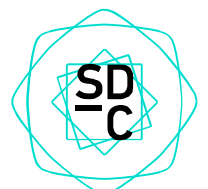


SUSTAINABLE DEVELOPMENT _CONSULTANTS

CREATE A BETTER PLACE TO LIVE.

Waste Management Plan
Clunies Ross Street & Foundation Place, Prospect



Proposed Industrial Development Clunies Ross Street & Foundation Place, Prospect

Waste Management Plan

June 2020

S4063 WMP. V1

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Table of Contents

1. Introduction.....	5
1.1 Secretary's Environmental Assessment Requirements	5
1.2 Aims and Objectives	5
1.3 Waste Management Strategy / Better Practice	5
1.4 Applicable Legislation and Guidance.....	6
1.5 Site Description & Development Summary	6
2. Construction Waste Management.....	8
2.1 Overview	8
2.2 Construction Waste Targets	8
2.3 Construction Waste Sources.....	8
3. Construction Waste Streams.....	9
3.1 Waste Avoidance measures	10
3.2 Re-use, Recycling and Disposal Measures.....	11
4. Construction Waste Storage & Collection.....	12
4.1 Bins and Storage.....	12
4.2 Collection.....	12
5. Implementation (Construction).....	12
5.1 Education & Awareness	12
5.2 Monitoring and Reporting.....	13
5.3 Roles and Responsibilities.....	13
6. Operational Waste Management.....	14
6.1 Overview	14
6.2 Targets	14
6.3 Types of Waste Generated.....	14
7. Operational Waste Generation	14
8. Bin Types, Collection Method & Frequency.....	15
9. Operational Waste Disposal, Storage & Collection.....	17
9.1 Waste Storage Area	17
9.2 Waste Disposal Methods.....	17
9.3 Waste Collection.....	17
9.4 Regular Maintenance	17
9.5 Green Waste.....	17
9.6 Hard Waste and e-Waste.....	18
9.7 Special Wastes.....	18
9.8 Liquid Wastes.....	18
9.9 Signage.....	18
9.10 Waste Avoidance Measures.....	19
9.11 Re-use, Recycling and Disposal Measures.....	19

10.	Implementation (Operational).....	19
11.	Summary.....	19

Version	Date of Issue	Description	Author	Approved
V1	02-06-2020	For Submission to Council	SC	LR

1. Introduction

This Waste Management Plan (WMP) has been prepared for the proposed industrial development at Clunies Ross Street and Foundation Place, Prospect, which is to comprise seven warehouses, each with ancillary offices and carpark, and a small café.

The purpose of this WMP is to determine the practical arrangements for how waste management and recycling will occur and to set in place measures to assist in reducing the generation of waste, and recovery of resources through reuse and recycling in the construction and operation phases of the project.

This document has been prepared by Sustainable Development Consultants with reference to the architectural drawings prepared by SBA Architects, as well as the Planning Secretary's Environmental Assessment Requirements (SEARs), particularly relating to Waste.

1.1 Secretary's Environmental Assessment Requirements

The Secretary's Environmental Assessment Requirements (SEARs), issued by the NSW Department of Planning and Environment for SSD-10399 on 16 December 2019 contain the following requirements for Waste:

- Details of the quantities and classification of all waste streams to be generated on site during construction and operation
- Details of waste storage, handling and disposal during construction and operation
- 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

1.2 Aims and Objectives

This WMP aims to ensure that all waste generated in the construction and operation phases of the project is managed in an effective and environmentally responsible manner, in accordance with the relevant regulatory requirements and with a focus on improving sustainable waste management outcomes where possible.

The key objectives of this WMP in achieving this are:

- Minimise waste to landfill
- Maximise resource recovery by reuse and recycling
- Establish procedures for monitoring, record keeping and reporting
- Comply with requirements of Council and other relevant regulatory authorities
- Identify areas to improve on best practice waste management principles

1.3 Waste Management Strategy / Better Practice

This WMP follows the principles and guidance set out in the WARR Strategy 2014-21 through promotion of waste as a resource. This allows a framework to be developed to improve sustainable waste management outcomes and can help with focussing effort to achieve the greatest efficiencies in time, cost and resources.

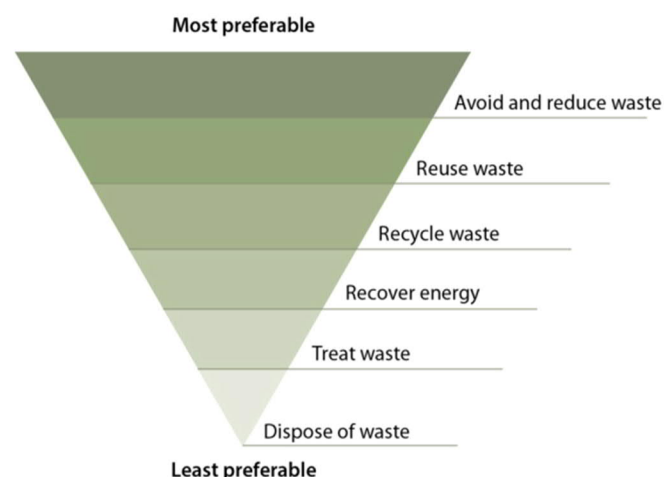


Figure 1: The waste hierarchy (Source: NSW WARR Strategy 2014-21)

The Waste Avoidance and Resource Recovery Strategy 2014-21 (WARR) sets out a waste hierarchy shown in Figure 1 providing a preferred order of approaches for waste management in achieving efficient resource use.

Under the waste hierarchy approach, waste avoidance is primarily achieved through reduction or prevention of waste generation, for example reducing packaging and manufacturing waste, avoiding disposable/single use materials or seeking out recycled materials rather than raw materials. The preference is then for waste to be reused for other purposes without further processing, where possible. Following this is a preference for recycling, which requires processing to create new source materials, rather than drawing on virgin materials. Where further recycling is not feasible, energy from waste recovery process may be used where appropriate and available. Finally, any materials that are inappropriate for any of the previous processes will be disposed of and may require treatment to stabilise, especially in the case of hazardous materials.

1.4 Applicable Legislation and Guidance

During the construction and operational phases of the development, the legislation and guidance set out below should be referenced with regard to waste management:

- Waste Avoidance and Resource Recovery Act 2001
- Protection of the Environment Operations Act (POEO) 1997 & Amendment Act 2011
- Protection of the Environment Operations Act (POEO) (Waste) Regulations 2014
- EPA Waste Classification Guidelines (Part 1) 2014)
- EPA Waste Avoidance and Resource Recovery (WARR) Strategy 2014-21
- National Construction Code (NCC) and relevant Australian Standards
- Blacktown Development Control Plan 2015: Part G - Site Waste Management and Minimisation

At the time of writing, there were no Development Control Plans that applied to Cumberland area of the site.

1.5 Site Description & Development Summary

The site at Clunies Ross Street and Foundation Place, is located approximately 27km West of the Sydney CBD, and sits within both the Cumberland and Blacktown Councils.

It is situated in an industrial precinct near the intersection of the Western Motorway and Prospect Highway adjacent to Prospect Reservoir. The site is currently occupied by a combination of commercial and industrial buildings which are to be demolished prior to construction of the proposed development.

The proposed development includes seven warehouses, each with ancillary offices and carpark, and a small cafe.

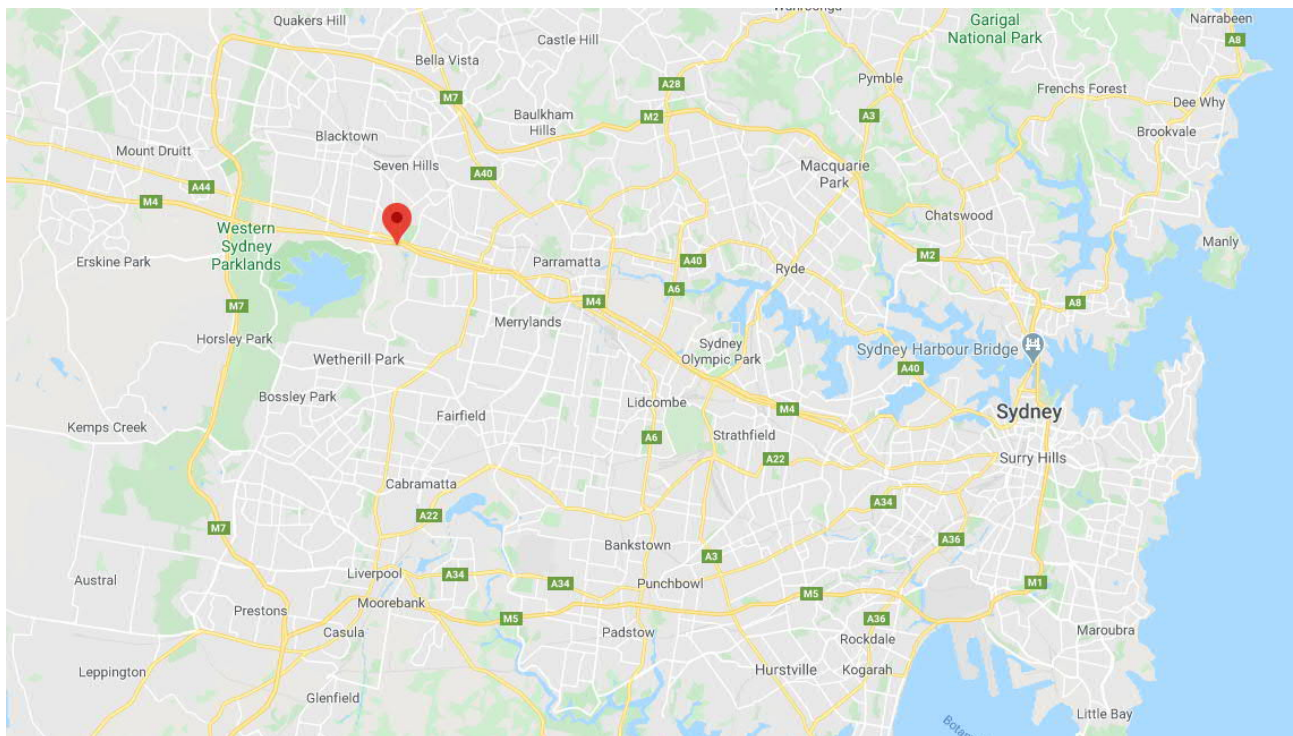


Figure 2: Location of the site in relation to the Sydney CBD (Source: Google Maps)



Figure 3: Aerial view of the site at Clunies Ross Street and Foundation Place (Source: Nearmap, mark-up by SDG)

The development summary is as follows:

	Warehouse Gross Floor Area	Office Gross Floor Area (including dock offices)	Café Gross Floor Area
Unit 1	18,224m ²	1,396m ²	-
Unit 2	24,071m ²	1,787m ²	-
Unit 3	12,088m ²	1,318m ²	-
Unit 4	5,349m ²	476m ²	-
Unit 5	10,401m ²	1,109m ²	-
Unit 6	8,441m ²	1,013m ²	-
Unit 7	8,927m ²	893m ²	-
Café	-	-	146m ²
Total	87,501m ²	7,992m ²	146m ²
Car parking	564 Spaces		
Total site area	186,597m ²		

2. Construction Waste Management

2.1 Overview

There is significant potential for the reduction of waste to landfill through minimisation, reuse and recycling during the construction phase of the project.

The following are the key construction activities for the project:

- Land clearing, levelling and excavation
- Preparation and installation of site services infrastructure and lead-ins (gas, electricity, water and telecommunications), stormwater and sewerage
- Construction of internal roads, carparks and hardstand areas
- Construction of warehouses and office buildings
- Landscaping and finishing

2.2 Construction Waste Targets

The NSW WARR Strategy 2014-21 targets a recycling rate of 80% for construction waste.

This project will be targeting a 90% resource recovery rate for all waste during the construction phase.

Additionally, reporting will be undertaken to demonstrate that less than 5kg per square metre of GFA will be sent to landfill throughout the construction process. These measures exceed the WARR Strategy target.

The measures taken to reach these targets are outlined in the following section. Waste audits and monitoring will demonstrate the actual percentages of separated materials diverted for recycling and sent to landfill during the construction phase of the project.

2.3 Construction Waste Sources

Possible waste sources expected in the construction of the project, along with their classifications according to the NSW EPA Waste Classification Guidelines, are detailed in Table 1 (below):

Table 1: Sources and classification of waste expected in the construction phase of the project.

Waste Category	Waste Type Examples	Classification
Excavation and land clearing material	Topsoil, excavated material, cleared vegetation	General solid waste (non-putrescible)
Construction wastes	Concrete, steel reinforcement & other metals, conduits and pipes timber formwork, plasterboard, bricks glass	General solid waste (non-putrescible)
Plant and machinery maintenance waste	Tyres	Special waste
	Air and oil filters	General solid waste (non-putrescible)
	Batteries	Hazardous waste
Packaging	Packaging materials, including wood, plastic, cardboard and metals	General solid waste (non-putrescible)
Employee waste	Recyclable beverage containers (glass, plastic bottles, aluminium cans), tin cans, clean paper and cardboard	General solid waste (non-putrescible)
	Food packaging such as paper and cardboard packaging, polystyrene, food.	General solid waste (non-putrescible mixed with putrescible)
	Sewerage from temporary washrooms	Liquid waste
Liquid Waste	Wastewater from washdown	Liquid waste

3. Construction Waste Streams

Listed in Table 2 (below) are the waste generation rates expected during the construction phase of this type of development¹, based on building type.

Table 2: Average rates of waste produced in the construction phase of different building types

Construction Type	Average Volume of Waste per 100m ² GFA
Industrial Buildings	13.0 m ³ /100m ² floor area
Commercial Offices	19.8 m ³ /100m ² floor area

Provided in Table 3 (below) are the estimated percentages for each potential waste stream²:

Table 3: Percentage for each potential waste stream

Construction Type	Estimated Waste Percentage (%)
Hard Material (e.g. bricks & tiles)	32
Timber	24
Plasterboard	6
Concrete	9
Metals	6
Plastics	15
Cardboard	4
Green Waste	3
Soil	1
Other	0.3

Table 4 (below) sets out the total estimated volume of waste to be generated. By cross-referencing the estimated waste generation volumes for the construction types in Table 4 (below) with the waste stream percentage breakdown in Table 3 (above), predicted volumes for all waste streams to be generated onsite can be estimated, as set out in Table 5 (below).

¹ Based on Environmental Performance Indicators (EPI) measuring the volume of waste produced per 100m², which form part of a set of benchmark indicators for predicting waste during construction projects by the UK Building Research Establishment (BRE) derived from data from completed projects on the SMARTWaste Plan.

² Compiled from a range of sources include the Inner Sydney Waste Board's Waste Planning Guide for Development Applications (1998), the Sustainability Victoria Waste Wise Tool Kit (2013) and the UK's Waste and Resources Action Programme (WRAP)

Table 4: Total Estimated volume of waste expected to be generated in the development during the construction phase

Construction Type	Estimated Volume of Waste
Warehouses (total)	11,375m ³
Ancillary Offices & Café (total)	1,611m ³
TOTAL	12,986m ³

Table 5: Total Estimated volume of waste expected to be generated in the development during the construction phase

Construction Type	Estimated Volume of Waste
Hard Material (e.g. bricks & tiles)	4,156m ³
Timber	3,117m ³
Plasterboard	779m ³
Concrete	1,169m ³
Metals	779m ³
Plastics	1,948m ³
Cardboard	519m ³
Green Waste	390m ³
Soil	130m ³
Other	39m ³

The estimated generation of waste by waste stream as set out in Table 5 (above) are approximate only.

Waste will also be generated from the construction of access roads, carparks, civil works and landscaped areas, which goes beyond the scope of the calculations shown in Tables 2-5.

3.1 Waste Avoidance measures

Opportunities for waste avoidance during the construction phase of the project will be identified and implemented by:

- Avoiding unnecessary excavation and topsoil disturbance. Where topsoil is stripped, it will be stored onsite for reuse or for sale and use offsite. Excavated materials will be used onsite for infill where possible
- Selecting construction materials and fittings/finishes that are made from or incorporate recycled components where possible (such as recycled concrete & steel and reused fittings and furnishings)
- Selecting construction materials and fittings/finishes for longevity and durability with consideration of end-of-life reuse and recycling potential

- Use pre-fabricated and pre-cut components where possible
- Re-use of construction infrastructure such as formwork where possible
- Estimate required concrete volumes prior to pouring and combine pours where possible
- Reduce packing waste onsite by:
 - Selecting producers who use reusable or recyclable packaging
 - Returning packaging materials to the supplier where appropriate
- Careful separation and storage of waste materials on-site to avoid damage, contamination and spoiling
- Induction for all contractors and site staff on waste management procedures for the site

3.2 Re-use, Recycling and Disposal Measures

Effective waste management procedures will be employed to ensure only waste products that cannot be effectively reused or recycled are sent to landfill (or other appropriate stabilisation and disposal facility). This will be achieved through sorting, separation and onsite storage of appropriate construction wastes to ensure they are reused and recycled wherever possible:

Table 4 (below) sets out the management of waste materials generated onsite:

Table 5: Waste materials generated onsite and how they will be managed

Waste Type	Reuse/Recycling Opportunities	Disposal
Concrete, tiles, bricks	Reused or recycled off-site	Disposed of appropriately where reuse/recycling not possible
Steel & other metals	Reused or recycled off-site	Disposed of appropriately where reuse/recycling not possible
Timber	Reused or recycled off-site	Disposed of appropriately where reuse/recycling not possible
Waste oil	Recycled off-site	Disposed of appropriately where reuse/recycling not possible
Used packaging such as crates/pallets etc	Returned for reuse where undamaged	Disposed of appropriately where damaged
Glass	Recycled where economically possible	Disposed of appropriately where reuse/recycling not possible
Waste produced by site staff and contractors	Recycling bins to be provided for food and beverage packaging to be recycled off-site	Garbage to be disposed of via council approved system
Hazardous and/or intractable waste	-	Disposed of according to Workcover Authority and EPA requirements
Sanitary Waste	-	Temporary washroom facilities provided onsite will be regularly emptied and serviced by a licensed contractor.

Liquid waste produced by washdown of equipment, plant, concrete delivery trucks or other machinery will occur within appropriately bunded washdown bays. Wastewater from this process will be transferred to a local waste treatment facility if available, otherwise connected to a local sewer. Washdown wastewater will not be permitted to enter the stormwater system at any time.

4. Construction Waste Storage & Collection

4.1 Bins and Storage

All waste materials for reuse, recycling or disposal will be stored in bins to be provided onsite by the appointed contractor(s). The bins provided will be appropriately coloured, with signage provided to delineate the purpose of the bin and what materials are to be deposited into them.

At a minimum, separate bins will be provided for:

- Concrete
- Bricks
- Steel and other scrap metal
- Timber
- Plasterboard
- General Waste
- Commingled recyclables
- Other waste for collection and reuse

Separate bins and/or provisions are also to be provided for the safe disposal of hazardous wastes, or wastes requiring treatment before disposal.

Recycling bins will be provided in common areas of the site for employees for food and beverage containers that are able to be recycled, such as glass and plastic bottles and aluminium cans to avoid these items going to landfill.

Dedicated bins for cigarette butts are also to be provided to ensure they do not become a fire risk if discarded into other bins.

Bins will be located in waste storage areas, the positions of which are likely to change with the progression of building works. They will be located with consideration of health and safety, accessibility for disposal and collection, visual amenity and to prevent downstream contamination.

The waste storage areas will allow adequate space for servicing and collection of the bins, easy and convenient separation of wastes and to maximise the recovery of waste materials for reuse and recycling where possible.

All waste placed in bins for reuse, recycling and disposal must be adequately contained to prevent the waste from becoming litter by falling, blowing, washing from or otherwise escaping the bins.

4.2 Collection

The frequency of collection for each bin will depend on the volume of material being placed into the bins, which vary throughout the construction phase. Bins will be monitored daily by the Construction Site Manager, who will arrange collection and replacement as appropriate, ensuring that the bins do not reach capacity and overflow.

All bins leaving the site will be appropriately contained or covered to prevent spillage of waste or any other contamination of the environment.

All construction waste generated on site will be collected and transported by appropriately licensed waste contractors and deposited in approved licensed recycling centres transfer stations or landfill sites.

A commitment will be made to engage qualified and certified contractors for the removal of any contaminated or hazardous materials and dispose of these materials at an approved, licensed facility.

5. Implementation (Construction)

5.1 Education & Awareness

All staff employed during the construction phase of the development will be required to complete induction training regarding waste management practices for the site. This should include, but is not limited to: Legal obligations, waste storage locations and separation of waste, importance and justification of waste management practices, incident response measures and emergency response procedures, responsibility and reporting.

Standard signage will be displayed in all waste storage areas and all bins will be labelled to indicate the purpose of each bin and appropriate materials for disposal. Typical construction waste signage examples are shown in Figure 4 (below):



Figure 4: Examples of construction waste signage (Source: EPA NSW)

5.2 Monitoring and Reporting

Records of the volumes of construction waste that are reused, recycled or removed for disposal are to be maintained, with supporting dockets and receipts retained to verify compliance with this WMP.

Monthly reporting on achievements of waste targets will take place, with waste audits to be carried out by the Construction Site Manager to evaluate the effectiveness of the waste separation and resource recovery measures that have been set in place. Where audits highlight that procedures are not effective, or targets are not being met, remedial measures will be implemented, such as additional staff training or adjustments to procedures.

5.3 Roles and Responsibilities

All subcontractors and employees working onsite will be required to comply with this WMP.

It will be the responsibility of the Head Contractor to implement this WMP and ensure each subcontractor:

- Takes practical measures to prevent unnecessary waste being generated from their work, including ordering materials in the right quantities with minimal packaging and using prefabrication where possible; and
- Implements procedures to ensure waste resulting from their work can be reused or recycled wherever possible, such as separation of offcuts for reuse.

The Construction Site Manager will be responsible for:

- Ensuring appropriate bins and waste storage areas are supplied for the separation and storage of waste materials, whether for reuse on-site, recycling off-site, or disposal as appropriate;
- Engaging waste and recycling contractors to remove the various waste streams from the site and process or dispose of them appropriately;
- Maximising the onsite re-use of materials by coordinating with subcontractors;
- Monitoring bins for proper use, containment and remaining capacity;
- Ensuring proper signage is provided and maintained for bins waste storage areas to facilitate proper and appropriate waste disposal by employees and subcontractors; and
- Providing induction training to all site employees and subcontractors regarding the proper implementation of this WMP

All personnel are personally responsible for their own compliance with legislation.

6. Operational Waste Management

6.1 Overview

There are significant opportunities for reducing the generation of waste and segregation of waste streams to maximise resource recovery so that minimal waste goes to landfill for disposal during the operational phase. The effective waste management strategy outlined in this WMP will also assist in controlling environmental pollution, litter, odours, amenity and hygiene issues that can be associated with poor waste management in commercial developments.

Effective waste management will result in benefits such as reduced costs through minimisation of fees associated with collection and disposal of waste, reuse of resources and improved sustainable waste management outcomes with environmental benefits on a local, regional and global level.

6.2 Targets

The NSW WARR Strategy 2014-21 targets a recycling rate of 70% of total waste for the Commercial and Industrial Sector.

This development will seek to meet and exceed this target through best-practice waste segregation practices in order to maximise resource recovery through separate storage, collection and recycling or disposal of nominated waste streams.

6.3 Types of Waste Generated

The following types of waste expected to be generated within a development such as this are set out in Table 6 (below), along with their classifications according to the NSW EPA Waste Classification Guidelines:

Table 6: Sources and classification of waste expected in the construction phase of the project.

Waste Category	Classification
General landfill garbage	General solid waste (non-putrescible mixed with putrescible)
Recyclables such as glass, paper, cardboard, cartons, plastics with ID Codes 1 to 7, steel & aluminium cans	General solid waste (non-putrescible)
Compostable organic material (food scraps)	General solid waste (putrescible)
Sundry waste types such as broken furniture and large objects	General solid waste (non-putrescible)
Electronic waste (e-waste) being all waste items with a plug, battery or power cords	Hazardous waste
Garden organic waste	General solid waste (non-putrescible)

7. Operational Waste Generation

Listed in Table 7 (below) are the waste generation rates for the ancillary offices and cafe in this development³.

Table 7: Weekly waste generation rates

Space Type	Garbage	Recyclables
Offices	8L/100m ² /day	6L/100m ² /day
Café	215L/100m ² /day	130L/100m ² /day

³ These average waste generation rates are sourced from the Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities prepared by EPA NSW.

Listed in Table 8 (below) are the total volumes of garbage and recyclables generated by the ancillary offices (including dock offices) and café in this development, on the basis that these spaces are occupied 5 days per week.

Table 7: Total estimated volume of waste generated by the development

Space Type and Area	Estimated Total Garbage Generation	Estimated Total Recyclables Generation
Ancillary Offices including Dock Offices		
Unit 1 Offices - 1,396m ²	558L/week	419L/week
Unit 2 Offices - 1,787m ²	715L/week	537L/week
Unit 3 Offices – 1,318m ²	527L/week	396L/week
Unit 4 Offices - 476m ²	191L/week	143L/week
Unit 5 Offices – 1,109m ²	444L/week	333L/week
Unit 6 Offices - 1,013m ²	406L/week	304L/week
Unit 7 Offices - 893m ²	358L/week	268L/week
TOTAL Offices – 7,992m ²	3,197L/week	2,397L/week
Cafe		
Café – 146m ²	1,570L/week	979L/week
	314L/day	196/day

The waste generation rates for the warehouses will vary significantly depending on tenants and the types of commercial/industrial activities taking place. Therefore, due to their arbitrary nature, generic waste generation rates for the warehouses have not been provided in Tables 7 or 8 (both above).

Waste generation rates, estimated volumes, bins and collection arrangements will be determined on the basis of the specified use for each Unit at a later stage.

8. Bin Types, Collection Method & Frequency

For this development, it is proposed that on-site collection of garbage and recyclables is to be adopted and that the collection is to be undertaken by private waste contractors.

In general, it is proposed each Unit will be provided with 3m³ bins for each waste stream, with sufficient capacity to accommodate the combined weekly garbage and recycling volumes of each Unit's warehouse and ancillary offices. The exact number of bins is to be confirmed at a later stage.



To achieve more sustainable waste management outcomes, it is proposed that recyclables are segregated into three separate recyclable waste streams where possible, with separate dedicated bins for:

- Clean paper & cardboard
- Glass
- Commingled recyclables (plastic and cans)

The total weekly waste generated for the café is estimated to be 1,570L of garbage and 979L for recyclables, as listed in Table 8 (above). In the interests of achieving more sustainable waste outcomes, as set out above, these will be segregated into further separate waste streams. The recyclables will be adequately covered by 1 x 660L bin for commingled recyclables, 1 x 660L bin for clean paper & cardboard and 1 x 240L bin for glass, all collected weekly. Additionally, as a significant portion of garbage for the café is expected to be food organic waste, it is proposed that food waste is separated from garbage into dedicated bins and collected as an additional waste stream. This will be adequately covered by 1 x 660L bin for garbage and 2 x 240L bins for food organic waste, both collected twice per week. Refer to Table 9 (below) for details.

The bins shown in Table 9 (below) are indicative only. Actual bins to be provided will be as supplied by the private waste contractor with a commitment that bins will be easily distinguishable, including different coloured lids, and will have appropriate signage on each bin to assist in distinguishing the purpose of each bin for either garbage, commingled recyclables (plastic and cans), glass, clean paper & cardboard and food organic waste (or as provided).

Table 8: Capacity, quantity and typical dimensions of bins for the development.

Bin Storage Type	Capacity	Quantity	Dimensions	Collection Frequency
Warehouse/Office Units				
	3m ³	To be determined for each Unit at a later stage	Height 1.2m Width 1.8m Depth 1.5m	Weekly
Café				
	660L	1 x Garbage	Height 1.3m Width 1.4m Depth 0.9m	Twice per week
	660L	1 x Commingled Recyclables + 1 x Clean Paper & Cardboard		Weekly
	240L	1 x Glass	Height 1.1 Width 0.6m Depth 0.7m	Weekly
	240L	2 x Food Organic Waste		Twice per week
	Total	6 Bins (3 x 660L and 3 x 240L)		

9. Operational Waste Disposal, Storage & Collection

9.1 Waste Storage Area

Each Unit and the café will be provided with a dedicated waste storage area of an adequate size to accommodate the required number of bins with additional space for access and manoeuvring of the bins and accommodation of any other waste management equipment that may be required. Space will also be allowed for the storage of hard waste and e-waste and additional bins should these be required, or should it be later determined that additional waste streams are to be separately collected.

Bin wash facilities will be provided with a floor waste connected to sewer to avoid stormwater contamination. Occupants will be expected to regularly clean and maintain their own bins and bin storage area in order to maintain cleanliness and control odours.

9.2 Waste Disposal Methods

Waste will need to be separated within each Unit of this development into garbage, commingled recyclables (plastic and cans), glass, clean paper & cardboard. The café will also require separation of food organic waste from garbage.

Warehouse and office occupants will be able to dispose of their waste directly into the 3m³ bins provided for each waste stream. There will also be smaller bins for each waste stream located within the offices and the warehouse for convenience, which will be emptied into these larger bins.

Similarly, café occupants will be able to dispose of their waste directly into the 660L and 240L bins provided for each waste stream. There will also be smaller bins for each waste stream located in key areas in the café, which will be emptied into the larger bins.

9.3 Waste Collection

For the Units, waste collection will be undertaken once per week for each waste stream by a private waste contractor. For the café, waste collection will be undertaken once per week for commingled recyclables, clean paper & cardboard and glass, and twice a week for garbage and food organic waste.

Collection will require five separate trucks, one each for garbage, commingled recyclables (plastic and cans), glass, clean paper & cardboard and food organic waste. More frequent collections may be scheduled depending on the waste requirements of the specific warehouse use.

Collection of the 3m³ bins will require front lifter trucks, which will enter the site from Foundation Place. All access driveways and internal roads will provide adequate clearance and manoeuvring space to allow a large rigid waste collection vehicle to enter and exit the site and collection points for each Unit in a forward motion without impeding access to, from or within the site.

Collection points for each Unit will be nominated with clear access to the waste storage areas and adequate clearance for bins to be lifted and emptied (minimum 6.2m).

The waste collection point for the café will be nominated in a location convenient to the bin storage area.

The private waste contractor will have relevant WorkCover insurances and Safe Work procedures in place for undertaking the tasks required at this address.

9.4 Regular Maintenance

The occupants of each Unit will be responsible for upkeep and cleaning of their bins and the bin storage area, as well as installing and maintaining vermin traps in and around the bin area.

The private waste contractor will undertake maintenance and repairs on the bins where necessary.

9.5 Green Waste

Where private maintenance contractors are employed to regularly attend to and maintain landscaped areas, they will be responsible for the removal and disposal of all garden waste as part of their contract. Alternatively, green waste bins may need to be provided for garden waste generated by the landscaped areas of each site, which will need to be accommodated in the waste storage area for each Unit. Bins provided for green waste will be collected by private waste contractors on an as-needs basis.

9.6 Hard Waste and e-Waste

Within the waste storage area for each Unit, space is also to be provided for hard waste and e-waste. These items, including broken or unwanted furniture, equipment and e-waste will be removed as and when required by the facility maintenance staff and disposed of appropriately by a private contractor.

9.7 Special Wastes

All contaminated or hazardous wastes, such as batteries, smoke detectors and fluorescent lights will be transported to and recycled at an appropriate facility as per EPA guidelines.

9.8 Liquid Wastes

No liquid waste, including washdown wastewater, is to be disposed of into the stormwater drainage system. Wastes to sewer will be provided in washdown areas as appropriate. Any liquid wastes or dangerous goods wastes generated in the development will be removed by a qualified contractor and disposed of at an appropriate licensed facility.

9.9 Signage

Appropriate signage will be placed in the bin storage area. Also, visual prompts stuck to the bins, such as Figure 5 (below) will assist in the proper disposal of the different types of waste.



Figure 5: Examples of proper waste disposal signage from the EPA NSW website.

Printable signage can be found online at sources such as the EPA NSW website: <https://www.epa.nsw.gov.au/>

Signage may also be provided by the private waste contractor.

9.10 Waste Avoidance Measures

The following waste avoidance measures should be considered for implementation:

- Reduction in packaging materials used for distribution of products
- Use of reusable packing and provision of packaging 'take-back' services to clients
- Bulk purchasing and/or selection of products with reduced packaging or offering 'take-back' services
- Provision of glassware, crockery and utensils to employees to reduce use of disposable items
- Induction for staff including waste reduction strategies and initiatives

9.11 Re-use, Recycling and Disposal Measures

The following initiatives will be implemented:

- Segregated recycling bins will be co-located with garbage bins throughout the development to promote and facilitate recycling options;
- Ink and toner cartridges will be collected in dedicated bins in office spaces and recycled appropriately;
- Provision for collection and recycling of batteries and other recyclable items such as e-waste, light bulbs and fluorescent tubes will be made onsite;
- Reusable packaging materials such as drums and pallets and crates to be returned to the supplier for re-use where possible. Broken crates and pallets to be recycled where possible; and
- Food organics collection will be considered if generated in sufficient quantities.

10. Implementation (Operational)

The building owner(s) in conjunction with the tenant for each Unit will be responsible for implementing the operational phase component of this Waste Management Plan and will put in place a review process allowing for future revisions as they may be required from time to time, or if operational requirements change.

It is recommended that waste audits will be undertaken on a regular basis in the operational phase to assess the actual waste quantities being produced by each Unit against the reduction targets.

11. Summary

This WMP outlines the practical arrangements for how waste management and recycling will occur during the construction and operational phases for the proposed industrial development at Clunies Ross Street and Foundation Place, Prospect.

The waste management strategies proposed in this WMP build on best-practice principles, achieving improved sustainable waste management outcomes for the development.

The implementation of this WMP will assist to achieve the correct disposal of waste generated in the construction and operation phases of this development and will help all construction personnel and building occupants be aware of ways to avoid and minimise waste. It will also ensure that all waste is stored and collected safely and effectively without compromising the capacity and tidiness of the waste storage areas, collection points and surrounding areas as well as minimising impact on neighbouring properties.