



RSL ANZAC Village Renewal Project  
90 Veterans Parade, Narrabeen  
Aged Care Facility

## OPERATIONAL WASTE MANAGEMENT PLAN

12/03/2026  
Report No. 6182  
Revision D

Client

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RSL LifeCare (RSLLC)

Architect

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AJC Architects

<https://architectsajc.com/>

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## GLOSSARY OF ABBREVIATIONS AND TERMS

<b>TERM</b>	<b>DESCRIPTION</b>
<i>Bin-Carting Route</i>	Travel path for transporting bins from their allocated storage location to the nominated collection point
<i>Bulk Bins</i>	Containers with a capacity greater than 1100L designed to be collected by a front-loading vehicle
<i>Bulky Waste</i>	Recycling items that are too large to be deposited into bins, including furniture, whitegoods, electronics and mattresses
<i>Chute</i>	A vertical pipe passing from floor to floor of a building with openings at each level for the disposal of general waste, recycling or FOGO.
<i>Chute Discharge</i>	The termination point of a chute whereby the chute offsets deposited general waste, recycling or FOGO into bins
<i>Chute Discharge Room</i>	A room enclosing the termination point of the chute/s, including bins and volume handling equipment that is accessible only to the building caretaker
<i>Collection Area/Point</i>	Designated area or point where bins are loaded onto the collection vehicle for servicing
<i>Comingled Recycling</i>	Waste stream for the recycling of plastic bottles, other plastics, paper, glass and metal containers
<i>Communal Bin Room</i>	A central, shared bin room accessible to all residents or staff to dispose of their waste stream
<i>DA</i>	Development Application
<i>DCP</i>	Development Control Plan
<i>EPA</i>	Environment Protect Authority
<i>FOGO</i>	Food Organics and Garden Organics
<i>General Waste</i>	All non-recyclable and non-hazardous waste that is sent to landfill
<i>HRV</i>	Heavy Rigid Vehicle
<i>Kerbside Collection</i>	A collection arrangement whereby bins are presented in a single row along the kerb and serviced by a collection vehicle on the street.
<i>L</i>	Litre
<i>LEP</i>	Local Environmental Plan
<i>Mixed Use Development</i>	A development comprising a combination of both residential and commercial units or two or more different land uses within the one development.
<i>Mobile Bins</i>	Containers with a capacity up to and including 1100L designed to be collected by a rear-loading vehicle

<i>Multi-unit Residential Development</i>	Also known as MUD's, residential flat buildings, or apartment blocks, this is a residential development with multiple units that typically share facilities and services such as bins and collections.
<i>Onsite Collection</i>	A collection arrangement whereby all bins are serviced by a collection vehicle within the property boundary, either in the building's basement or at grade and off-street.
<i>Owners Corporation</i>	An organisation or group of persons that is identified by a particular name and that acts, or may act, as an entity
<i>Paper/ Cardboard Recycling</i>	Waste stream for the recycling of paper and cardboard only.
<i>Service Bins</i>	Supplementary bins which are provided to residents or staff for use during collection periods either in communal bin rooms or under chutes
<i>Source Separation Receptacles</i>	Communal containers used throughout the development for the day-to-day disposal of different waste streams
<i>Volume Handling Equipment</i>	Equipment which comes in the form of either carousel or linear tracks positioned at the base of the chute/s to mechanically replace full bins with empty bins
<i>Waste Stream</i>	A classification used to describe waste of a particular type (eg. food waste stream)
<i>WHS</i>	Workplace Health and Safety

## 1.0 ACKNOWLEDGEMENT OF COUNTRY

Elephants Foot Consulting (EFC) acknowledges that every project we work on takes place on First Peoples land. We recognise Aboriginal and Torres Strait Islander People as Traditional Custodians of this land. We pay respect to ancestors and Elders, past and present.

## 2.0 INTRODUCTION

This Operational Waste Management Plan (OWMP) has been prepared by Elephants Foot Consulting (EFC) on behalf of RSL LifeCare (Applicant). It supports a Concept and Stage 1 State Significant Development Application (SSDA) for a new seniors housing development on land at the RSL ANZAC Village, Narrabeen.

Robust waste management strategies are required for new developments to support the design and sustainable performance of the building. It is EFC's belief that a successful waste management strategy contains three key objectives:

- i. **Promote responsible source separation** to reduce the amount of waste that goes to landfill by implementing convenient and efficient waste management systems.
- ii. **Ensure adequate waste and recycling provisions and procedures** are established that will cater for potential changes during the operational phase of the development.
- iii. **Comply** with all relevant codes, policies, and guidelines.

To achieve these objectives, this OWMP identifies and details the following components:

- Waste streams expected to be generated onsite and anticipated volumes;
- Suitable bin sizes and quantities;
- Waste and recycling disposal procedures;
- Bin room size estimations and equipment recommendations; and
- Waste collection strategies, locations and frequencies.

It is vital that this OWMP is integrated into the overall management of the building and is clearly communicated to all relevant stakeholders.

### 2.1 SCOPE OF REPORT

This OWMP only applies to the **operational** phase of the proposed development; therefore, the requirements outlined in this OWMP must be implemented during the operational phase of the site and may be subject to review upon further expansion of, and/or changes to the development.

The waste management of the **construction** and **demolition** phases of the development are not addressed in this report. A construction and demolition WMP will need to be provided separately.

## 2.2 REPORT CONDITIONS

The purpose of this report is to document an OWMP as part of a development application, which is supplied by EFC with the following limitations:

- Drawings, estimates and information contained in this OWMP have been prepared by analysing the information, plans and documents supplied by the client and third parties including Council and other government agencies. The assumptions based on the information contained in the OWMP is outside the control of EFC,
- The figures presented in the report are an estimate only – the actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building management's approach to educating residents and tenants regarding waste management operations and responsibilities,
- The building manager will adjust waste management operations as required based on actual waste volumes (e.g. if waste is greater than estimated) and increase the number of bins and collections accordingly,
- The report will not be used to determine or forecast operational costs or prepare any feasibility study or to document any safety or operational procedures,
- The report has been prepared with all due care; however no assurance is made that the OWMP reflects the actual outcome of the proposed waste facilities, services, and operations, and EFC will not be liable for plans or results that are not suitable for purpose due to incorrect or unsuitable information or otherwise,
- EFC offer no warranty or representation of accuracy or reliability of the OWMP unless specifically stated,
- Any manual handling equipment recommended in this OWMP should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply,
- Design of waste management chute equipment and systems must be approved by the supplier,
- EFC cannot be held accountable for late changes to the design after the OWMP has been submitted to Council,
- EFC will provide specifications and recommendations on bin access and travel paths within the OWMP, however it is the architect's responsibility to ensure the architectural drawings meet these provisions,
- EFC are not required to provide information on collection vehicle swept paths, head heights, internal manoeuvring or loading requirements. It is assumed this information will be provided by a traffic consultant,
- This OWMP is only finalised once the draft watermark has been removed. If the draft watermark is present, the information in the OWMP is not confirmed.

### 3.0 LEGISLATION & GUIDANCE

Waste management and resource recovery regulation in Australia is administered by the Australian Constitution, Commonwealth laws, and international agreements. State and territory governments maintain primary responsibility for controlling development and regulating waste. The following legislation has been enacted in New South Wales, and provides the lawful underpinnings of this OWMP.

- NSW Environmental Planning & Assessment Act 1979
- NSW Protection of the Environment Operations Act 1997
- NSW Waste Avoidance & Resource Recovery Act 2001

The preparation of this OWMP is required in accordance with the SEARs Item No. 17, which mandates the preparation and submission of a waste management plan as part of the development application to demonstrate appropriate waste avoidance, storage, collection, and disposal arrangements during operation. These are identified in the following table:

*Table 1: SEARs Requirements*

<i>SEARs Request</i>	<i>Elephant Feet Response</i>
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste, including in accordance with any council waste management requirements.	Chapters 5, 6, 7, 9 & 14
Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site	Sections 5.5, 6.3 & 7.4 Chapters 8, 13 & 15

At the local level, councils or Local Government Areas (LGAs) require OWMPs to be included in new development applications. This OWMP is specifically required by:

- Warringah Development Control Plan 2011
- Warringah Local Environmental Plan 2011

The primary purpose of a Development Control Plan (DCP) is to guide the planning process according to the aims of the corresponding local environmental plan (LEP). The DCP must be read in conjunction with the provisions of the relevant LEP.

Information provided in this OWMP comes from a wide range of waste management guidance at the local, state, and federal levels. The primary sources of guidance include:

- Northern Beaches Council Waste Management Guidelines 2016
- NSW Better Practice Guide For Resource Recovery In Residential Developments 2019
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste and Sustainable Materials Strategy 2041
- NSW Waste Classification Guidelines 2014
- Australia's National Waste Policy 2018

## 4.0 DEVELOPMENT OVERVIEW

Development consent is sought for the following. A detailed description of the development is outlined in the Environmental Impact Statement prepared by Colliers Urban Planning.

### **Concept Proposal**

A concept master plan for the renewal of parts of the existing RSL ANZAC Village for seniors housing, comprising:

- Residential accommodation for the purposes of seniors housing, including ancillary uses, supporting a new onsite Gross Floor Area of approximately 72,000sqm;
- A range of planning envelopes across the site accommodating basement levels and heights ranging between one (1) to eight (8) storeys;
- Approximately one thousand, six hundred (1600) new underground and structured car parking spaces, including street parking;
- Demolition and site preparation works, including tree removal;
- Site landscaping, tree planting and embellishment works;
- Upgraded entries to the site from Lantana Avenue and Veterans Parade and upgraded internal vehicle and pedestrian access and circulation; and
- Utility and services augmentation as required.

### **Stage 1 Development**

Detailed approval for the operation and use of the first stage of the concept proposal, comprising:

- Demolition and site preparation works, including tree removal;
- Residential accommodation for the purposes of seniors housing, including ancillary uses, supporting a new onsite Gross Floor Area of approximately 12,700sqm;
- A range of building heights across the site accommodating one basement level, a row of garages, and three different building heights of two (2), five (5) and six (6) storeys;
- One hundred and twenty-two (122) basement car parking spaces, fourteen (14) garage parking spaces, as well as an estimated forty-one (41) surface parking spaces;
- Amendments to existing bushfire asset protect zones to facilitate the development;
- Associated landscape and open space delivery;
- Building identification signage and wayfinding; and
- Services and utility augmentation.

***Note: The Concept Masterplan (Stages 2–5) is a Concept Proposal only, the yield and all the subsequent waste data and requirements are indicative only***

All figures and calculations are based on area schedules as advised by our client and shown on architectural drawings.

## 4.1 SITE LOCATION

The site is located at 90 Veterans Parade, Narrabeen, which is situated within the Northern Beaches Local Government Area (LGA) and is commonly known as the RSL ANZAC Village.

The village overall has a total area of approximately 44 hectares and comprises 6 allotments. It is noted, however, that the SSDA is only proposed to apply to land with the four allotments of the village that are located south of Coolooli Road, as tabulated below.

Table 2: Site Description

Legal Description	Area (Approximately)
Lot 2611 DP752038	21ha
Lot 573 DP 752038	2ha
Lot 1 DP 803645	9ha
Lot 1 DP 774980	6ha

The site is irregular in shape and is bounded by Veterans Parade to the east and Lantana Avenue to the south. It currently comprises an existing low and mid-rise seniors housing development that contains a mixture of independent living units, veteran accommodation, residential care facility accommodation, and associated community facilities and services, including a café and preschool.

An aerial of the site is provided in Figure 1.

Figure 1: Site Location



Source: Nearmap and Ethos Urban.

## 5.0 ILUs WASTE MANAGEMENT

The following section outlines best practice waste management for the residential component of the development, including waste stream generation estimates and disposal and collection procedures.

### 5.1 WASTE GENERATION ESTIMATES

The bin requirements for the Independent Living Units (ILUs) and facilities were calculated using the Northern Beaches Council Waste Management Guidelines and the NSW EPA Better Practice Guide for Resource Recovery in Residential Developments (2019). Calculations are based on generic general waste, recycling and Food Organics and Garden Organics (FOGO) rates. Actual volumes may vary depending on resident behaviours.

The following tables present the estimated volumes (L) of general waste, recycling, and FOGO generated by the residential component of the development. Tables 3–10 relate to the Concept Masterplan (Stages 2–5), and Tables 11–13 relate to the Detailed Design Stage 1.

**Note: The Concept Masterplan (Stages 2–5) is a concept proposal, and all waste estimates are indicative only.**

Table 3: Estimated General Waste & Comingled Recycling – Concept Masterplan (Stage 2)

Building	No of Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Comingled Recycling Generation Rate (L/unit/week)	Generated Comingled Recycling (L/week)
1	48	80	3840	40	1920
2	38	80	3040	40	1520
3	24	80	1920	40	960
4	10	80	800	40	400
5	10	80	800	40	400
<b>TOTAL</b>	<b>130</b>		<b>10400</b>		<b>5200</b>
<b>Bins &amp; Collections</b>		General Waste Bin Size (L)	660	Comingled Recycling Bin Size (L)	660
		General Waste Collections per Week	2	Comingled Recycling Collections per Week	2
		<b>Total General Waste Bins Required</b>	<b>10</b>	<b>Total Comingled Recycling Bins Required</b>	<b>7</b>
<b>Bins per Building/ Core</b>		<b>Building</b>	<b># Bins</b>	<b>Building</b>	<b># Bins</b>
		1	3	1	2
		2	3	2	2
		3	2	3	1
		4	1	4	1
		5	1	5	1

Table 4: Estimated Paper/ Cardboard Recycling & FOGO – Concept Masterplan (Stage 2)

Building	No of Units	Paper/ Cardboard Recycling Generation Rate (L/unit/week)	Generated Paper/ Cardboard Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
1	48	60	2880	25	1200
2	38	60	2280	25	950
3	24	60	1440	25	600
4	10	60	600	25	250
5	10	60	600	25	250
<b>TOTAL</b>	<b>130</b>		<b>7800</b>		<b>3250</b>
<b>Bins &amp; Collections</b>	Paper/ Cardboard Recycling Bin Size (L)		660	FOGO Bin Size (L)	240
	Paper/ Cardboard Recycling Collections per Week		2	FOGO Collections per Week	2
	<b>Total Paper/ Cardboard Recycling Bins Required</b>		<b>9</b>	<b>Total FOGO Bins Required</b>	<b>9</b>
<b>Bins per Building/ Core</b>	<b>Building</b>		<b># Bins</b>	<b>Building</b>	<b># Bins</b>
	1		3	1	3
	2		2	2	2
	3		2	3	2
	4		1	4	1
	5		1	5	1

Table 5: Estimated General Waste & Comingled Recycling – Concept Masterplan (Stage 3)

Building	No of Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Comingled Recycling Generation Rate (L/unit/week)	Generated Comingled Recycling (L/week)
1	38	80	3040	40	1520
2A	70	80	5600	40	2800
2B	104	80	8320	40	4160
<b>TOTAL</b>	<b>212</b>		<b>16960</b>		<b>8480</b>
<b>Bins &amp; Collections</b>	General Waste Bin Size (L)		660	Comingled Recycling Bin Size (L)	660
	General Waste Collections per Week		2	Comingled Recycling Collections per Week	2
	<b>Total General Waste Bins Required</b>		<b>15</b>	<b>Total Comingled Recycling Bins Required</b>	<b>9</b>
<b>Bins per Building/ Core</b>	<b>Building</b>		<b># Bins</b>	<b>Building</b>	<b># Bins</b>
	1		3	1	2
	2A		5	2A	3
	2B		7	2B	4

Table 6: Estimated Paper/ Cardboard Recycling & FOGO – Concept Masterplan (Stage 3)

Building	No of Units	Paper/ Cardboard Recycling Generation Rate (L/unit/week)	Generated Paper/ Cardboard Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
1	38	60	2280	25	950
2A	70	60	4200	25	1750
2B	104	60	6240	25	2600
<b>TOTAL</b>	<b>212</b>		<b>12720</b>		<b>5300</b>
<b>Bins &amp; Collections</b>		Paper/ Cardboard Recycling Bin Size (L)	660	FOGO Bin Size (L)	240
		Paper/ Cardboard Recycling Collections per Week	2	FOGO Collections per Week	2
		<b>Total Paper/ Cardboard Recycling Bins Required</b>	<b>11</b>	<b>Total FOGO Bins Required</b>	<b>12</b>
<b>Bins per Building/ Core</b>		<b>Building</b>	<b># Bins</b>	<b>Building</b>	<b># Bins</b>
		1	2	1	2
		2A	4	2A	4
		2B	5	2B	6

Table 7: Estimated General Waste & Comingled Recycling – Concept Masterplan (Stage 4)

Building	No of Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Comingled Recycling Generation Rate (L/unit/week)	Generated Comingled Recycling (L/week)
1	39	80	3120	40	1560
2	35	80	2800	40	1400
3	43	80	3440	40	1720
<b>TOTAL</b>	<b>117</b>		<b>9360</b>		<b>4680</b>
<b>Bins &amp; Collections</b>		General Waste Bin Size (L)	660	Comingled Recycling Bin Size (L)	660
		General Waste Collections per Week	2	Comingled Recycling Collections per Week	2
		<b>Total General Waste Bins Required</b>	<b>9</b>	<b>Total Comingled Recycling Bins Required</b>	<b>6</b>
<b>Bins per Building/ Core</b>		<b>Building</b>	<b># Bins</b>	<b>Building</b>	<b># Bins</b>
		1	3	1	2
		2	3	2	2
		3	3	3	2

Table 8: Estimated Paper/ Cardboard Recycling & FOGO – Concept Masterplan (Stage 4)

Building	No of Units	Paper/ Cardboard Recycling Generation Rate (L/unit/week)	Generated Paper/ Cardboard Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
1	39	60	2340	25	975
2	35	60	2100	25	875
3	43	60	2580	25	1075
<b>TOTAL</b>	<b>117</b>		<b>7020</b>		<b>2925</b>
<b>Bins &amp; Collections</b>		Paper/ Cardboard Recycling Bin Size (L)	660	FOGO Bin Size (L)	240
		Paper/ Cardboard Recycling Collections per Week	2	FOGO Collections per Week	2
		<b>Total Paper/ Cardboard Recycling Bins Required</b>	<b>6</b>	<b>Total FOGO Bins Required</b>	<b>8</b>
<b>Bins per Building/ Core</b>		<b>Building</b>	<b># Bins</b>	<b>Building</b>	<b># Bins</b>
		1	2	1	3
		2	2	2	2
		3	2	3	3

Table 9: Estimated General Waste & Comingled Recycling – Concept Masterplan (Stage 5)

No of Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Comingled Recycling Generation Rate (L/unit/week)	Generated Comingled Recycling (L/week)	
44	80	3520	40	1760	
<b>Bins &amp; Collections</b>		General Waste Bin Size (L)	660	Comingled Recycling Bin Size (L)	660
		General Waste Collections per Week	2	Comingled Recycling Collections per Week	2
		<b>Total General Waste Bins Required</b>	<b>3</b>	<b>Total Comingled Recycling Bins Required</b>	<b>2</b>

Table 10: Estimated Paper/ Cardboard Recycling & FOGO – Concept Masterplan (Stage 5)

No of Units	Paper/ Cardboard Recycling Generation Rate (L/unit/week)	Generated Paper/ Cardboard Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)	
44	60	2640	25	1100	
<b>Bins &amp; Collections</b>		Paper/ Cardboard Recycling Bin Size (L)	660	FOGO Bin Size (L)	240
		Paper/ Cardboard Recycling Collections per Week	2	FOGO Collections per Week	2
		<b>Total Paper/ Cardboard Recycling Bins Required</b>	<b>2</b>	<b>Total FOGO Bins Required</b>	<b>3</b>

Table 11: Estimated General Waste &amp; Comingled Recycling – Detailed Design Stage 1

Building	No of Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Comingled Recycling Generation Rate (L/unit/week)	Generated Comingled Recycling (L/week)
1	39	80	3120	40	1560
2	39	80	3120	40	1560
<b>TOTAL</b>	<b>78</b>		<b>6240</b>		<b>3120</b>
<b>Bins &amp; Collections</b>	General Waste Bin Size (L)		660	Comingled Recycling Bin Size (L)	660
	General Waste Collections per Week		2	Comingled Recycling Collections per Week	2
	<b>Total General Waste Bins Required</b>		<b>6</b>	<b>Total Comingled Recycling Bins Required</b>	<b>4</b>
<b>Bins per Building/ Core</b>	<b>Building</b>		<b># Bins</b>	<b>Building</b>	<b># Bins</b>
	1		3	1	2
	2		3	2	2

Table 12: Estimated Paper/ Cardboard Recycling &amp; FOGO – Detailed Design Stage 1

Building	No of Units	Paper/ Cardboard Recycling Generation Rate (L/unit/week)	Generated Paper/ Cardboard Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
1	39	60	2340	25	975
2	39	60	2340	25	975
<b>TOTAL</b>	<b>78</b>		<b>4680</b>		<b>1950</b>
<b>Bins &amp; Collections</b>	Paper/ Cardboard Recycling Bin Size (L)		660	FOGO Bin Size (L)	240
	Paper/ Cardboard Recycling Collections per Week		2	FOGO Collections per Week	2
	<b>Total Paper/ Cardboard Recycling Bins Required</b>		<b>4</b>	<b>Total FOGO Bins Required</b>	<b>6</b>
<b>Bins per Building/ Core</b>	<b>Building</b>		<b># Bins</b>	<b>Building</b>	<b># Bins</b>
	1		2	1	3
	2		2	2	3

Table 13: Estimated Waste & Recycling – ILU Facilities Detailed Design Stage 1

Tenancy	Waste Generation Type	Floor Area (m <sup>2</sup> )	General Waste Generation Rate (L/100m <sup>2</sup> /day)	Generated General Waste (L/week)	Recycling Generation Rate (L/100m <sup>2</sup> /day)	Generated Recycling (L/week)
Dining Area	Cafes	194.6	100	1362	120	1635
Kitchen	Restaurant	90	400	2514	280	1760
Gym	Gymnasiums	237	20	332	15	249
Sport Lounge	Cafes	83.9	100	587	120	705
Hair & Beauty	Hair & Beauty	66	50	231	40	185
<b>TOTAL</b>		<b>671.3</b>		<b>5027</b>		<b>4533</b>
<b>Bins &amp; Collections</b>			General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100
			General Waste Collections per Week	3	Recycling Collections per Week	3
			<b>Total General Waste Bins Required</b>	<b>2</b>	<b>Total Recycling Bins Required</b>	<b>2</b>

## 5.2 BIN SUMMARY

Based on the estimated volumes of general waste, recycling and FOGO generated by the residential component of this development, the recommended bin quantities and collection frequencies are as follows:

### CONCEPT MASTERPLAN (STAGES 2-5)

- Stage 2 ILUs:
 

<b><u>General Waste:</u></b>	10 x 660L bins collected <b>2 x weekly</b>
<b><u>Comingled Recycling:</u></b>	7 x 660L bins collected <b>2 x weekly</b>
<b><u>Paper/Cardboard Recycling:</u></b>	9 x 660L bins collected <b>2 x weekly</b>
<b><u>FOGO:</u></b>	9 x 240L bins collected <b>2 x weekly</b>
  
- Stage 3 ILUs:
 

<b><u>General Waste:</u></b>	15 x 660L bins collected <b>2 x weekly</b>
<b><u>Comingled Recycling:</u></b>	9 x 660L bins collected <b>2 x weekly</b>
<b><u>Paper/Cardboard Recycling:</u></b>	11 x 660L bins collected <b>2 x weekly</b>
<b><u>FOGO:</u></b>	12 x 240L bins collected <b>2 x weekly</b>
  
- Stage 4 ILUs:
 

<b><u>General Waste:</u></b>	9 x 660L bins collected <b>2 x weekly</b>
<b><u>Comingled Recycling:</u></b>	6 x 660L bins collected <b>2 x weekly</b>
<b><u>Paper/Cardboard Recycling:</u></b>	6 x 660L bins collected <b>2 x weekly</b>
<b><u>FOGO:</u></b>	8 x 240L bins collected <b>2 x weekly</b>
  
- Stage 5 ILUs:
 

<b><u>General Waste:</u></b>	3 x 660L bins collected <b>2 x weekly</b>
<b><u>Comingled Recycling:</u></b>	2 x 660L bins collected <b>2 x weekly</b>
<b><u>Paper/Cardboard Recycling:</u></b>	2 x 660L bins collected <b>2 x weekly</b>
<b><u>FOGO:</u></b>	3 x 240L bins collected <b>2 x weekly</b>

### DETAILED DESIGN STAGE 1

- Stage 1 ILUs:
 

<b><u>General Waste:</u></b>	6 x 660L bins collected <b>2 x weekly</b>
<b><u>Paper/Cardboard Recycling:</u></b>	4 x 660L bins collected <b>2 x weekly</b>
<b><u>Comingled Recycling:</u></b>	4 x 660L bins collected <b>2 x weekly</b>
<b><u>FOGO:</u></b>	6 x 240L bins collected <b>2 x weekly</b>
  
- Stage 1 ILU Facilities:
 

<b><u>General Waste:</u></b>	2 x 1100L bins collected <b>3 x weekly</b>
<b><u>Recycling:</u></b>	2 x 1100L bins collected <b>3 x weekly</b>

During operation, it is the responsibility of the building manager/caretaker to monitor the number of bins required for the residential component of the development. General waste, recycling and FOGO volumes may change according to residents' attitudes to waste disposal, building occupancy levels or the development's management. Any requirements for adjusting the capacity of the waste facilities may be achieved by changing the number of bins, the bin sizes or collection frequencies. Building management will be required to negotiate any changes to bins or collections with the collection service provider.

### 5.3 CHUTE DISCHARGE EQUIPMENT SUMMARY

It is strongly recommended that the bins and equipment at the base of each chute allows for at least 1 days' worth of general waste and recycling generation. Based on the estimated general waste and recycling volumes generated by each building, the following equipment is recommended. Tables 14–21 relate to the Concept Masterplan (Stages 2–5), and Tables 22–23 relate to the Detailed Design Stage 1.

**Note: The Concept Masterplan (Stages 2–5) is a concept proposal, and all equipment recommendations are indicative only.**

Table 14: Chute Discharge Equipment for General Waste – Concept Masterplan (Stage 2)

General Waste			
Building	Generated General Waste (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	3840	1.66	2-Bin Linear System
2	3040	1.32	2-Bin Linear System
3	1920	0.83	Single Bin
4	800	0.35	Single Bin
5	800	0.35	Single Bin

Table 15: Chute Discharge Equipment for Recycling – Concept Masterplan (Stage 2)

Commingled Recycling			
Building	Generated Recycling (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	1920	0.83	Single Bin
2	1520	0.66	Single Bin
3	960	0.42	Single Bin
4	400	0.17	Single Bin
5	400	0.17	Single Bin

Table 16: Chute Discharge Equipment for General Waste – Concept Masterplan (Stage 3)

General Waste			
Building/core	Generated General Waste (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	3040	1.32	2-Bin Linear System
2A	5600	2.42	3-Bin Linear System
2B	8320	3.60	4-Bin Carousel System

Table 17: Chute Discharge Equipment for Recycling – Concept Masterplan (Stage 3)

Commingled Recycling			
Building/core	Generated Recycling (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	1520	0.66	Single Bin
2A	2800	1.21	2-Bin Linear System
2B	4160	1.80	2-Bin Linear System

Table 18: Chute Discharge Equipment for General Waste – Concept Masterplan (Stage 4)

General Waste			
Building	Generated General Waste (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	3120	1.35	2-Bin Linear System
2	2800	1.21	2-Bin Linear System
3	3440	1.49	2-Bin Linear System

Table 19: Chute Discharge Equipment for Recycling – Concept Masterplan (Stage 4)

Commingled Recycling			
Building	Generated Recycling (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
1	1560	0.68	Single Bin
2	1400	0.61	Single Bin
3	1720	0.74	Single Bin

Table 20: Chute Discharge Equipment for General Waste – Concept Masterplan (Stage 5)

General Waste		
Generated General Waste (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
3520	1.52	2-Bin Linear System

Table 21: Chute Discharge Equipment for Recycling – Concept Masterplan (Stage 5)

Commingled Recycling		
Generated Recycling (L/week)	# 660L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
2640	1.14	2-Bin Linear System

Table 22: Chute Discharge Equipment for General Waste – Detailed Design Stage 1

General Waste			
Building	Generated General Waste (L/week)	# 660L Bins Required for 1 days' Capacity	Recommended Chute Discharge Equipment
1	3120	0.68	Single Bin
2	3120	0.68	Single Bin

Table 23: Chute Discharge Equipment for Recycling – Detailed Design Stage 1

Commingled Recycling			
Building	Generated Recycling (L/week)	# 660L Bins Required for 1 days' Capacity	Recommended Chute Discharge Equipment
1	1560	0.34	Single Bin
2	1560	0.34	Single Bin

The above is a recommendation only and equivalent volume handling equipment may be used subject to equipment supplier's recommendation/review.

## 5.4 WASTE DISPOSAL PROCEDURES

The following sections pertain to both the Concept Masterplan (Stages 2–5) and the Detailed Design for Stage 1. The strategy is based on the Detailed Design for Stage 1, which, as far as can be determined, is also suitable for the broader Concept Masterplan (Stages 2–5). Please note that the Concept Masterplan is a concept proposal, and all suggested procedures are indicative only.

Each residential unit will be provided with a storage area capable of holding separate receptacles for general waste, recycling and FOGO. This is typically located within kitchen areas beneath the workbench. This space should be sized to accommodate 40L receptacles (minimum) to account for 2 days' worth of general waste, recycling and 20L for FOGO storage.

### 5.4.1 GENERAL WASTE AND COMINGLED RECYCLING DISPOSAL PROCEDURES

Dual chute systems comprising of a single general waste chute and single comingled recycling chute will be installed in each building core. Access will be provided to all residents on each residential level.

Residents will be responsible for walking their general waste and recycling to their allocated disposal point and placing their general waste into the general waste chute and comingled recycling into the comingled recycling chute. Residents will wrap or bag their general waste before placing in the general waste chute. Bagged waste should not exceed 3kg in weight, or 35cm x 35cm x 35cm. Residents will be responsible for loosely placing their comingled recycling into the recycling chute. Comingled recycling should be clean and must not be bagged as soft plastics contaminate recycling.

Paper and cardboard recycling, cardboard boxes and large containers should not be disposed of in the recycling chute. Instead, these should be disposed of directly into the 240L paper and cardboard recycling bins which will be provided in a compartment adjacent to the chutes. These bins will be monitored by the building caretaker and full bins will be transferred down to the Bin Holding Rooms where they are to be decanted into 1100L collection bins using a bin lifter.

The general waste will discharge from the chute into 660L bins on linear tracks and the comingled recycling will discharge into a 660L single bin in the Chute Discharge Area in the Bin Holding Rooms located in the basement of each building. The building manager/caretaker will monitor bin capacities under the dual chute systems and exchange full bins with empty bins when required. Full and spare bins will be kept in the Bin Holding Room as well.

#### **5.4.2 FOGO DISPOSAL PROCEDURES**

The majority of organics waste generated from multi-unit residential developments (MUD's) comprises of food waste as opposed to garden waste. As such, calculations and management recommendations provided in this report considers that FOGO bins will primarily comprise of food organics.

The residents of each unit will be provided with a kitchen caddy for the separation of FOGO. Food organics must be contained in accordance with the required FOGO collection service procedures (for example a compostable liner). Any plant clippings from residential units can also be disposed of with the FOGO.

Each building/core will be provided with a Communal FOGO Bin Room which contains 240L bins for FOGO. The residents will be responsible for walking their own FOGO down to the Bin Holding Rooms and placing it into the FOGO bins in coordination with the building caretaker.

Building management is responsible for ensuring that the Bin Holding Rooms and FOGO bins are washed down frequently to ensure that hygiene and odour is managed.

#### **5.5 BIN COLLECTION PROCEDURES**

The following pertains to both the Concept Masterplan (Stages 2–5) and the Detailed Design for Stage 1. The strategy is based on the Detailed Design for Stage 1, which, as far as can be determined, is also suitable for the broader Concept Masterplan (Stages 2–5). Please note that the Concept Masterplan (Stages 2–5) is a concept proposal, and all suggested procedures are indicative only.

A private waste contractor will be engaged to service the general waste and recycling bins as per an agreed collection schedule. This report assumes that all ILU waste streams will be collected twice weekly and all ILU Facilities' waste will be collected three times weekly for Stage 1 and five times weekly for Stage 3.

The building manager/caretaker is responsible for ensuring that the bins are adequately arranged for an efficient collection. It is also the responsibility of the caretaker to ensure that the loading area is clear of any vehicles or obstructions prior to waste collection.

On the day of service, a private waste collection vehicle will enter the site from the appropriate street and park in the loading bay. The building caretaker will provide the driver with access to the bin holding rooms. Once the bins are serviced, the collection vehicle will exit the site in a forward direction.

## 5.6 OTHER WASTE MANAGEMENT CONSIDERATIONS

The following sections outline other waste management considerations for the residential components.

### 5.6.1 RESIDENTIAL COMMON AREAS

Residential common areas will be supplied with suitably branded source separation receptacles where considered appropriate. Receptacles should be placed in convenient locations which are accessible to all residents. The building manager/caretaker will monitor the capacity of these receptacles and empty the contents into the central collection bins as required.

### 5.6.2 LANDSCAPED AREAS AND GARDEN ORGANICS

Garden organics generated from landscaped areas and indoor foliage typically consists of lawn clippings, cuttings, leaves and branches. These will be managed and removed from the site by the designated landscaping contractors as they carry out scheduled landscaping maintenance works.

Garden organics generated from within residential units will be managed by the residents and should be disposed of into the FOGO bins.

### 5.6.3 RESIDENTIAL BULKY WASTE PROCEDURES

In each building, an area will be made available for the storage of discarded residential bulky waste items (e.g. whitegoods, furniture, etc.). This room should be located within close proximity of the collection point and must have a minimum doorway width of 1.5m to facilitate the movement of large items in and out of the room.

The Concept Masterplan (Stages 2–5) will include bulky waste rooms sized according to need, with final dimensions to be confirmed as more detailed design information becomes available.

For the Detailed Design of Stage 1, bulky waste collection is expected to occur regularly and the ILUs are anticipated to generate relatively low volumes of bulky waste. Therefore, a single **15 m<sup>2</sup>** bulky waste room is proposed to be placed in Building 2.

Residents will need to liaise with building management regarding the transportation of bulky items and the availability of the Bulky Waste Room. It is the caretaker's responsibility to arrange collection dates with private collector and coordinate these times with the residents.

On the day of bulky waste collection, a private waste collection vehicle will enter the site from the appropriate street and park in the loading bay. Collection staff will collect the bulky waste items from the Bulky Waste Room. Once bulky items have been loaded onto the vehicle, the collection vehicle will exit the site in a forward direction.

#### **5.6.4 CLINICAL WASTE**

Clinical waste includes human tissue, or anything contaminated with human blood or bodily fluids suspected of having a communicable disease.

If clinical waste is generated on site, lined 60 L clinical receptacles will be provided at each nurse station for the disposal of waste arising from medical, dental, or related activities. Nurses and staff will deposit any clinical waste directly into these receptacles.

Cleaners or staff will then circulate through the facility daily to transfer all bagged clinical waste to the 240 L clinical waste collection bins located in a dedicated bin room.

#### **5.6.5 SHARPS**

Sharps include any objects capable of cutting or penetrating the skin, including retractable sharps, used ampules and syringes with attached needles.

If sharps are generated on site, disposable 1.4 L sharps containers will be provided at each nurse station for the disposal of sharps. Immediately after use, nurses and staff will place sharps directly into the designated containers.

When a sharps container is full, staff will seal it and transfer it to a dedicated bin room, where it will be deposited directly into the 240 L clinical waste collection bins.

#### **5.6.6 PHARMACEUTICAL WASTE**

Pharmaceutical waste includes waste products (and their by-products) that may have expired or may no longer be required, including prescription medication, controlled drugs, vials and connecting tubes.

If pharmaceutical waste is generated on site, it will be collected and piled in a 20L receptacle in an allocated locked cupboard. Once the receptacle reaches capacity, the accumulated pharmaceutical waste will be collected on an on-call basis.

#### **5.6.7 CYTOTOXIC WASTE**

Cytotoxic waste includes drugs or equipment used to prepare, transport and administer cytotoxic treatment, specifically chemotherapy.

Cytotoxic waste is rarely generated, however if needed staff will arrange for cytotoxic bins to be delivered to the facility by a licenced contractor who will also remove them from the site immediately after use.

## 6.0 STAGE 1 TOWNHOUSE WASTE MANAGEMENT

The following section outlines best practice waste management for the townhouses, including recommended bin quantities, disposal procedures and collection arrangements.

### 6.1 TOWNHOUSE BIN SUMMARY

A four-bin service will be offered to all single residential dwellings consisting of separate bins for general waste, commingled recycling, paper/ cardboard recycling and FOGO.

**General Waste:** 7 x 140L bins collected **1 x weekly**

**Comingled Recycling:** 7 x 140L bins collected **Fortnightly**

**Paper/Cardboard Recycling:** 7 x 140L bins collected **Fortnightly**

**FOGO:** 7 x 140L bins collected **Fortnightly**

### 6.2 TOWNHOUSE WASTE DISPOSAL PROCEDURES

Residents will have access to an allocated storage area within their own townhouse capable of holding 2 x 30L receptacles for general waste and recycling. This is typically located within kitchen areas beneath the workbench. In addition, a kitchen caddy will also be provided for FOGO.

Residents will also be provided with an external bin storage area for storage of four individual 140L bins for commingled recycling, paper/ cardboard recycling and FOGO. Bin storage areas are typically positioned in a courtyard or garage area on the ground level behind the building line of the townhouse, or where it is screened and cannot be viewed from public areas.

Residents will be responsible for depositing their own bagged general waste into the general waste bin, unbagged recycling into the commingled and paper/ cardboard recycling bins and compostable lined FOGO directly into the FOGO bin.

Residents will also be responsible for maintaining their own bins, such as cleaning bins as required and arranging for broken bins to be replaced.

### 6.3 TOWNHOUSE BIN COLLECTION PROCEDURES

A private contractor will be engaged to collect all waste streams in accordance with a specified collection schedule. This report assumes that general waste will be collected weekly, while commingled recycling, paper/ cardboard recycling and FOGO will be collected fortnightly.

On the night before nominated waste collection days, residents will move their own bins from the bin storage area to the nominated kerbside collection point. Residents are responsible for ensuring that bins are presented appropriately to kerbside, as per the following:

- Bins are to be presented one metre apart.
- Bins should be presented a distance from trees, telegraph poles, parked cars or other obstacles.
- Bin lids should open facing the road.
- Bin lids should be kept closed while situated on the kerb.
- Bins should not be overfilled or overflowing and must be under 70kg.

After the bins have been serviced, residents are responsible for returning the empty bins back to the bin storage area within their property, as soon as possible, on the same day as collection.

## **6.4 OTHER TOWNHOUSE WASTE MANAGEMENT CONSIDERATIONS**

The following sections outline other waste management considerations for the townhouse development.

### **6.4.1 LANDSCAPED AREAS AND GARDEN ORGANICS**

Residents will be provided with 140L FOGO bins for the disposal of unbagged green waste generated on their property. In special circumstances—such as lawn mowing, pruning, or branch cutting—where the bin capacity is not sufficient, residents may request an additional collection by booking with management in advance.

Acceptable green waste includes:

- Lawn clippings
- Pruned shrubs or trees
- Cut flowers
- Weeds (excluding priority weeds)
- Sticks, twigs and leaves
- Bark and branches no longer than 1m and 75mm in diameter

### **6.4.2 RESIDENTIAL BULKY WASTE**

A kerbside collection service for discarded residential bulky items (e.g. whitegoods, furniture, etc.) will be offered upon request.

Each residential dwelling is entitled to 2m<sup>2</sup> of bulky waste per collection and collections must be booked with management in advance.

## 7.0 ANCILLIARY WASTE MANAGEMENT

The following section outlines best practice waste management for the ancillary aspect, including waste generation estimates and waste disposal and collection procedures.

### 7.1 WASTE GENERATION ESTIMATES

The NSW EPA's *Better Practice Guide for Resource Recovery in Residential Developments* (2019) has been used to calculate the total number of bins required for the ancillary facilities. Calculations are based on generic generation rates, and actual waste and recycling volumes may vary depending on the tenants' operational practices. The generation rates from the NSW EPA guide have been adapted to represent litres per 100 m<sup>2</sup> per day.

At the time of preparation of this OWMP, the specific ancillary uses for Masterplan Stages 2–5 have not yet been finalised. However, provision will be made within future stages of the development to accommodate appropriate waste storage, collection, and servicing arrangements for ancillary uses, in accordance with relevant NSW EPA guidelines and Council requirements at the detailed design stage.

The following table shows the estimated volume (L) of general waste and recycling that will be generated by the ancillary facilities. Table 24 relates to the Detailed Design for Stage 1.

Table 24: Estimated Waste and Recycling Cafe – Detailed Design Stage 1

Tenancy	Waste Generation Type	Floor Area (m <sup>2</sup> )	General Waste Generation Rate (L/100m <sup>2</sup> /day)	Generated General Waste (L/week)	Recycling Generation Rate (L/100m <sup>2</sup> /day)	Generated Recycling (L/week)
Café	Cafes	108	100	756	120	907
Bins & Collections			General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100
			General Waste Collections per Week	1	Recycling Collections per Week	1
			<b>Total General Waste Bins Required</b>	<b>1</b>	<b>Total Recycling Bins Required</b>	<b>1</b>

### 7.2 BIN SUMMARY

Based on the estimated waste and recycling volumes generated by the facilities, the recommended bin quantities and collection frequencies are as follows:

#### DETAILED DESIGN STAGE 1

- Stage 1 Cafe:
  - General Waste:** 1 x 1100L bins collected **1 x weekly**
  - Recycling:** 1 x 1100L bins collected **1 x weekly**

Bin sizes, quantities, and/or collection frequencies may be modified by the building manager/caretaker once the proposed development is operational. Building management will be required to negotiate any changes to bins or collections with the collection service provider. Seasonal peak periods should also be considered.

### 7.3 WASTE DISPOSAL PROCEDURES

All tenancies will be responsible for their own general waste and recycling disposal procedures within their own vicinity.

On completion of each trading day or as required, nominated staff or contracted cleaners will transport all general waste and recycling to the respective waste room and place into the appropriate collection bins.

### 7.4 WASTE COLLECTION PROCEDURES

A private waste contractor will be engaged to service the general waste and recycling bins as per an agreed collection schedule. This report assumes that general waste and recycling are collected once weekly for stage 1 and stage 3 and three times weekly for stage 4.

On the day of service, a private waste collection vehicle will enter the Stage 1 site from Lantana Avenue via a new road and park near the café waste room. The building caretaker will provide the driver with access to the café waste room. Once the bins are serviced, the collection vehicle will exit the site in a forward direction.

Regarding the concept masterplan, a private waste collection vehicle will enter each site from the appropriate street and park near the respective waste room. The building caretaker will provide the driver with access to the respective waste room. Once the bins are serviced, the collection vehicle will exit each site in a forward direction.

### 7.5 OTHER WASTE MANAGEMENT CONSIDERATIONS

The following waste management practices are recommended.

#### 7.5.1 WASHROOM FACILITIES

Washroom facilities should be supplied with collection bins for paper towels (if used). Sanitary bins for female restroom facilities must also be arranged with an appropriate contractor.

#### 7.5.2 LIQUID WASTE

Liquid wastes as such cleaning products, chemicals, paints, solvents, and motor and cooking oil will be stored in a secure room and enclosed by a low wall intended to contain any liquid spillage or inundation to other areas. Liquid waste will be drained to a grease trap, in accordance with legislation and the requirements of State government authorities and agencies. Further information can be provided by the Services Consultant.

#### 7.5.3 PROBLEM WASTE

The building manager/caretaker is responsible for making arrangements for the disposal and recycling of problem waste streams with an appropriate contractor. Problem wastes cannot be placed in the general waste stream as they can have adverse impacts to human health and the environment if disposed of in landfill.

Problem waste streams include:

- Chemical Waste
- Liquid wastes
- Toner cartridge
- Lightbulbs
- eWaste
- Batteries

## 8.0 STAKEHOLDER ROLES & RESPONSIBILITIES

The following table outlines the primary roles and responsibilities of the respective stakeholders:

Table 25: Stakeholder Roles and Responsibilities

Roles	Responsibilities
<b>Strata, Body Corporate or Management</b>	<ul style="list-style-type: none"> <li>• Co-ordinate the waste strategy within the site.</li> <li>• Ensure all waste service providers submit monthly reports on all equipment movements and waste quantities/weights.</li> <li>• Organise internal waste audits/visual assessments on a regular basis.</li> <li>• Purchase any on-going waste management equipment or maintenance of equipment once building is operational; and</li> <li>• Manage any non-compliances/complaints reported through waste audits.</li> </ul>
<b>Building Manager or Waste Caretaker</b>	<ul style="list-style-type: none"> <li>• Co-ordinate general waste, recycling and FOGO collections</li> <li>• Clean and transport bins as required.</li> <li>• Maintain and clean chute doors on each level.</li> <li>• Organise replacement or maintenance requirements for bins.</li> <li>• Organise, maintain and clean bin storage areas.</li> <li>• Organise bulky waste collections when required.</li> <li>• Investigate and ensure prompt clean-up of illegally dumped waste materials.</li> <li>• Prevent storm water pollution by taking necessary precautions (secure bin rooms, prevent overfilling of bins).</li> <li>• Abide by all relevant WH&amp;S legislation, regulations, and guidelines.</li> <li>• Provide staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management.</li> <li>• Assess any manual handling risks and prepare a manual handling control plan for bin transfers.</li> <li>• Ensure site safety for residents, children, visitors, staff and contractors; and</li> <li>• Ensure effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors.</li> </ul>
<b>Residents</b>	<ul style="list-style-type: none"> <li>• Dispose of all general waste, recycling and FOGO in the allocated chutes and/or bins provided.</li> <li>• Ensure adequate separation of general waste, recycling and FOGO; and</li> <li>• Comply with the provisions of Council and the OWMP.</li> </ul>
<b>Café</b>	<ul style="list-style-type: none"> <li>• Manage general waste and recycling within their tenancy during daily operations.</li> <li>• Correctly separate general waste and recycling streams.</li> <li>• Flatten cardboard within the recycling bin.</li> <li>• If required, arrange for storing used and unused cooking oil in a bunded area,</li> <li>• Organise grease interceptor trap servicing, and</li> <li>• Ensure the suitable storage for chemicals, pesticides and cleaning products waste back of house.</li> </ul>
<b>Waste Collection Contractor</b>	<ul style="list-style-type: none"> <li>• Provide a reliable and appropriate bin collection service.</li> <li>• Provide feedback to building managers/residents regarding contamination of recyclables; and</li> <li>• Work with building managers/caretakers to customise waste systems where possible.</li> </ul>
<b>Gardening/Landscaping Contractor</b>	<ul style="list-style-type: none"> <li>• Remove all garden organics generated during gardening maintenance activities for recycling at an offsite location.</li> </ul>
<b>Developer</b>	<ul style="list-style-type: none"> <li>• Purchase all equipment required to implement this OWMP prior to the occupation of the building to be provided to the Strata or Body Corporate.</li> </ul>

## 9.0 SOURCE SEPERATION

Better practice waste management includes the avoidance, reuse, and recovery of unwanted items, which can be achieved through source separation. The table below outlines what is typically included in various waste streams and how they can be managed. Refer to your local council for a list of accepted materials. Planet Ark can be accessed online to find other facilities that recover unwanted items.

Table 26: Operational Waste Streams

Waste Stream	Description	Typical Destination	Waste Stream Management
<b>General Waste</b>	The remaining portion of the waste stream that is not recovered for re-use, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc.	Landfill	Waste should be bagged before placing in chutes.
<b>Paper and Cardboard Recycling</b>	Cardboard and paper products are recyclable materials that can be re-processed into new products.	Resource Recovery Centre	Bulky cardboard must not be placed in any chute. Cardboard should be flattened before placing in the designated cardboard bin.
<b>Commingled Recycling</b>	A mixture of items that are commonly recycled usually segregated through a MRF. Typically include food and beverage containers (e.g. aluminium, glass, steel, hard plastics, cartons).	Materials Recovery Facility (MRF)	Commingled recycling must not be bagged, and instead should be placed loosely in the designated recycling chute.
<b>FOGO</b>	FOGO consists of unwanted or uneaten kitchen scraps that are easily compostable/biodegradable (e.g. vegetable peels, fruit rinds, coffee grounds) and garden organics including lawn clippings, leaves, pruning's and branches.	Composting Facility	FOGO should be bagged in compostable liners when deposited into the chute/s or bins and will be collected by Council.
<b>Garden Organics</b>	Garden organics consists of unwanted organic materials that are easily biodegradable and/or compostable (e.g. lawn clippings, branches)	Resource Recovery Centre	Landscape Maintenance Contractors will remove the garden organics from site during scheduled maintenance.
<b>Secure Documents</b>	Secure documents are printed paper materials that contain sensitive information.	Recycling Facility	Secure documents are placed in allocated secure document bins. Private contractor removes bins from site.
<b>Electronic Waste</b>	Discarded e-waste, electronic components and materials such as computers, mobile phones, keyboards, etc.	Resource Recovery Centre	Building manager/caretaker arranges collection for e-waste recycling as needed by residents. Café will arrange for recycling of their own e-waste.
<b>Bulky Waste Items</b>	Items that are too large to place into general rubbish collection. This includes disused and/or broken furniture, mattresses, white goods, etc.	Resource Recovery Centre or Landfill	Residents liaise with building manager/caretaker to store in Bulky Waste Room. Building manager arranges with Council for removal. Café is responsible for removal of their bulky items.
<b>Sanitary Waste</b>	Feminine hygiene waste generated from female bathrooms.	Incineration or Landfill	Sanitary bins are serviced by sanitary waste contractor.
<b>Other</b>	Other recyclable items that require special recovery may include ink cartridges, batteries, chemical waste, fluorescent tubes, etc.	Resource Recovery Facility	Building manager/caretaker arranges collection by appropriate recycling services when required.

## 10.0 EDUCATION

Educational material encouraging correct separation of general waste, recycling and FOGO must be provided to each resident and staff member. This should include the correct disposal process for bulky waste such as old furniture, large discarded items, and other materials including electronic and chemical wastes. It is recommended that the building caretaker provide information in multiple languages to support correct behaviours, and to minimise the possibility of chute blockages and contamination in communal bins.

Education and communication must be provided consistently on a regular basis to encourage behaviour change and account for transient building personnel such as new residents, tenants, or cleaning staff. It is also recommended that the owners' corporation website contain information for residents' referral regarding use of the chute. Information should include:

- Directions on using the chute doors;
- Descriptions of items accepted in the general waste, recycling and FOGO streams (refer to Council guidance);
- How to dispose of bulky waste and any other items that are not general waste, recycling or FOGO (refer to Council guidance);
- Residents' obligations to health and safety as well as building management; and
- How to prevent damage or blockages to the chute (example below).

### 10.1 SIGNAGE

Signage and education are essential components to support best practice waste management including resource recovery, source separation, and diversion of waste from landfill.

Signage should include:

- Clear and correctly labelled bins,
- Instructions for separating and disposing of waste items. Different languages should be considered,
- Locations of, and directions to, the waste storage areas with directional signs, arrows, or lines,
- The identification of all hazards or potential dangers associated with the waste facilities, and
- Emergency contact information should there be issues with the waste systems or services in the building.

The building manager/caretaker is responsible for waste room signage including safety signage. Appropriate signage must be prominently displayed on doors, walls and above all bins, clearly stating what type of waste or recyclables is to be placed in each bin.

All chute doors on all residential levels will be labelled with signs directing chute operations and use of chute door.

All signage should conform to the relevant Australian Standards.

## 11.0 POLLUTION PREVENTION

Building management shall be responsible for the following to minimise dispersion of site litter and prevent stormwater pollution to avoid impact to the environment and local amenity:

- Promoting adequate waste disposal into the bins
- Securing all bin rooms (whilst affording access to staff/contractors)
- Prevent overfilling of bins, keep all bin lids closed and bungs leak-free
- Taking action to prevent dumping or unauthorised use of waste areas
- Require collection contractor/s to clean up any spillage when clearing bins

## 12.0 BIN WASHING

The bins will be cleaned by the building manager/caretaker periodically to ensure hygiene and minimise odour.

Bin washing can occur within the bin rooms, using the room clean down facilities (i.e tap connection and drain). Alternatively, a specialist bin washing contractor can be engaged to clean the bins to an agreed schedule. The specialist bin contractor would collect the bins from the bin holding area and clean the bins with their specialised vehicle.

## 13.0 BIN MOVING PATHS

Minimal movement of bins is anticipated for this site, as bins are to be collected directly from their storage location. The building manager/caretaker will be responsible for any transportation of bins that does occur.

Any movement of bins should minimise manual handling where possible, as bins become heavy when full. The building manager/caretaker must assess manual handling risks and provide any relevant documentation to key personal.

The routes along any bin moving paths should;

- Allow for a continuous route that is wholly within the property boundary.
- Be free from obstruction and obstacles such as steps and kerbs.
- Be constructed of solid materials with a non-slip surface
- Be A minimum of 300mm wider than the largest bin used onsite.
- If bins are moved manually, the route must not exceed a grade of 1:14.
- If a bin moving device is used, the route cannot exceed the maximum operating grade of the device. This is typically a grade of 1:4, however this will vary depending on the model of bin moving device acquired for the site.

## 14.0 EQUIPMENT SUMMARY

Table 27: Equipment Summary – Concept Masterplan (Stages 2-5)

	Part	Qty	Notes
<b>Dual Chutes</b>	Please refer to supplier's information	4	(See APPENDIX: B.1 for Typical Dual Chute Layout)
<b>Chute Equipment</b>	<b>General Waste:</b>		
	2-bin 660L Bin Linear Track System	7	(See APPENDIX: B.2 for Typical Linear System)
	3-bin 660L Bin Linear Track System	1	
	4-bin 660L Bin Carousel System	1	(See APPENDIX: B.3 for Typical Carousel System)
	<b>Commingled Recycling</b>		
	2-bin 660L Bin Linear Track System	3	

Table 28: Equipment Summary – Detailed Design Stage 1

	Part	Qty	Notes
<b>Dual Chutes</b>	Please refer to supplier's information	4	(See APPENDIX: B.1 for Typical Dual Chute Layout)
<b>Chute Equipment</b>	<b>General Waste:</b>		(See APPENDIX: B.2 for Typical Linear System)
	2-bin 660L Bin Linear Track System	2	(See APPENDIX: B.3 for Typical Carousel System)
<b>Other Equipment</b>	240L Bin Lifter (to decant 240L recycling bins into 1100L bins for collection)	1	(See APPENDIX: D.1 for Typical Bin Lifter)

## 15.0 WASTE ROOMS

The areas allocated for waste storage and collection areas are detailed in the table below and are estimates only.

The equipment recommended in the chute discharge rooms is to manage 1 days' worth of estimated general waste and recycling from that building core. Therefore, this represents the minimum equipment required in these rooms to satisfy best practice requirements. Additional bins or volume handling equipment can be included in these rooms to increase days of capacity or manual labour required in operation.

Tables 29–32 relate to the Concept Masterplan (Stages 2–5), while Table 33 relates to the Detailed Design Stage 1.

At the time of preparation of this OWMP, the specific ancillary uses for Masterplan Stages 2–5 have not yet been finalised. However, provision will be made within future stages of the development to accommodate appropriate waste storage arrangements for ancillary uses, in accordance with relevant NSW EPA guidelines and Council requirements at the detailed design stage.

***Note: The Concept Masterplan (Stages 2–5) is a concept proposal, and all waste estimates are indicative only.***

Table 29: Waste Room Areas – Concept Masterplan (Stage 2)

Level	Waste Room Type	Equipment	Estimated Area Required (m <sup>2</sup> )
TBC	<b>Building 1</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 3 x 660L bins <b>FOGO:</b> 3 x 240L bins	>33
TBC	<b>Building 2</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 2 x 240L bins	>30
TBC	<b>Building 3</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 2 x 660L bins <b>Comingled Recycling:</b> 1 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 2 x 240L bins	>16
TBC	<b>Building 4</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bins <b>Paper/Cardboard Recycling:</b> 1 x 660L bin <b>FOGO:</b> 1 x 240L bin	>12
TBC	<b>Building 5</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bins <b>Paper/Cardboard Recycling:</b> 1 x 660L bin <b>FOGO:</b> 1 x 240L bin	>12
TBC	<b>Bulky Waste Room</b>		TBC

Table 30: Waste Room Areas – Concept Masterplan (Stage 3)

Level	Waste Room Type	Equipment	Estimated Area Required (m <sup>2</sup> )
TBC	<b>Building 1</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 2 x 240L bins	>30
TBC	<b>Building 2A</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 3-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 2-bin 660L Bin Linear Track System  Collection Area: <b>General Waste:</b> 5 x 660L bins <b>Comingled Recycling:</b> 3 x 660L bins <b>Paper/Cardboard Recycling:</b> 4 x 660L bins <b>FOGO:</b> 4 x 240L bins	>57
	<b>Building 2B</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 4-bin 660L Bin Carousel System <b>Comingled Recycling:</b> 2-bin 660L Bin Linear Track System  Collection Area: <b>General Waste:</b> 7 x 660L bins <b>Comingled Recycling:</b> 4 x 660L bins <b>Paper/Cardboard Recycling:</b> 5 x 660L bins <b>FOGO:</b> 6 x 240L bins	>69
TBC	<b>Bulky Waste Room</b>		TBC
TBC	<b>ILU Facilities Waste Room</b>	<b>General Waste:</b> 8 x 1100L bins <b>Recycling:</b> 5 x 1100L bins	>38
TBC	<b>Ancillary Waste Room</b>	TBC	TBC

Table 31: Waste Room Areas – Concept Masterplan (Stage 4)

Level	Waste Room Type	Equipment	Estimated Area Required (m <sup>2</sup> )
TBC	<b>Building 1</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 3 x 240L bins	>31
TBC	<b>Building 2</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 2 x 240L bins	>30
TBC	<b>Building 3</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 3 x 240L bins	>31
TBC	<b>Bulky Waste Room</b>		TBC
TBC	<b>Ancillary Waste Room</b>	TBC	TBC

Table 32: Waste Room Areas – Concept Masterplan (Stage 5)

Level	Waste Room Type	Equipment	Estimated Area Required (m <sup>2</sup> )
TBC	Bin holding room	Chute Discharge Area: <b>General Waste:</b> 2-bin 660L Bin Linear Track System <b>Comingled Recycling:</b> 2-bin 660L Bin Linear Track System  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 3 x 240L bins	>41
TBC	<b>Bulky Waste Room</b>		TBC



Table 33: Waste Room Areas – Detailed Design Stage 1

Level	Waste Room Type	Equipment	Estimated Area Required (m <sup>2</sup> )
B1	<b>Building 1</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 3 x 240L bins  1 x 240L Bin Lifter	>24
B1	<b>Building 2</b> Bin holding room	Chute Discharge Area: <b>General Waste:</b> 1 x 660L bin <b>Comingled Recycling:</b> 1 x 660L bin  Collection Area: <b>General Waste:</b> 3 x 660L bins <b>Comingled Recycling:</b> 2 x 660L bins <b>Paper/Cardboard Recycling:</b> 2 x 660L bins <b>FOGO:</b> 3 x 240L bins  1 x 240L Bin Lifter	>24
B1	<b>Bulky Waste Room</b>		>15
B1	<b>ILU Facilities Waste Room</b>	<b>General Waste:</b> 2 x 1100L bins <b>Recycling:</b> 2 x 1100L bins	>12
GF	<b>Café Waste Room</b>	<b>General Waste:</b> 1 x 1100L bins <b>Recycling:</b> 1 x 1100L bins	>6

EFC recommends bins sizes, collection frequencies and/or equipment for best practice waste management at this site, however EFC also acknowledges there are a range of other suitable options that may alter waste room requirements (e.g. floor area, accessibility, head height, etc.)

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 70% of bin GFA factored in for manoeuvrability.

In addition, all doorways and passageways facilitating the movement of bins and/or bulky waste items must be at least 1500mm wide.

The following table provides further waste room requirements.

Table 34: Waste Room Requirements

Waste Room Type	Waste Room Requirements
<b>Chute Discharge Area</b>	<ul style="list-style-type: none"> <li>• Ceiling clearance height must be a minimum of 3000mm (subject to penetration location)</li> <li>• The chute penetration must have a minimum 500mm clearance of any service pipes or other overhead obstacles</li> <li>• All chute discharge points should be caged off to ensure the safety of any personnel accessing the waste room</li> <li>• 200mm clearance is required around compaction equipment</li> <li>• Where a chute offset is required, the angle of the offset must not exceed 30 degrees (subject to number of consecutive offset and/or up to 1500mm)</li> <li>• Where the chute discharge room also acts as the collection point, the chute discharge and any equipment underneath the chute should be caged off to ensure the safety of personnel accessing the room.</li> </ul>
<b>Residential Bin Holding Room and/or Bin Collection Area</b>	<ul style="list-style-type: none"> <li>• Bins must not be stacked in rows that are more than two bins deep.</li> </ul>
<b>Bulky Waste Room</b>	<ul style="list-style-type: none"> <li>• May be a dedicated room or screened area within another waste room</li> <li>• Must be in close proximity to the collection area</li> <li>• Area must also be allocated for the segregation of e-waste, gas bottles, cardboard, etc.</li> <li>• Doorway should be a minimum of 1500mm wide</li> </ul>
<b>Ancillary Waste Room</b>	<ul style="list-style-type: none"> <li>• In order to ensure staff safety, all bins should be arranged so they can be accessed without moving another bin</li> <li>• Bins must be coordinated with the hinge of the lid facing the back. This is to allow for ideal access to the bin.</li> </ul>

## 16.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the Warringah Development Control Plan 2011, in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

The *NSW Better practice guide for resource recovery in residential developments (2019)* also states that better practice bin storage areas should achieve more than the minimum compliance requirements, which are as follows:

- Ensuring BCA compliance, including ventilation. Where required, ventilation system must comply with AS1668.4-2012 The use of ventilation and air conditioning in buildings.
- Ensuring storage areas are well lit (sensor lighting preferred) and have lighting available 24 hours a day.
- Provision of bin washing facilities, including taps for hot and cold water provided through a centralised mixing valve. The taps must be protected from bins and be located where they can be easily accessed even when the area is at bin capacity.
- Floor constructed of concrete at least 75mm thick.
- Floor graded so that any water is directed to a sewer authority approved drainage connection to ensure washing bins and/or waste storage areas do not discharge flow into the stormwater drain.
- Provision of smooth, cleanable and durable floor and wall surfaces that extend up the wall to a height equivalent to any bins held in the area.
- Ensuring ceilings are finished with a smooth-faced non-absorbent material capable of being cleaned.
- All surfaces (walls, ceiling and floors) finished in a light colour.

### 16.1 ADDITIONAL CONSIDERATIONS

- Waste room floor to be sealed with a two-pack epoxy;
- All corners coved and sealed 1,200mm up, this is to eliminate build-up of dirt;
- Hot and cold water tap height and light switch height of 1.6m;
- Storm water access preventatives (grate);
- All walls painted with light colour and washable paint;
- Equipment electric outlets to be installed 1700mm above finished floor level;
- Optional automatic odour and pest control system installed
- If 660L or 1100L bins are utilised, 2 x 820mm (minimum) double-doors must be used;
- All personnel doors are hinged, lockable and self-closing;
- Conform to the Building Code of Australia, Australian standards and local laws; and
- Childproofing and public/operator safety shall be assessed and ensured
- Waste and recycling rooms must have their own exhaust ventilation system either;
  - Mechanically - exhausting at a rate of 5L/m<sup>2</sup> floor area, with a minimum rate of 100L/s minimum. Mechanical exhaust systems shall comply with AS1668.4.2012 and not cause any inconvenience, noise or odour problem; or
  - Naturally - permanent, unobstructed, and opening direct to the external air, not less than one-twentieth (1/20) of the floor area.

## 17.0 USEFUL CONTACTS

EFC does not warrant or make representation for goods or services provided by suppliers.

### LOCAL COUNCIL

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Northern Beaches Council	Ph: 1300 434 434	E: <a href="mailto:council@northernbeaches.nsw.gov.au">council@northernbeaches.nsw.gov.au</a>
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### PRIVATE WASTE COLLECTION PROVIDER

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Capital City Waste Services	Ph: 02 9599 9999	E: <a href="mailto:service@ccws.net.au">service@ccws.net.au</a>
Sydney Waste	Ph: 02 8661 0031	
Waste Clear	Ph: 1300 525 352	E: <a href="mailto:admin@wasteclear.com.au">admin@wasteclear.com.au</a>

### BIN MOVING DEVICE SUPPLIERS

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Elephants Foot Equipment	Ph: 1300 435 374	E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>
Sitecraft	Ph: 1300 363 152	E: <a href="mailto:sales@sitecraft.com.au">sales@sitecraft.com.au</a>

### BALER SUPPLIERS

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Elephants Foot Equipment	Ph: 1300 435 374	E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>
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### ORGANIC DIGESTERS AND DEHYDRATORS

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Elephants Foot Equipment	Ph: 1300 435 374	E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>
Waste Master	Ph: 1800 614 272	E: <a href="mailto:hello@wastemasterpacific.com.au">hello@wastemasterpacific.com.au</a>

### COOKING OIL CONTAINERS AND DISPOSAL

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Cookers	Ph: 1300 882 299	E: <a href="mailto:info@cookers.com.au">info@cookers.com.au</a>
Auscol	Ph: 1800 629 476	E: <a href="mailto:sales@auscol.com">sales@auscol.com</a>

### ODOUR CONTROL

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Elephants Foot Equipment	Ph: 1300 435 374	E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>
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### SOURCE SPERATION BINS

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Method Recycling	Ph: 0499 890 455	
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### BINS AND BIN EQUIPMENT

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Elephants Foot Equipment	Ph: 1300 435 374	E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>
SULO	Ph: 1300 364 388	E: <a href="mailto:sulosales@pactgroup.com">sulosales@pactgroup.com</a>

### CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

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Elephants Foot Chute Solutions	Ph: 1300 435 374	E: <a href="mailto:chutes@elephantsfoot.com.au">chutes@elephantsfoot.com.au</a>
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## APPENDIX A: ARCHITECTURAL PLANS

## Anzac Village

### Numerics for Design Report

Project #: 24015  
 Date: 21/11/2025  
 Revision: Q4b



AJC Architects Pty Ltd

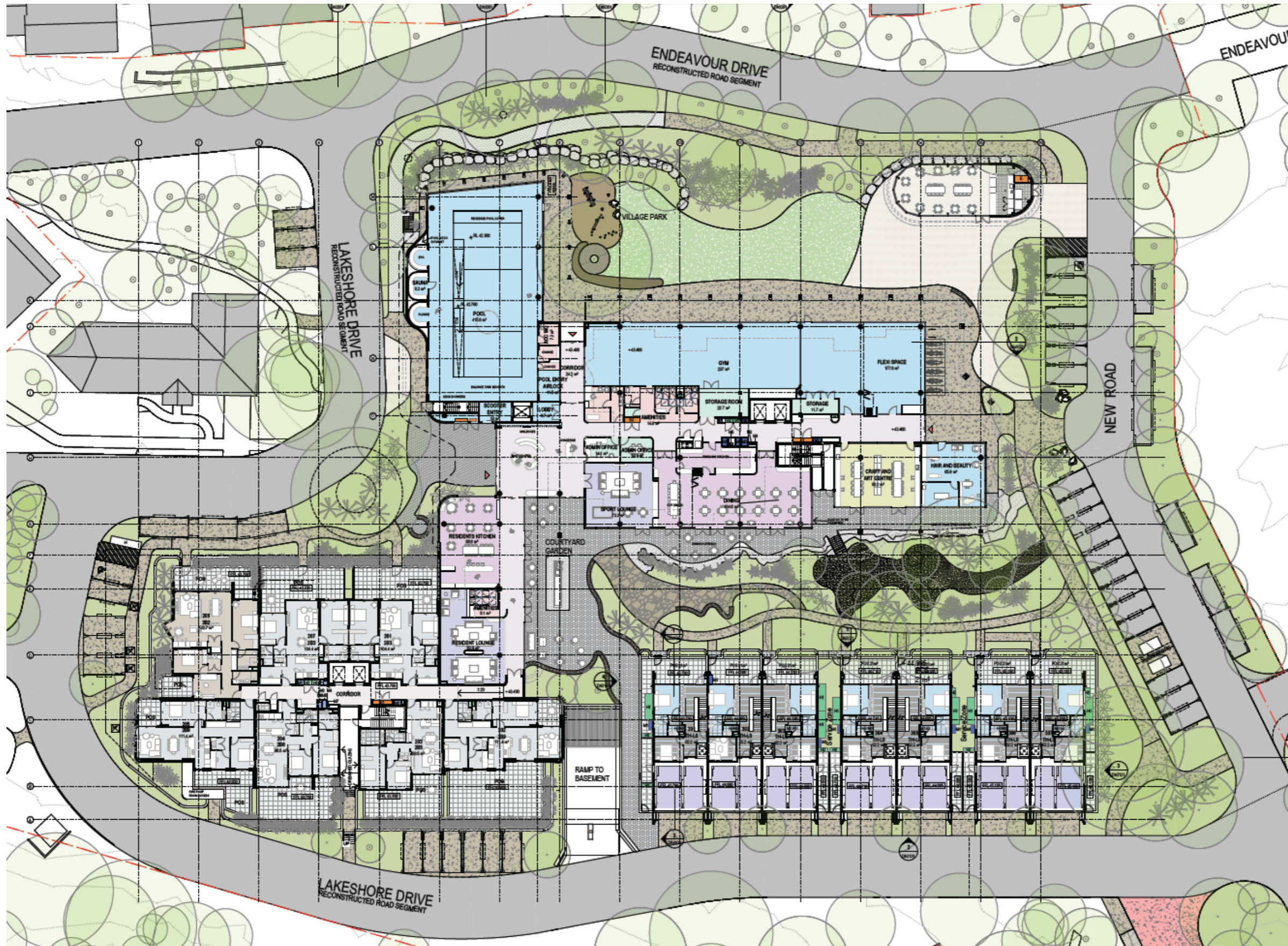
<b>Indicative Dwelling Yield</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Stage 4</b>	<b>Stage 5</b>	<b>Stage MSP</b>	<b>Total</b>
<b>ILU</b>	78	106	54	117	44	0	399 <i>units</i>
<b>Townhouses</b>	7	0	0	0	0	0	7 <i>townhouses</i>
<b>Studios</b>	0	24	54	0	0	0	78 <i>studios</i>
<b>RACF</b>	0	0	104	0	0	0	104 <i>beds</i>

<b>Indicative Gross Floor Area (GFA)</b>	<b>Stage 1</b>	<b>Stage 2</b>	<b>Stage 3</b>	<b>Stage 4</b>	<b>Stage 5</b>	<b>Stage MSP</b>	<b>Total</b>
Independent Living Units	10,877	13,700	7,191	14,787	6,267	-	52,822 <i>sqm</i>
Studios	-	1,454	3,350	-	-	-	4,804 <i>sqm</i>
Residential Aged Care Facilities	-	-	6,892	-	-	-	6,892 <i>sqm</i>
Ancillary Uses	1,843	-	2,855	448	-	-	5,146 <i>sqm</i>
Service & Maintenance Areas	-	101	191	189	-	1,048	1,529 <i>sqm</i>
<b>Total GFA</b>	<b>12,720</b>	<b>15,256</b>	<b>20,478</b>	<b>15,424</b>	<b>6,267</b>	<b>1,048</b>	<b>71,193 <i>sqm</i></b>

Source: AJC Architects, Project No 24015, Rev Q4b, 21/11/2025 – Numerics for Design Report.



APPENDIX: A.3 GROUND FLOOR PLAN: LEVEL 1



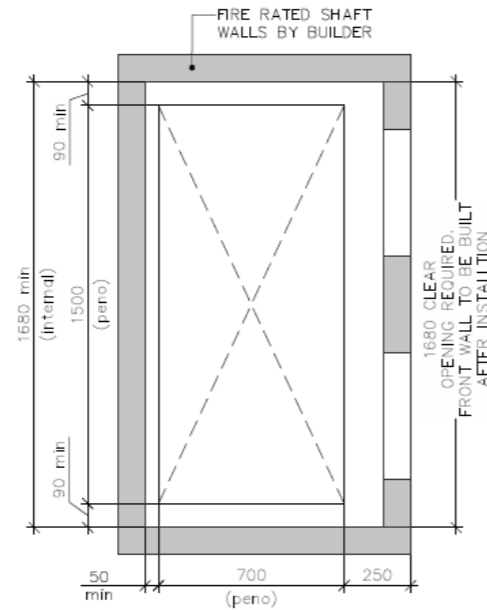
Source: AJC Architects, Project No 24015, Sheet No DA2010, Rev 15, 16/12/2025 – General Arrangement Plan Level 00

## APPENDIX B: INSTALLATION EQUIPMENT

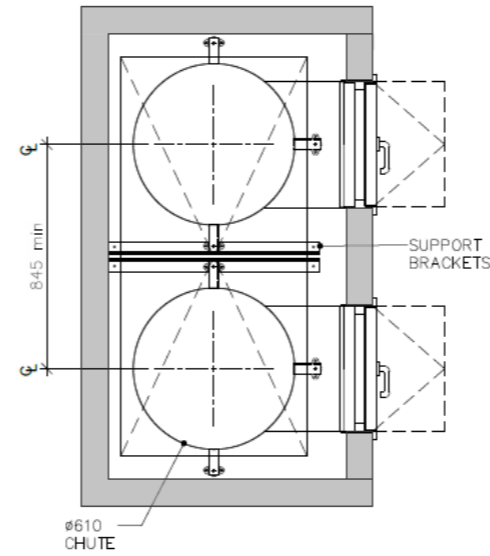


## CHUTE SHAFT & PENETRATION SET-OUT

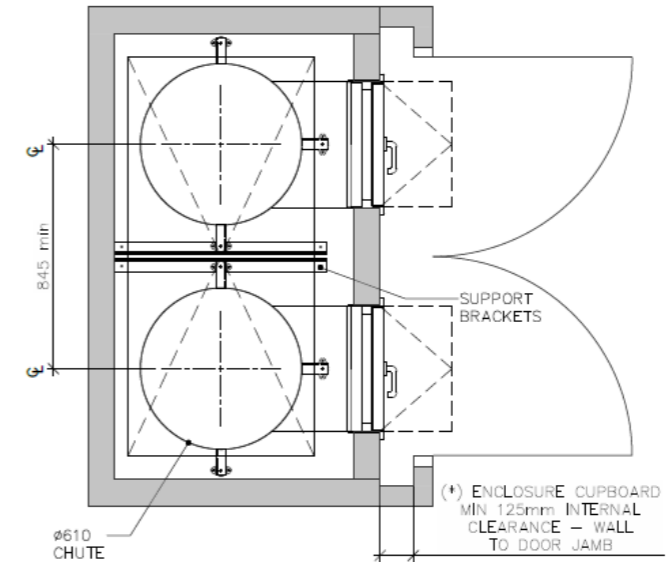
### DUAL Ø610 STEEL



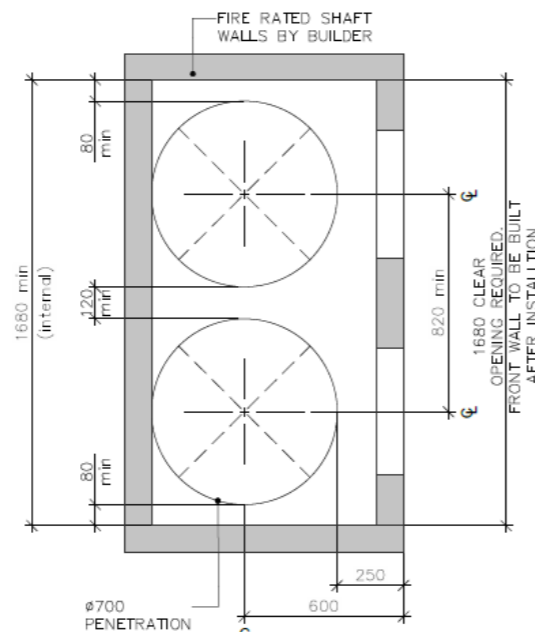
01 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT PENETRATION SET-OUT



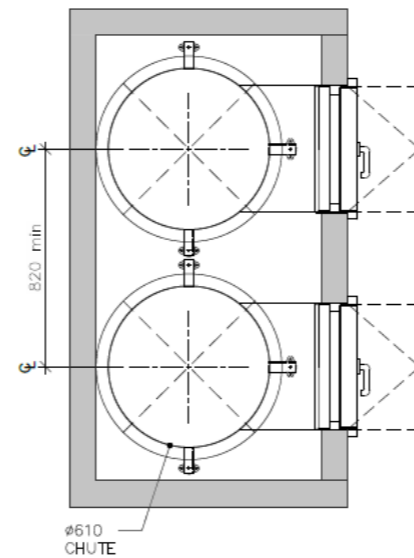
02 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT



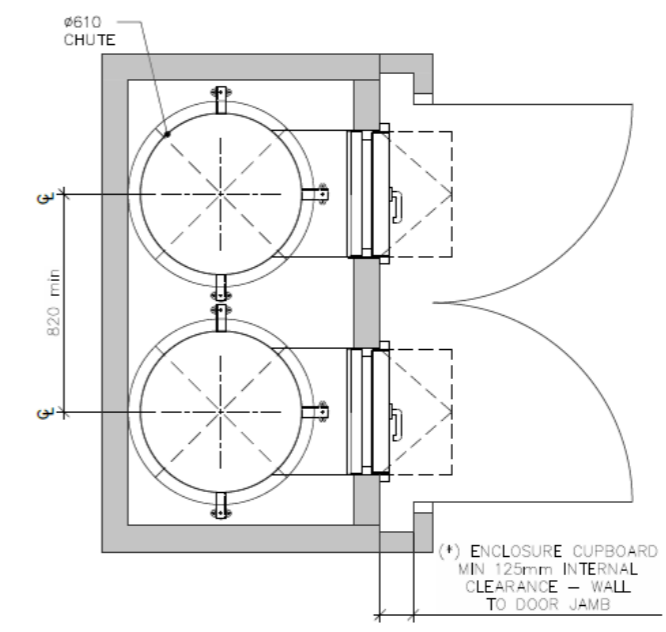
03 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT with ENCLOSURE CUPBOARD (\*)



04 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT WITH CIRCULAR PENETRATION SET-OUT



05 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT (W/ CIRCULAR PENETRATION)



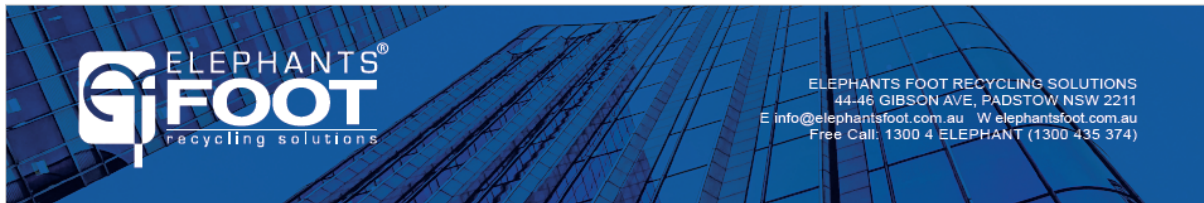
06 DUAL (610Ø) GALV. STEEL CHUTE LAYOUT with ENCLOSURE CUPBOARD (\*)

(\*) NOTE: ENCLOSURES ARE RECOMMENDED IF THE CHUTE OPENS DIRECTLY TO A CORRIDOR OR IS NOT LOCATED IN A WASTE ROOM. IF CHUTE ACCESS IS WITHIN A WASTE ROOM THEN THE CUPBOARD ENCLOSURES ARE NOT REQUIRED.

SCALE 1:25 @ A3

Please Note: This is an example only – please refer to supplier's information and specification.

## APPENDIX: B.2 TYPICAL LINEAR TRACK SYSTEM FOR 660L BINS



# 660 LITRE LINEAR TRACK SYSTEM

## PRODUCT INFORMATION

Elephants Foot 660 Litre bin Linear Track System is a versatile waste handling solution for many types of multi-storey or multi-level developments. The Linear Track System collects waste or recycling being disposed from the floors above through the chute system, discharging the material via a hopper that feeds the bins. Electromechanically driven with automated operation, the system utilises linear motion to automatically change over full bins. Once all the bins are filled, an indicator light will illuminate signifying that the bins are ready for withdrawal and collection. Available with or without compaction unit, our standard 660 litre bin Linear Track System is available in standard 2 or 3. Our 4 Bin option is available as a special order.



## SPECIFICATIONS

System Control	Electric PLC
Power Supply	415 V AC / 10A / 5 PIN
Motor Size (kW)	0.55
Maximum bin load	265 kg
Noise (dBA)	<85
Bin Size (L)	660
Cycle time (sec)	60
Bin Quantity options	2, 3, or 4

## OPTIONAL EXTRAS

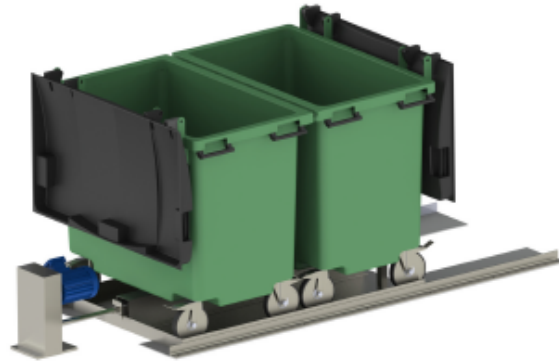
- Compaction unit – Please refer to the bin compactor product information sheet for details and specifications
- Enhanced safety add on's – Interlocking barriers, occupancy sensors or safety light curtains (presence sensing light barriers)
- Full bin SMS and email notification
- CMMS and BMS integration
- Extend warranty – Terms and conditions apply

## STANDARD FEATURES & BENEFITS

- Simple operation with user friendly controls
- Increased waste servicing efficiency for the development
- Automatic system control with manual override
- Robust unit construction for long performance life
- Low service and maintain costs
- Rotating flashing beacon (activated during operation)
- Quiet and efficient system operation
- Maximise safety for residents, caretakers and collectors
- Restrained design with minimal moving parts
- Can suit low ceiling clearances
- Floor contact components fully galvanised steel
- Retro fitting options to suit other chutes systems
- Compliant with relevant Building Codes and Standards
- Standard 12 month warranty

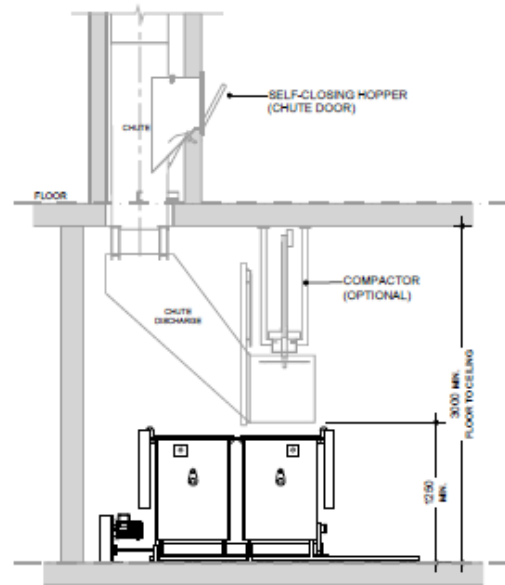
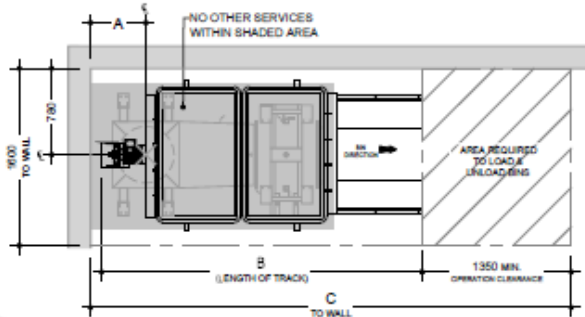


# 660 LITRE LINEAR TRACK SYSTEM



No. of Bins	Reference (mm)		
	A	B	C
2	500	2950	4350
3	1450	4850	6050
4	2300	6300	7750

Available with or without compaction unit, our standard 240 litre bin Linear Track System can support 2, 3 or 4 bin quantities.



**Notes:**  
Bins not provided by Elephants Foot

Drawings shown are for general information purposes only and provide minimum equipment spacial requirements for waste room design.

These drawings are not intended for site specific use or for construction. Each project is unique and will be designed to suit.

Additional equipment options, systems and configurations are available. For design assessment, information and advice, please contact an Elephants Foot design consultant on 1300 435 374

*Please Note: This is an example only – please refer to supplier's information and specification*

APPENDIX: B.3 TYPICAL CAROUSEL SYSTEM FOR 660L BINS



ELEPHANTS FOOT RECYCLING SOLUTIONS  
44-46 GIBSON AVE, PADSTOW NSW 2211  
E info@elephantsfoot.com.au W elephantsfoot.com.au  
Free Call: 1300 4 ELEPHANT (1300 435 374)

## 660 LITRE CAROUSEL SYSTEM

### PRODUCT INFORMATION

Elephants Foot 660 Litre bin Carousel System is a versatile waste handling solution for many types of multi-storey or multi-level developments. The Carousel System collects waste or recycling being disposed from the floors above through the chute system, discharging the material via a hopper that feeds the bins positioned on the unit. Electromechanically driven with automated operation, the Carousel System automatically replaces full bins by a revolving circular platform. Once all the bins on the system are filled, an indicator light will illuminate signifying that the bins are ready for withdrawal and collection. Available with or without compaction unit, our standard 660litre bin Carousel System is available in standard 2, 3 or 4 bin options. Our 5 Bin option is available as a special order.



### SPECIFICATIONS

System Control	Electric PLC
Power Supply	415 V AC / 10A / 5 PIN
Motor Size (kW)	0.37
Maximum bin load	265 kg
Noise (dBA)	<85
Bin Size (L)	660
Cycle time (sec)	60
Bin Quantity options	2, 3, 4 or 5

### STANDARD FEATURES & BENEFITS

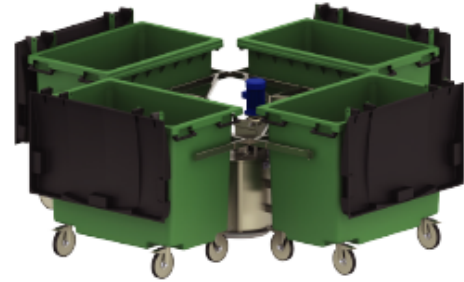
- Simple operation with user friendly controls
- Increased waste servicing efficiency for the development.
- Automatic system control with manual override
- Robust unit construction for long performance life
- Low service and maintain costs
- Rotating flashing beacon (activated during operation)
- Quiet and efficient system operation
- Maximise safety for residents, caretakers and collectors
- Restrained design with minimal moving parts
- Can suit low ceiling clearances
- Floor contact components fully galvanised steel
- Retro fitting options to suit other chutes systems
- Compliant with relevant Building Codes and Standards
- Standard 12 month warranty

### OPTIONAL EXTRAS

- Compaction unit – Please refer to the bin compactor product information sheet for details and specifications
- Enhanced safety add on's – Interlocking barriers, occupancy sensors or safety light curtains (presence sensing light barriers)
- Full bin SMS and email notification
- CMMS and BMS integration
- Extend warranty – Terms and conditions apply

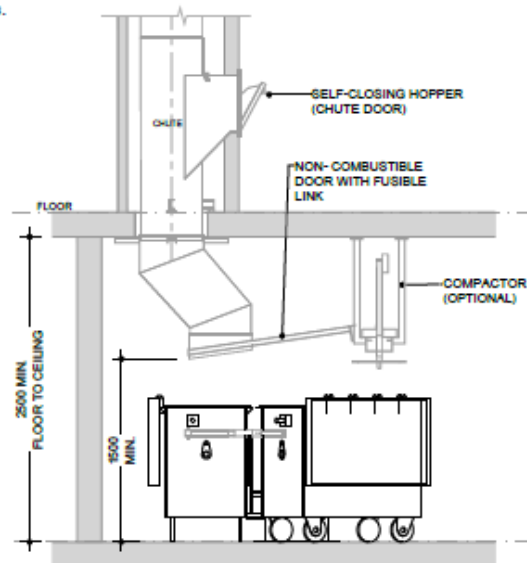
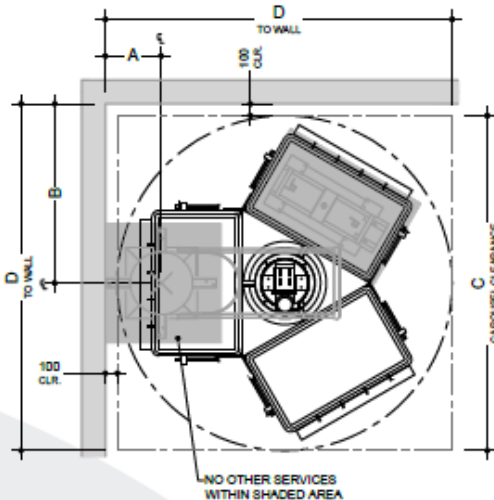


# 660 LITRE CAROUSEL SYSTEM



No. of Bins	Reference (mm)			
	A	B	C	D
2	500	1450	2700	2850
3	500	1550	2850	2950
4	500	1750	3300	3450
5	500	2050	3760	3900

Available with or without compaction unit, our standard 660litre bin Carousel System is available in standard 2, 3 or 4 bin options. Our 5 Bin option is available as a special order.



### Notes:

Bins not provided by Elephants Foot

Drawings shown are for general information purposes only and provide minimum equipment spacial requirements for waste room design.

These drawings are not intended for site specific use or for construction. Each project is unique and will be designed to suit.

Additional equipment options, systems and configurations are available. For design assessment, information and advice, please contact an Elephants Foot design consultant on 1300 435 374

*Please Note: This is an example only – please refer to supplier's information and specification*

## APPENDIX C: PRIMARY WASTE MANAGEMENT PROVISIONS

## APPENDIX: C.1 TYPICAL BIN SPECIFICATIONS


### Mobile bins

Mobile bins come in a variety of sizes and are designed for lifting and emptying by purpose-built equipment.

Mobile bins with capacities of up to 1700L must comply with *AS4123.6-2006 Mobile waste containers* which specifies standard sizes and sets out the colour designations for the bodies and lids of mobile waste containers indicating the type of materials they are used to collect.

The most common bin sizes are provided below, although not all sizes are shown. The dimensions are a guide only and differ slightly between manufacturers. Some bins have flat or domed lids and are used with different lifting devices. Refer to *AS4123.6-2006* for further details.

**Table G1.1: Average dimension ranges for two-wheel mobile bins**




Bin capacity	80L	120L	140L	240L	360L
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	530	540	735	820
Width (mm)	450	485	500	580	600
Approximate footprint (m <sup>2</sup> )	0.24	0.26–0.33	0.27-0.33	0.41–0.43	0.49
Approximate weight (kg)	8.5	9.5	10.4	15.5	23
Approximate maximum load (kg)	32	48	56	96	Not known

**Wheelie bin**

Sources include Sulo, Single Waste, Cleanaway, SUEZ, just wheelie bins and Perth Waste for two-wheel mobile bins

**Table G1.2: Average dimension ranges for four-wheel bulk bins**



Bin capacity	660L	770L	1100L	1300L	1700L
Height (mm)	1250	1425	1470	1480	1470
Depth (mm)	850	1100	1245	1250	1250
Width (mm)	1370	1370	1370	1770	1770
Approx footprint (m <sup>2</sup> )	0.86–1.16	1.51	1.33–1.74	2.21	2.21
Approx weight (kg)	45	Not known	65	Not known	Not known
Approx maximum load (kg)	310	Not known	440	Not known	Not known

**Dome or flat lid container**

Sources include Sulo, Signal Waste, Cleanaway, SUEZ, Just Wheelie Bins and Perth Waste

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

## APPENDIX: C.2 SIGNAGE FOR WASTE AND RECYCLING BINS

### Waste signs

Signs and educational materials perform several functions including:

- informing residents why it is important to recover resources and protect the environment
- providing clear instructions on how to use the bins and services provided
- alerting people to any dangers or hazards within the bin storage areas.

All waste, recycling and organic bins should be Australian Standard colours and clearly and correctly labelled, such as by a sticker on the lid and/or the body of the bin.

Communal bin storage areas should be clearly signposted with signs outlining how to correctly separate waste into the bins provided. The local council responsible for waste services may be a good source of signs and posters and can advise on what signs are suitable.

Information on who to contact to find out more about the recycling and/or other resource recovery services in the building should also be displayed in communal areas, such as on a noticeboard.

The Planet Ark website also has resources available free of charge for use by businesses and councils. These signs can be found at [businessrecycling.com.au/research/signage.cfm](http://businessrecycling.com.au/research/signage.cfm)

Figure I1.1: Examples of waste wall posters (EPA supplied)



Figure I1.2: Examples of bin lid stickers (EPA supplied)



Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

## Problem waste signs

The EPA has also produced a range of images and signs that can be used for problem wastes, such as fluoro globes and tubes, household and car batteries, e-waste and smoke detectors. To access these resources, contact the NSW EPA. Some examples are shown below.

Figure I2.1: Problem waste signs



## Safety signs

The use of safety signs for waste resource recovery rooms must comply with *AS1319 Safety signs for occupational environments*. Safety signs must be used to regulate and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Suitable signs should be decided for each development as required.

Figure I3.1: Example safety signs



Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

## APPENDIX: C.3 EXAMPLE COLLECTION VEHICLE INFORMATION

### General

Appropriate heavy rigid vehicle standards should be incorporated into the road and street designs in new developments where onsite collections are proposed. Road and street designs must comply with relevant Acts, regulations, guidelines, and codes administered by Austroads, Standards Australia, NSW Roads and Maritime Services, WorkSafe NSW and any local council traffic requirements.

Applicants and building designers should consult with councils and other relevant authorities before designing new roads or streets and access points for waste collection vehicles to establish specific design requirements.

**Table H4.1: Australian Standards for turning circles for medium and heavy rigid class vehicles**

Vehicle class	Overall length (m)	Design width (m)	Design turning radius (m)	Swept circle (m)	Clearance (travel) height (m)
Medium rigid vehicle	8.80	2.5	10.0	21.6	4.5
Heavy rigid vehicle	12.5	2.5	12.5	27.8	4.5

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

### Large collection vehicles

Waste collection vehicles may be side-loading, rear-loading, front-lift-loading, hook or crane lift trucks. Vehicle dimensions vary by collection service, manufacturer, make and model. It is not possible to provide definitive dimensions, so architects and developers should consult with the local council and/or contractors.

The following characteristics represent typical collection vehicles and are provided for guidance only. Reference to *AS2890.2 Parking facilities: off-street commercial vehicle facilities* for detailed requirements, including vehicle dimensions, is recommended.

**Table B2.1: Collection vehicle dimensions**

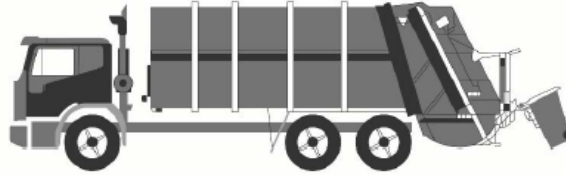
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0	13.0
Maximum payload (t)	10.0	10.8	11.0	14.5	9.5
Turning circle (m)	25.0	21.4	25.0	25.0	18

\* The maximum reach of a side arm is 3 m.

Sources: JJ Richards, SUEZ, MacDonald Johnson, Cleanaway, Garwood, Ros Roca, Bingo and Edbro. Figures shown represent the maximum dimensions for each vehicle type.

### Rear-loading collection vehicles

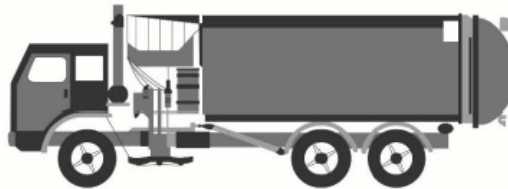
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



Rear-loading waste collection vehicle

### Side-loading collection vehicles

This is the most commonly used vehicle for domestic waste, recycling and organics collections. It is only suitable for collecting mobile bins up to 360L in capacity.



Side-loading waste collection vehicle

### Front-lift-loading collection vehicles

These vehicles are commonly used for collecting commercial and industrial waste. They can only collect specially designed front-lift bulk bins and not mobile bins.



Front-lift-loading waste collection vehicle

### Small collection vehicles

Typically, councils and their contractors operate with large collection vehicles (heavy rigid class vehicles) because they carry greater payloads and allow for more cost-effective collection services. Some councils, or their contractors, may have smaller collection vehicles in their fleet. Early discussion with the council is important to confirm this, but it should not be assumed that the council will have access to small collection vehicles.

The waste management systems and the location of the collection point should always be designed so that the council can provide the standard domestic waste service.

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

## **APPENDIX D: SECONDARY WASTE MANAGEMENT PROVISIONS**

APPENDIX: D.1 EXAMPLE BIN LIFTER FOR 240L BINS

**versatip**

Versatip Bin Tipper – 1500mm Tip



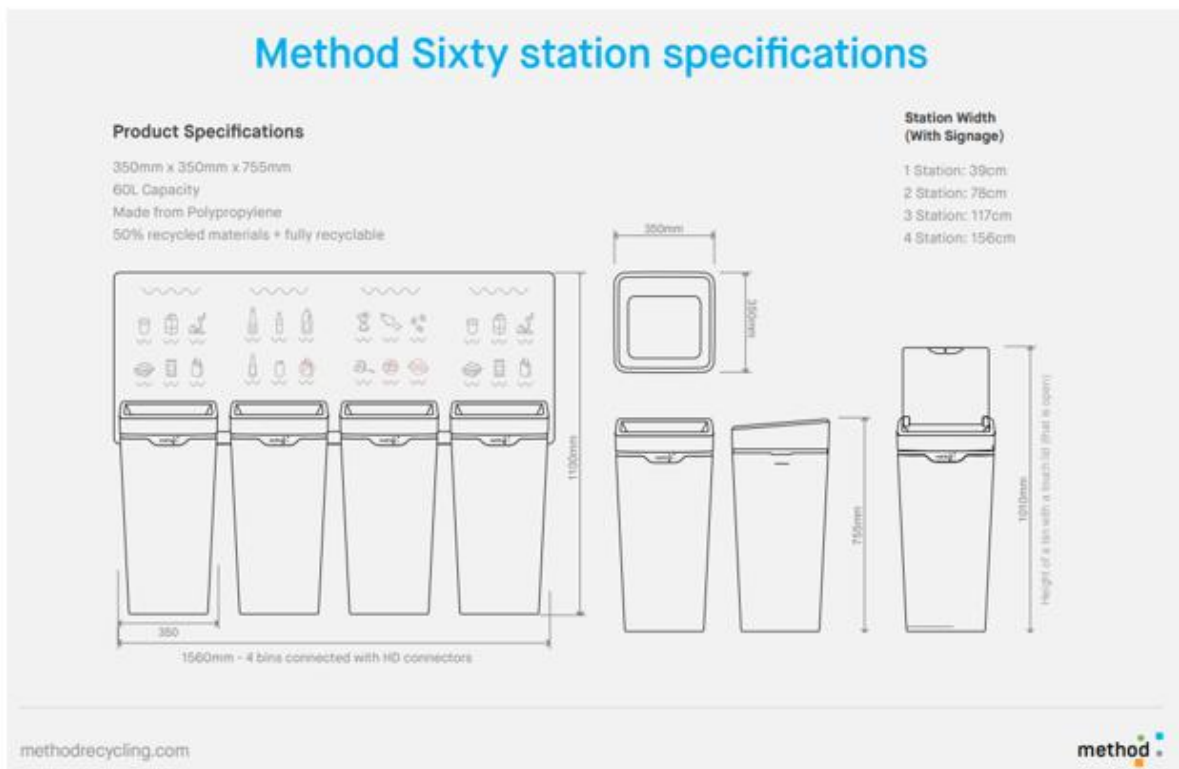
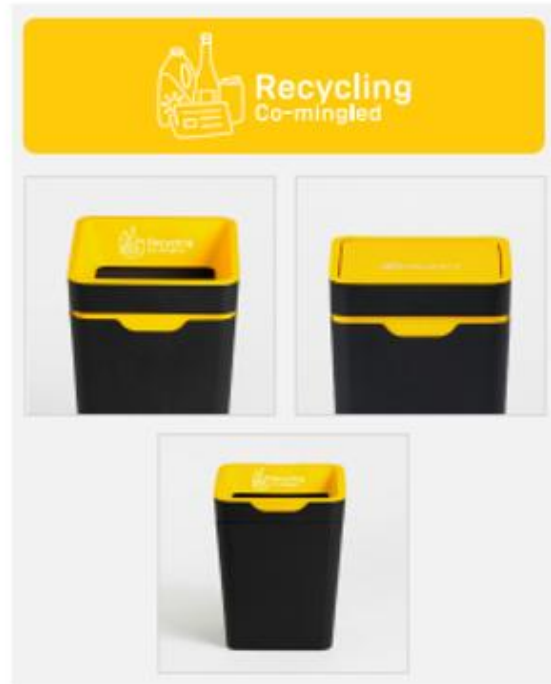
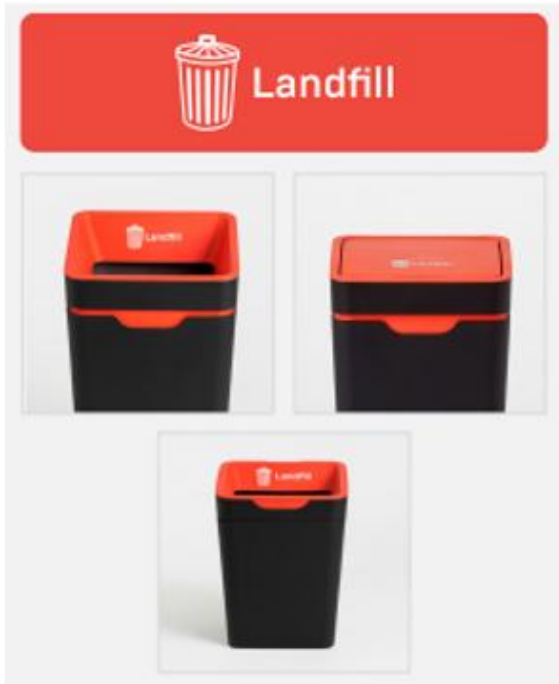
**Specifications**

Product Code	69121009
Product Name	1500mm Tip – Battery Powered
Capacity (kg)	250
Height (mm)	2085
Length (mm)	1330
Power Source	Battery Powered
Tipping Height (mm)	1500
Width (mm)	990

*Please Note: This is an example only – please contact supplier for specific recommendations.*

Source: Elephants Foot Equipment - [www.elephantsfoot.com.au/equipment/](http://www.elephantsfoot.com.au/equipment/)

APPENDIX: D.2 EXAMPLE SOURCE SEPARATION RECEPTACLES



Source: Method Recycling - [www.methodrecycling.com](http://www.methodrecycling.com)