste management and approval of off-site waste transport, disposal locations and checking licensing requirements
	Monitor and maintain site environmental controls and
	Monitoring, inspection and reporting requirements.



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 2019 were 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 waste that are being or have been recycled during operation.

6.2 Waste Streams and Classifications

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

- Domestic 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 and
- Stores, plant and general maintenance waste.

Potential ongoing waste types, their associated waste classifications, and management methods are provided in Table 7. 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.

Waste Types	NSW EPA Classification	Proposed Management Method					
	General Operations						
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					
Food waste 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					

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



Waste Types	NSW EPA Classification	Proposed Management Method
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 (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
General garbage, including non-recyclable plastics	General solid (putrescible and non-putrescible) waste	Disposal at landfill
	Maintenance	
Spent smoke detectors ¹⁰	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 ¹¹ or Lamp Recyclers ¹² for more information
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 (non-putrescible) waste	Reuse on-site or contractor removal for recycling at licenced facility

6.3 Estimated Quantities of Operational Waste

To calculate the size of the waste storage areas, SLR has adopted the waste generation rates for 'Warehouse' from the Randwick Council Waste Guidelines to estimate the quantities of waste generated from the warehouse areas. For office areas, SLR has adopted the waste generation rates for 'Office' from the Randwick Council Waste Guidelines. The waste generation rates can be seen in the waste generation rates can be seen in Table 8.



¹⁰ 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.

¹¹ <u>https://www.fluorocycle.org.au/</u>

¹² <u>https://www.lamprecyclers.com.au/</u>

Table 8Waste generation rates

Type of Premises	General Waste Generation (L/100 m²/day)	Recycling Generation (L/100 m²/day)
Warehouse	30	30
Offices	10	25

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

- The floor areas as presented on the architectural drawings attached in Appendix A, and
- A week comprising seven days of operation.

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

Table 9	Estimated quantities of	operational g	eneral waste and	recycling for the	Development
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Complex	Location	Area (m²)	General Waste (L/week)	Recycling (L/week)
	Warehouse	4,519	9,490	9,490
Warehouse	Office	416	291	728
tenancy 1	GF Dock Office	15	11	26
	Total	4,950	9,792	10,244
	Warehouse	4,144	8,702	8,702
Warehouse	Office	421	295	737
tenancy 2	GF Dock Office	15	11	26
	Total	4,580	9,008	9,465
Warehouse	Warehouse	4,522	9,496	9,496
tenancy 3	Office	416	291	728
	L1 Dock Office	15	11	26
	Total	4,953	9,798	10,250
Warehouse	Warehouse	4,448	9,341	9,341
tenancy 4	Office	418	293	732
	L1 Dock Office	15	11	26
	Total	4,881	9,644	10,099



6.3.1 Other Types of Operational Waste

Materials such as pallets, plastic and cardboard packaging waste are likely to be produced and disposed of through the recycling stream. Standard pallets would be returned to their owners and non-standard and broken pallets should be stockpiled and collected as required by a waste contractor.

If additional collection services are required, such as secured document destruction, these can be organised with a waste contractor who can provide additional bins and take collected waste to a licenced facility for disposal or recycling.

The Development is anticipated to produce minimal quantities of garden organics. This waste will be taken by a landscaping contractor which will dispose of it at a licenced facility.

6.4 Waste Storage Area Size

The waste storage areas must be large enough to adequately accommodate all quantities of operational waste and recycling between collections.

Waste collection services at a warehouse development like this will most likely be undertaken by a front-lift collection vehicle. Typical bin capacities for this kind of service are 3 m³ bin. SLR notes that the final decision on what bins service will be provided will be made by tenants in consultation with their waste contractors.

To allow for ready movement of bins into and out of the bin storage area, at least twice the total minimum bin footprint has been allowed. This can also act as a contingency in the event of spikes in waste generation. This has been considered in the calculation of the waste storage areas.

In the absence of Council bin dimensions for 3 m² bins, SLR has used the maximum typical bin dimensions from our internal database. See Table 10 below for the dimensions and approximate footprint of bins.

Table 10Dimensions and approximate footprint of bins

Dimension	Height (mm)	Depth (mm)	Width (mm)	Footprint (m ²)
3 m³ bin	1,540	1520	2,060	3.13

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

- The estimated quantities of operational waste and recycling as shown in Table 9
- Bin dimensions as shown in Table 9

Table 11 Minimum number of bins and waste storage area for operational waste of the Development

СЕЛ		Bins Required		Collection Fr	equency per Week	Recommended Storage	
Location	(m ²)	General Waste	Comingled Recycling	General Waste	Comingled Recycling	Area (m ²)	
Warehouse tenancy 1	4,950	1 x 3 m ³	1 x 3 m ³	4	4	12.5	
Warehouse tenancy 2	4,580	1 x 3 m ³	1 x 3 m ³	4	4	12.5	



CEA	Bins Required		Collection Fr	equency per Week	Recommended Storage	
Location	(m ²)	General Waste	Comingled Recycling	General Waste	Comingled Recycling	Area (m ²)
Warehouse tenancy 3	4,953	1 x 3 m ³	1 x 3 m³	4	4	12.5
Warehouse tenancy 4	4,881	1 x 3 m ³	1 x 3 m ³	4	4	12.5

6.4.1 Bulky Waste Management

There are no requirements for bulky waste in the SSD requirements for waste management or in the Randwick DCP. SLR understands that from time to time, bulky waste including broken pallets, broken storage units, ewaste and other materials that cannot be disposed of in the general or recyclable waste stream will likely be generated. SLR notes that there is adequate space in the allocated waste storage areas to store bulky waste that could accumulate during operations. Tenants may arrange for a hook-lift collection from time to time to collect the bulky waste if and when needed.

6.5 Waste Storage Room Location

In accordance with Council's requirements, and better practice waste management, the waste storage area should be located so that:

- Equal and convenient access for all occupants is to be provided
- It is sited behind the development building line and incorporated within the development footprint
- In areas that will not reduce the amenity for occupants and existing users adjoining the development and
- Convenient access to the collection vehicle loading area to minimise bin-carting routes.
- There is space for collection vehicles to directly access the bins by driving forward onto for front lift bins and reversing onto for the hook bin.
- Garbage and Recycling Enclosures / Rooms and internal collection points shall be located so that their use will not interfere with the use of access driveways, loading bays and parking bays;
- Garbage and Recycling Rooms shall be located entirely within the main building.

As specified in the DCP, the collection areas and storage areas for each warehouse are to be clearly nominated on site plans accompanying development applications. The waste storage areas for the Development are shown on the architectural drawings attached in Appendix A in line with Council's requirements.

6.6 Waste Storage Area Features

In accordance with good practice waste management, the Development's waste storage areas will have the following features:

- Blend in with the design of the wider development and the surrounding streetscape
- Be well lit and well-ventilated
- Have adequate vermin prevention measures

- Reduce potential noise and odour impacts
- Be connected to a water outlet for washing purposes
- Have water discharge from washing flow to a sewer approved by the relevant authority
- Protected from theft and vandalism
- Be enclosed or screened, preferably with landscape buffer planting, from public areas to reduce the impacts of noise, odour and visual amenity, and
- Flexible in design to allow for future changes in operation, tenancies and uses.

6.7 Waste Servicing and collection arrangements for contactors

SLR understands that waste collections will be undertaken through a private contractor. 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 rooms are not accessible to the general public.

In accordance with the Randwick DCP, the following is required for the access provisions for of waste collection vehicles for commercial and industrial developments:

- The vehicle must be able to enter and exit the site in a forward direction. The collection point should be located to minimise manoeuvring within the site.
- The route of travel (including vehicle manoeuvring areas) for the waste collection vehicle to the collection point must satisfy the typical dimensions of heavy rigid vehicle. This also includes adequate vertical clearance for the vehicle.
- The grades of entry and exit routes must not exceed the capabilities of the waste collection vehicle and are to comply with AS2890.2.

The collection vehicles required for 3 m³ front lift bins require 6.2 m height clearance to empty the bins. Therefore, front-lift 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.

Randwick Council's Waste Guidelines specify that the dimensions of a front-lift waste collection vehicle are the same as those for a standard heavy rigid vehicle as identified in Australian Standard 2890.2 Parking facilities, Part 2: Off-street commercial vehicle facilities. A private waste collection contractor will likely use this type of vehicle which requires special access requirements. The dimensions of the Australian Standard are shown in Table 12 below.

Vehicle Element	Specifications in AS 2890.2
Overall Length (m)	10.5
Operational Length (m)	12.5
Design Width (m)	2.8

Table 12Heavy vehicle dimensions

Vehicle Element	Specifications in AS 2890.2
Design Height (m)	4.1
Operational Height (m)	+4.5 (specific to bins proposed) At least 6.2
Swept Circle (m)	22.5
Clearance (travel height) (m)	4.5
Roadway/ramp grade (max)	1:6.5 (15.4%)
Rate of change of grade (max)	1:16 (6.25%) in 7.0 m of travel
Gross Weight (max tonnes)	28.0
Front Chassis Clearance	13º
Rear Chassis Clearance	16°

The dimensions from the Australian Standard 2890.2 are also shown in Figure 3 below.



Figure 3 Front lift collection vehicle dimensions

Once a private waste contractor is engaged, a valid waste and recycling collection contract is recommended 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

- Avoiding printing where possible
- Review of packaging design to reduce waste but maintain 'fit for purpose'
- Providing ceramic cups, mugs, crockery and cutlery 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.

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-waste
- Flatten or bale cardboard to reduce number of bins required
- 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, and
- Development of 'buy recycled' purchasing policy.

6.9 Communication Strategies

Waste management initiatives and management measures should be clearly communicated to building managers, tenants, employees, customers and cleaners. Benefits of providing this communication include:

- improved satisfaction with services
- increased ability and willingness to participate in recycling
- improved amenity and safety
- improved knowledge and awareness through standardisation of services
- increased awareness or achievement of environmental goals and targets
- reduced contamination of recyclables stream
- increased recovery of recyclables and organics 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 Development
- 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

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 Development.

Signs which clearly identify waste management procedures and provisions to staff and visitors should be distributed around the Development. 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 4
- 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 Development, and
- Emergency contact information for reporting issues associated with waste or recycling management.

Colour-coded and labelled lids are necessary for identifying bins. All signage should conform to the relevant Australian Standard and use labels approved by the NSW EPA¹³. 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.



Figure 4 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 Development 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.



¹³ NSW EPA waste signage and label designs <u>http://www.epa.nsw.gov.au/wastetools/signs-posters-symbols.htm</u>

In addition, audits are to 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 Building Manager. This is to allow reviews of the waste management arrangements and provisions at the site over time. Records of waste disposal should also be available to regulatory authorities such as the NSW Environmental Protection Authority 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 Building Manager as soon as it is practical. Where audits show that recycling 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 Development, 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 Development's waste management system clearly explained. A summary of recommended roles and responsibilities are provided in Table 13.

Responsible Person	General Tasks		
Management	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 on a weekly basis or as required.		
	Compliance with the provisions of this WMP.		

Table 13 Operational waste management responsibility allocation



7 Conclusion

Impacts will occur during the construction phase of the project and during ongoing operation.

Impacts during construction will be minimal with no excavation or demolition works proposed. Most construction will take place on-site, and waste materials produced from site preparation and construction activities will be separated at the source and stored separately on-site. Only waste that cannot be cost effectively reused or recycled will be sent to landfill or appropriate disposal facilities.

It is anticipated that the waste minimisation measures in the sections listed above will assist the Development to achieve average recovery in line with the NSW *Waste and Sustainable Materials Strategy 2041*.

The estimated quantities of waste generated from the warehouse and office areas were guided by the waste generation rates from the Randwick Council Waste Guidelines and which were used as a guide to calculate the size of the waste storage areas.

The WMP complies with the SEARs relevant to this project. The relevant requirements of the SEARs issued for SSD-31552370 addressed in this report are:

- Details of the quantities and classification of all waste streams to be generated on site during the development (found in Section 5)
- Details of waste storage, handling, and disposal during the development (found in Section 6)



APPENDIX A

Site plans







HALE 01.03.22 16.12.21 30.11.21 19.11.21 12.11.21 04.11.21



PROPOSED INDUSTRIAL DEVELOPMENT

42RAYMOND AVENUE, MATRAVILLE





DEVELOPMENT SUMMARY GFA CALCULATIONS:

DEVELOPABLE SITE AREA (Lot 1 DP 369668, Lot 32 Section B DP 8313 & Lot	19,437 m² 1 DP 511092)
NON-DEVELOPABLE SITE AREA (Lot 2 DP1082623)	3,337 m ²
TOTAL SITE AREA	22,774 m ²
OFFICE AREA	1671 m²
WAREHOUSE & DOCK OFFICE AREA	17789 m²
TOTAL GFA:	19460 m ²
PROPOSED FSR	1.01:1
LANDSCAPE AREA 11.5%	% 2250 m ²
CAR SPACES REQUIRED CAR SPACES PROVIDED	101 101
MOTORCYCLES PARKING BICYCLES PARKING	6 11

GFA AREA SCHEDULE					
UNIT NAME	WH AREA	OFFICE AREA	TOTAL		
TENANCY 01	4519 m ²	416 m ²	4935 m²		
TENANCY 02	4144 m ²	421 m²	4565 m²		
TENANCY 03	4522 m ²	416 m ²	4938 m²		
TENANCY 04	4448 m ²	418 m ²	4866 m²		
LOBBY AREA	96 m²	0 m ²	96 m²		
GF DOCK OFFICE	30 m²	0 m ²	30 m²		
L1 DOCK OFFICE	30 m²	0 m ²	30 m²		
TOTAL:	17789 m²	1671 m²	19460 m ²		



SITE ANALYSIS PLAN & SUMMARY

REVISION





SBA

ISSUE FOR DA

FOR CLIENT REVIEW FOR CLIENT REVIEW

B ISSUE FOR INFORMATION

A ISSUE FOR INFORMATION

HALE

16.12.21 30.11.21 19.11.21 12.11.21 04.11.21

PROPOSED INDUSTRIAL DEVELOPMENT

42RAYMOND AVENUE, MATRAVILLE

NORTH

16.12.21 As indicated @ A1 JOB NO. DWG NO. E

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