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Cremorne Pathways Seniors Living
50-88 Parraween St & 59-67 Gerard St Cremorne

OPERATIONAL WASTE MANAGEMENT PLAN

3/07/2023
Report No. 4557
Revision C

Client

Skermanic Pty Ltd

Architect

Morrison Design Partnerships

<https://www.mdpa.com.au/>





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GLOSSARY OF ABBREVIATIONS AND TERMS

TERM	DESCRIPTION
<i>Bin-carting Route</i>	Travel route for transferring bins from the storage area to a nominated collection point
<i>Chute</i>	A ventilated, vertical pipe passing from floor to floor of a building with openings as required to connect with hoppers and normally terminating at its lower end at the roof of the central waste room(s)
<i>Chute Discharge</i>	The point at which refuse exits from the refuse chute
<i>Chute Discharge Room</i>	A secure, enclosed area or room housing the discharge and associated equipment for the refuse chute
<i>Collection Area/Point</i>	The identified position or area where general waste or recyclables are loaded onto the collection vehicle
<i>Compactor</i>	A machine for compressing waste into disposable or reusable containers
<i>Composter</i>	A container/machine used for composting specific food scraps
<i>Crate</i>	A plastic box used for the collection of recyclable materials
<i>DA</i>	Development Application
<i>DCP</i>	Development Control Plan
<i>EPA</i>	Environmental Protection Authority
<i>HRV</i>	Heavy Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>L</i>	Litre(s)
<i>LEP</i>	Local Environmental Plans guide planning decisions for local government areas
<i>Liquid Waste</i>	Non-hazardous liquid waste generated by commercial premises that must be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste)
<i>Mixed Use Development</i>	A development comprised of two or more different uses
<i>MUD</i>	Multi-Unit Dwellings comprise of a development with more than one dwelling. This ranges from dual occupancies and attached dwellings to high-rise residential developments
<i>Mobile Garbage Bin(s) (MGB)</i>	A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 360, 660, 1000 or 1100
<i>MRV</i>	Medium Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>Onsite Collection</i>	When the collection vehicle enters the property and services the development within the property boundary from a designated loading area

<i>Owners Corporation</i>	An organisation or group of persons that is identified by a particular name and acts, or may act, as an entity
<i>Service Bins</i>	Bin set side to be placed under a chute while the remainder of the bins are being collected
<i>SRV</i>	Small Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>WHS</i>	Workplace Health and Safety
<i>Wheel-in wheel-out service</i>	A type of waste collection service offered by local councils where the council waste collection personnel enter the premises to collect the bins and returns them to the property

1.0 ACKNOWLEDGEMENT OF COUNTRY

Elephants Foot Consulting 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

Elephants Foot Consulting (EFC) has been engaged to prepare the following waste management plan for the operational management of waste generated by the Dependant and Independent Seniors Living development located at 50-88 Parraween St & 59-67 Gerard St Cremorne.

Waste management strategies and audits are required for new developments in order 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 provisions and robust procedures*** that will cater for potential changes during the operational phase of the development.
- iii. **Comply*** with all relevant council codes, policies, and guidelines.

To achieve these objectives, this operational waste management plan (OWMP) identifies the different waste streams likely to be generated during the operational phase of the development, as well as how the waste will be handled and disposed, details of bin sizes/quantities and waste rooms, descriptions of the proposed waste management equipment used, and information on waste collection points and frequencies.

It is essential 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 operational waste management plan (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,
- Council are subject to changing waste and recycling policies and requirements at their own discretion.

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

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:

- North Sydney Development Control Plan 2013
- North Sydney Local Environmental Plan 2013

The primary purpose of a development control plan (DCP) is to guide development 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:

- North Sydney Development Control Plan: S19: Waste Minimisation and Management
- NSW Better Practice Guide For Resource Recovery In Residential Developments 2019
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste Classification Guidelines 2014
- Australia's National Waste Policy 2018

4.0 DEVELOPMENT OVERVIEW

The proposed development falls under the LGA of North Sydney Council, and consists of:

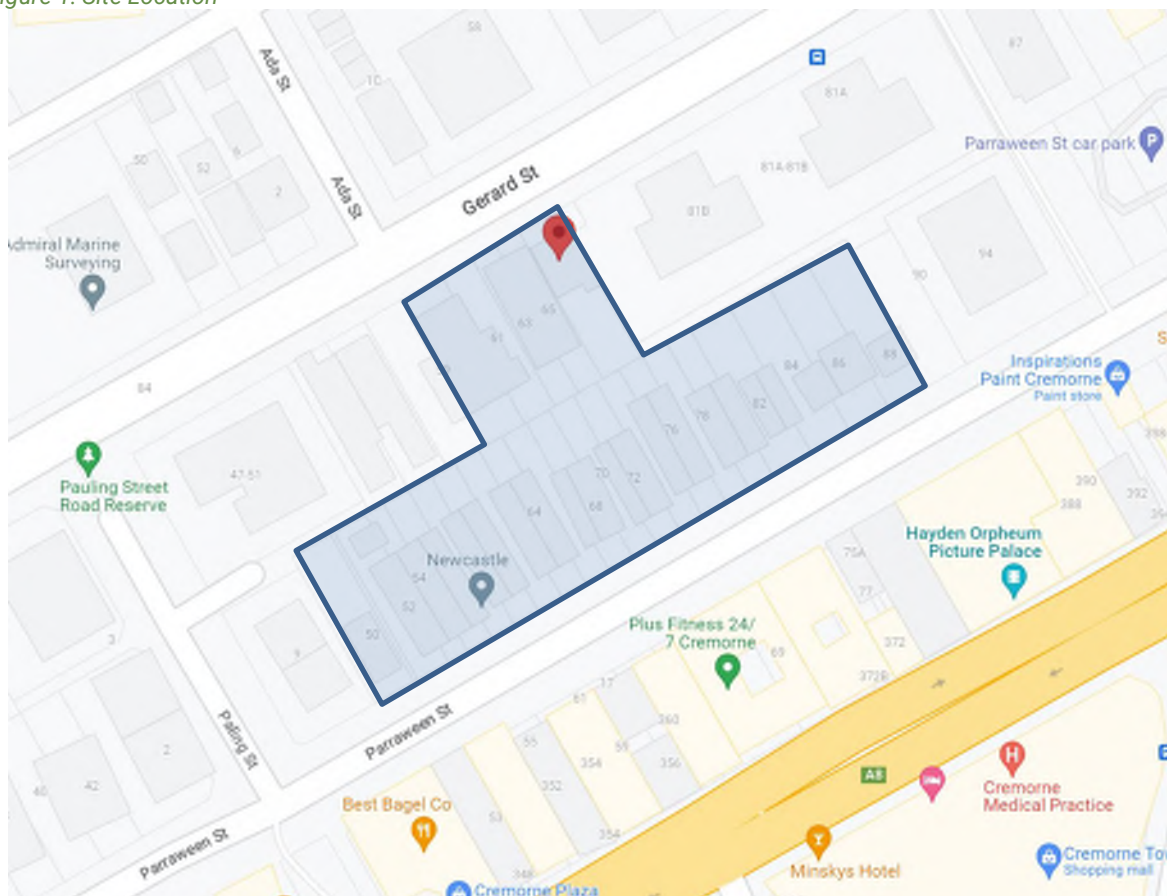
- 4 buildings with shared basement levels containing;
 - 58 Independent Living Units in total separated into 4 buildings
 - 5 units in Building 1
 - 10 units in Building 2
 - 14 units in Building 3
 - 31 units in Building 4
 - Building 1 also contains a dependant aged care with 41 beds and associated facilities including a Pool, Dining areas, Lounge areas, Mens shed & Beauty/hair area a kitchen of 135m².

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 50-88 Parraween St & 59-67 Gerard St Cremorne, as shown in Figure.1 (boundaries are indicative only).

Figure 1: Site Location



Source: Google Maps

5.0 INDEPENDANT LIVING UNITS WASTE MANAGEMENT

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

5.1 INDEPENDANT LIVING UNITS WASTE GENERATION ESTIMATES

The *North Sydney Development Control Plan 2013* has been referenced to calculate the total number of bins required for the residential units. Calculations are based on generic waste and recycling rates. Actual volumes of waste and recycling generated in operation differ according to the residents' actual waste management practices.

The following table shows the estimated volume (L) of general waste and recyclables generated by the residential component of the development.

Table 1: Estimated Waste and Recycling Volumes – Independent Living Units

Building	# Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Recycling Generation Rate (L/unit/week)	Generated Recycling (L/week)	
<i>Building 2</i>	12	80	960	60	720	
<i>Building 3</i>	14	80	1120	60	840	
<i>Building 4</i>	31	80	2480	60	1860	
TOTAL	57		4560		3420	
Bins and Collections		General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100	
		General Waste Bins per Week	4.15	Recycling Bins per Week	3.11	
		General Waste Collections per Week	1	Recycling Collections per Week	1	
		Total General Waste Bins Required for Collection	<u>6</u>	Total Recycling Bins Required for Collection	<u>4</u>	
Number of Waste Bins Per Day		<i>Building 2</i>	0.12	Number of Recycling Bins Per Day	<i>Building 2</i>	0.09
		<i>Building 3</i>	0.15		<i>Building 3</i>	0.11
		<i>Building 4</i>	0.32		<i>Building 4</i>	0.24

*Note: An additional 1100L MGB should be provided for each chute discharge for use during collection periods. These bins are not included in the above figures.

**Note: It is strongly recommended bins/equipment at the base of each chute allow for 2-days' worth of waste or recycling generation.

5.2 INDEPENDANT LIVING UNITS BIN SUMMARY

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

General Waste:	6x 1100L MGBs collected 1 x weekly.
Recycling:	4 x 1100L MGBs collected 1 x weekly.

Additional Considerations:

- 3 x 1100L MGBs Service Bins*
- A 240L recycling bin per level of each building core*

During operation, it is the responsibility of the building manager to monitor the number of bins required for the residential component. Waste and recycling volumes may change according to residents' attitudes to waste disposal and recycling, building occupancy levels or development's management. Any requirements for adjusting the capacity of the waste facilities can 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 INDEPENDANT LIVING UNITS WASTE DISPOSAL PROCEDURES

For the Independent Living Unit residents of Buildings, 2, 3, and 4, Single waste chutes will be installed with access on each residential level of each core. A separate cupboard for the storage of 240L MGBs will be provided next to each waste chute for the storage of commingled recyclables.

The residents are responsible for walking their waste and recycling to the disposal point on their level and placing their waste into the chute and recycling into the bins. Residents will wrap or bag their general waste before placing in the chute. Bagged waste should not exceed 3kg in weight, or 35cm x 35cm x 35cm. Residents will be responsible for loosely placing their recyclables into the 240L MGBS. Recyclables must not be bagged as soft plastic is a contaminate to recycling.

The general waste will discharge from the chute into 1100L MGBs within the chute discharge rooms for each building. The building manager will monitor the fullness of the bins under the chute and rotate with empty bins as required.

The Building Manager will monitor the fullness of the recycling bins on each level. When full, or as required, the building manager will transport the 240L bins to the Bin Holding Room and decant the 240L recycling bins into the 1100L recycling bins using a bin lifter.

5.4 INDEPENDANT LIVING UNITS WASTE COLLECTION PROCEDURES

Council will be engaged to collect the Intendant Living Units' waste and recycling in accordance with Council's collection schedule. This report assumes waste and recycling will be collected weekly.

On the nominated waste collection day, the building caretaker will be responsible for transporting the 1100L MGBs to the Bin Holding Room to await collection. It is recommended that extra 1100L service bins are placed under the chute to collect discharge while the other bins are being serviced.

To service the bins, a Council collection vehicle will enter the site from Parraween St and park in the loading bay on basement level. The waste collection staff will collect the bins via a collect and return arrangement from the residential bin holding room.

Once the bins are serviced, the collection vehicle will exit the site onto Parraween St in a forward direction.

It is the responsibility of the caretaker to ensure that the loading area is clear of any vehicles or obstructions prior to waste collection.

When waste collection is complete, the building caretaker will return the bins to their operational locations to resume use.

5.5 INDEPENDANT LIVING UNITS BULKY WASTE PROCEDURES

An area will be made available for the storage of discarded residential bulky items (e.g. whitegoods, furniture, etc.). This room should be located within close proximity of the garbage and recycling bin collection room and must have a minimum doorway width of 1.5m to allow for easy movement of large waste items in and out of the room.

In accordance with the NSW EPA's Better Practice Guide for Resource Recovery in Residential Developments 2019, the bulky waste room should be sized in accordance with the number of units as per the following rate; 10m² for the first 40 units and then an additional 2m² for every 10 units thereafter.

Residents will need to liaise with building management regarding the transportation of bulky items and the availability of the bulky waste room on. It is the caretaker's responsibility to arrange collection dates with Council and then coordinate with the residents.

6.0 AGED CARE WASTE MANAGEMENT

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

6.1 AGED CARE WASTE GENERATION ESTIMATES

The following table shows the estimated volume (L) of garbage and recycling generated by the development in operation. As detailed in *Better Practice Guide for Resource Recovery in Residential Developments (2019)* the kitchen and dining components of the aged care has been calculated separately. The rate for restaurants has been applied to the GFA of the kitchen area to represent the waste and recycling generation of this component. For the dining areas, it is assumed that the waste generation for this space will mainly be scraps from plates, therefore a restaurant rate has been applied to these areas.

It is assumed that the rate for the Dependant Care Residents includes waste and recycling generated from the typical dependant aged care operations. This includes admin/office areas, lounges, medical room, physio, hairdresser, laundry facility and any other common areas.

It has been assumed that all dependant aged care operation and related facilities will share bins, waste room and collection service.

Table 2: Estimated Waste and Recycling Volumes – Dependent Aged Care

Type	Waste Generation Rate Type	# Residents	General Waste Generation Rate (L/Resident/day)	Generated Recycling (L/week)	Recycling Generation Rate (L/Resident/day)	Generated Recycling (L/week)
Dependant Aged Care Residents	Aged Care	41	10	2870	5	1435
Type	Waste Generation Rate Type	GFA (m ²)	General Waste Generation Rates (L/100m ² /day)	Generated Garbage (L/week)	Recycling Generation Rate (L/100m ² /day)	Generated Recycling (L/week)
Kitchen	Restaurant	135	400	3780	280	2646
TOTAL				6650		4081
Equipment and Collections		General Waste Bin Size (L)		1100	Recycling Bin Size (L)	1100
		General Waste Bins Per Week		7	Recycling Bins Per Week	4
		General Waste Collections per Week		2	Recycling Collections per Week	2
		Total General Waste Bins Required		4	Total Recycling Bins Required	2

6.2 AGED CARE BIN SUMMARY

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

General Waste: 4 x 1100L MGBs collected **2x weekly**

Recycling: 2 x 1100L MGBs collected **2 x weekly**

During operation, it is the responsibility of the building manager to monitor the number of bins required. Any requirements for adjusting the capacity of the waste facilities can 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.

6.3 AGED CARE WASTE DISPOSAL PROCEDURES

The Aged Care building will be provided with a Bin Room containing 1100L MGBs for waste and recycling collection.

Waste and recycling receptacles will be placed in key areas around the dependant aged care buildings, such as the kitchen, residents' rooms, staff rooms and common areas.

As required, cleaners or nominated staff will transport the waste and recycling from the receptacles to the Aged Care Bin Room where the waste and recycling will be placed into the appropriate collection bin. Residents will not have access to the bin holding area.

6.4 OTHER AGED CARE WASTE MANAGEMENT CONSIDERATION

Based on the types of operations anticipated for this development, the following waste management practices are recommended.

6.4.1 MEDICAL WASTE

The dependant aged care will generate medical waste in addition to general waste and recycling. Medical waste is any solid waste that is hazardous or contains potentially infectious material generated from biological and medical sources and activities. Medical waste can include (but is not limited to) sharps and pharmaceutical waste, clinical waste, cytotoxic waste and radioactive waste. The medical waste stream types and their management are further outlined in Appendix C.

It is the dependant aged care operator's responsibility to determine the types of medical waste that would be generated by their operations and to arrange for the appropriate bins and collection services for the relevant medical waste types.

The dependant aged care operator is also responsible for appointing a medical waste collection contractor prior to the operation of the site to provide and service the appropriate medical waste bins.

Medical waste must be managed and disposed of in accordance with the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations (Waste) Regulation 2005*. Please refer to Table 3 for storage and collection requirements for any medical waste streams to be generated by the site in operation.

Table 3: Storage and Collection Requirements for Medical Waste

Area	Location
Storage	<p>According to best practice as detailed in Waste Management Association of Australia, Biohazardous Waste Industry Group, <i>Manual for the Management of Biohazardous Waste</i>, 6th edition 2010, storage can be in a dedicated and purpose-built room or dedicated storage area for mobile garbage bins back of house. The appropriate storage will depend on the type of medical waste, volumes and servicing processes.</p> <p>In accordance with NSW Health's <i>Clinical and Related Waste Management for Health Services 2017</i>, Health services must provide an enclosed structure such as a shed, garage, cage or fenced area or separate loading bay to store medical waste. The storage area for anatomical and/or clinical waste may require refrigeration to prevent decomposition of the waste, if this waste stream is not removed on a frequent basis.</p> <p>Any medical waste holding area must:</p> <ul style="list-style-type: none"> • Be located away from food and clean storage areas, • Be inaccessible to the public, • Have a lockable door, • Have rigid impervious flooring, • Allow for regular cleaning, and • Prevent odour and vermin. <p>An EPA licence may be required to store Hazardous Wastes.</p>
Containers	<p>All medical waste must be stored in the correct medical waste container with correct colour coding and labelling in accordance with the <i>Australian Dangerous Goods Code Edition 7.3 (ADG Code)</i>.</p> <p>All containers of medical waste to be stored in a secure location.</p>
Spillages	<p>Clean up facilities, spills kits, appropriate drainage and bunding should be provided within the Waste Storage Area.</p> <p>Ensure all necessary equipment required to clean and disinfect the area in case of accidental spillage is easily available and accessible. It is essential that personnel involved in spill management receive education and training in emergency procedures and handling requirements. Spill kits that have been used should be disposed of with the type of waste that has been cleaned up, eg used cytotoxic spill kits should be disposed of with cytotoxic waste.</p>
Mixed waste	Any waste mixed with medical waste must be treated as medical waste
Sharps	Sharps containers should be placed within "arms reach" of where the sharps are generated. Full containers will be sealed and then transported utility rooms/ designated storage area to awaiting collection by contractors.
Collections	<p>It is intended that as per normal practice for these types of facilities, that the appointed contractor will service the medical waste containers/bins from their operational location within the facility and replace them at the same time with empty containers/bins.</p> <p>Medical waste shall remain within the storage areas and only be moved during collections. Collections will be performed by a transporter licensed by the EPA to collect, transport and dispose of the medical waste stream accordingly.</p>

6.4.1.1 MEDICAL WASTE ROOM REQUIREMENTS

If a medical waste room is provided with a development, the medical waste room should strive for best practice waste room storage as outlined in Waste Management Association Of

Australia, Biohazardous Waste Industry Group's *Manual for the Management of Biohazardous Waste*, 6th edition 2010, which is as follows

- Storage area base is an impervious surface surround by a bund appropriate to contain any spill
- All loading/unloading takes place within the bunded area in such a manner to ensure any spills are appropriately managed
- The base and walls of bunded areas are free of gaps or cracks
- Where vehicular access to the bunded area is required, bunds are constructed to prevent them from being damage by vehicles
- Signage is posted with the biohazard symbol and other labelling appropriate to the types of waste stored in that area
- The bunded area drains to a sump or sewer to collect spills and wash water.
- If any refrigerator facilities are provided, they shall be contained within a secure area.

6.4.2 BATHROOMS

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.

6.4.3 LIQUID WASTE

Liquid wastes such cleaning products, chemicals, paints, and cooking oil, etc., will be stored in a secure space that is bunded and drained to a grease trap in accordance with State government authorities and legislation.

6.4.4 PROBLEM WASTE

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

Problem waste streams include:

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

6.5 AGED CARE WASTE COLLECTION PROCEDURES

A private waste collection contractor will be engaged to service the retail waste and recycling bins per an agreed schedule. This report assumes waste and recycling is collected twice weekly.

On the day of service, a private waste collection vehicle will enter the site from Perraween St and park in the loading bay within basement Level. The building caretaker will provide the driver with access to the Aged Care Bin Room and the waste collection staff will collect the bins via a collect and return arrangement.

Once the bins are serviced, the collection vehicle will exit the site onto Perraween St in a forward direction.

Please note that the collection of bins with a private contractor should occur on separate days from the collection of Independent Living Unit bins to minimise conflicts in loading area.

7.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 4: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Strata, Body Corporate or Management	<ul style="list-style-type: none"> • Ensure all waste service providers submit monthly reports on all equipment movements and waste quantities/weights; • Organise internal waste audits/visual assessments on a regular basis • Purchase any on-going waste management equipment or maintenance of equipment once building is operational; and • Manage any non-compliances/complaints reported through waste audits.
Building Manager or Waste Caretaker	<ul style="list-style-type: none"> • Maintain and clean chute doors on each level; • Coordinate general waste and recycling collections; • Clean and transport bins as required; • Organise replacement or maintenance requirements for bins; • Organise, maintain and clean the waste holding area; • Organise bulky goods collection when required • Investigate and ensure prompt clean-up of illegally dumped waste materials. • Prevent storm water pollution by taking necessary precautions (secure bin rooms, prevent overfilling of bins) • Abide by all relevant WH&S legislation, regulations, and guidelines; • Provide staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management; • Assess any manual handling risks and prepare a manual handling control plan for waste and bin transfers; • Ensure site safety for residents, children, visitors, staff and contractors; and • Ensure effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors.
Aged Care Staff and Residents	<ul style="list-style-type: none"> • Dispose of all garbage and recycling in the allocated MGBs provided; • Ensure adequate separation of garbage and recycling; and • Compliance with the provisions of Council and the WMP.
Waste Collection Contractor	<ul style="list-style-type: none"> • Provide a reliable and appropriate waste collection service; • Provide feedback to building managers/residents regarding contamination of recyclables; and • Work with building managers to customise waste systems where possible.
Gardening/Landscaping Contractor	<ul style="list-style-type: none"> • Remove all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.
Developer	<ul style="list-style-type: none"> • Purchase all equipment required to implement this OWMP prior to the occupation of the building to be provided to the strata or Body Corporate.

8.0 SOURCE SEPARATION

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 5: Operational Waste Streams

Waste Stream	Description	Typical Destination	Waste Stream Management
General Waste	The remaining portion of the waste stream that is not recovered for reuse, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc.	Landfill	Waste should be bagged before placing in chutes, or in designated waste bins.
Recycling	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). Also included cardboard and paper products.	Resource Recovery Centre	Recycling must not be bagged, and instead should be placed loosely in the designated recycling bins. Bulky cardboard must not be placed in any chute. Cardboard should be flattened before placing in the designated cardboard bin.
Secure Documents	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.
Green Waste	Green waste 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 green waste from site during scheduled maintenance.
Electronic Waste	Discarded e-waste, electronic components and materials such as computers, mobile phones, keyboards, etc.	Resource Recovery Centre	Building manager arranges collection for e-waste recycling as needed by residents. Aged Care is responsible for arranging the recycling of their own e-waste.
Bulky Items	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 to store in Bulky Goods Room. Building manager arranges with Council for removal. The Aged Care is responsible for removal of their bulky items.
Sanitary Waste	Feminine hygiene waste generated from female bathrooms.	Incineration or Landfill	Sanitary bins are serviced by sanitary waste contractor.
Other	Other recyclable items that require special recovery may include ink cartridges, batteries, chemical waste, fluorescent tubes, etc.	Resource Recovery Facility	Building manager arranges collection by appropriate recycling services when required.

9.0 EDUCATION

Educational materials encouraging correct separation of general waste and recyclables must be provided to each resident, age care resident and aged care 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 provides information in multiple languages to support correct behaviours, and to minimise the possibility of chute blockages and contamination in communal waste 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 recycling and general waste streams (refer to Council guidance);
- How to dispose of bulky goods and any other items that are not general waste or recycling (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).

To prevent damage or blockage to rubbish chute DO NOT dispose of any umbrellas, bedding, cigarettes, cartons, coat hangers, brooms, mops, large plastic wrappings from furniture, white goods, any sharp objects, hot liquid or ashes, oil, unwrapped vacuum dust, syringes, paint and solvents, car parts, bike parts, chemicals, corrosive and flammable items, soil, timber, furniture, bricks or other building materials down the chute.

9.1 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 waste and recycling 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 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.

9.2 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

10.0 BIN MOVEMENTS

The building caretaker is responsible for the transportation of bins as required from their designated operational locations to the bin holding room as required and returning them once emptied to resume operational use.

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

The routes along the bin moving path 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.

As the distance of the bin moving paths exceed 10m, a bin moving device is require to aid the movement of full bins. The developer is responsible for suppling all equipment required for moving bins this includes any bin lifters, bin moving devices and waste transfer bins. This equipment must be new and appropriate for the site. The developer should contact a bin-tug, trailer or tractor consultant to provide equipment recommendations.

Once the site is operational (and the developers is no longer involved) the building proprietors/strata/body corporate will be responsible for maintaining, repairing and replacing waste management equipment.

11.0 EQUIPMENT SUMMARY

Table 6: Equipment Summary

Part		Qty	Notes
Chutes	Please refer to supplier's information	3	(See Appendix B.1
Other Equipment	Bin Lifter for 240L MGBs	1	(See APPENDIX C.6)
	Suitable Bin Moving Equipment	Recommended	(See APPENDIX C.5)

12.0 WASTE ROOMS

The areas allocated for waste storage and collection areas are detailed in the table below, and are estimates only. Final areas will depend on room and bin layouts.

Table 7: Waste Room Areas

Level	Waste Room Type	Equipment	Estimated Area Required (m ²)
B1	Chute Discharge Room – Building 2	<i>Minimum</i> 1x 1100L MGB (waste) 1x 1100L MGB (Service Bin)	>7
B1	Chute Discharge Room – Building 3	<i>Minimum</i> 1x 1100L MGB (waste) 1x 1100L MGB (Service Bin)	>7
B1	Chute Discharge Room – Building 4	<i>Minimum</i> 1x 1100L MGB (waste) 1x 1100L MGB (Service Bin)	>7
B1	Independent Living Unit Bin Holding Room (collection point)	Bin Lifter 6x 1100L MGBs (waste) 4x 1100L MGBs (recycling)	>45
B1	Bulky Waste Storage Room		>14
B1	Aged Care Bin Room	4x 1100L MGBs (waste) 2x 1100L MGBs (recycling)	>23

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 90% 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 1600mm wide.

The following table provides further waste room requirements.

Table 8: Waste Room Requirements

Waste Room Type	Waste Room Requirements
Chute Discharge Rooms	<ul style="list-style-type: none"> • Ceiling clearance height must be a minimum of 3000mm (3100mm with compactor) (subject to penetration location) • The chute penetration must have a minimum 500mm clearance of any service pipes or other overhead obstacles • All waste discharge points should be caged off to ensure the safety of any personnel accessing the waste room • 200mm clearance is required around compaction equipment • Where a chute offset is required, the angle of the offset must not exceed 40 degrees (subject to number of consecutive offset and/or up to 1500mm) • 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.
Bin Holding Room and/or Bin Collection Area	<ul style="list-style-type: none"> • Bins must not be stacked in rows that are more than two bins deep
Bulky Waste Storage Room	<ul style="list-style-type: none"> • May be a dedicated room or screened area within another waste room • Must be in close proximity to the collection area • Area must also be allocated for the segregation of e-waste, gas bottles, cardboard, etc. • Doorway should be a minimum of 1500mm wide
Aged Care Bin Room	<ul style="list-style-type: none"> • In order to ensure staff safety, all bins should be arranged so they can be accessed without moving another bin

13.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the North Sydney Development Control Plan 2013, 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.

12.1 ADDITIONAL CONSIDERATIONS

- Waste room floor to be sealed with a two-pack epoxy;
- All corners coved and sealed 100mm up, this is to eliminate build-up of dirt;
- 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/m² 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.

13.0 USEFUL CONTACTS

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

PRIVATE WASTE COLLECTION PROVIDER

Capital City Waste Services	Ph: 02 9599 9999	E: service@ccws.net.au
Remondis	Ph: 02 9032 7100	
Suez Environmental	Ph: 13 13 35	
Wastewise NSW	Ph: 1300 550 408	E: admin@wastewise.com.au

BIN MOVING DEVICE SUPPLIERS

Electrodrive	Ph: 1800 333 002	E: sales@electrodrive.com.au
Sitecraft	Ph: 1300 363 152	E: sales@sitecraft.com.au
Spacepac	Ph: 1300 763 444	

ORGANIC DIGESTERS AND DEHYDRATORS

Closed Loop	Ph: 1300 762 166	
Orca		E: contact.australia@feedtheorca.com
Soil Food	Ph: 1300 556 628	
Waste Master	Ph: 1800 614 272	E: hello@wastemasterpacific.com.au

COOKING OIL CONTAINERS AND DISPOSAL

Auscol	Ph: 1800 629 476	E: sales@auscol.com
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ODOUR CONTROL

EF Neutralizer	Ph: 1300 435 374	E: info@elephantsfoot.com.au
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SOURCE SPERATION BINS

Source Separation Systems	Ph: 1300 739 913	E: info@sourceseparationsystems.com.au
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MOBILE GARBAGE BINS, BULK BINS AND BIN EQUIPMENT

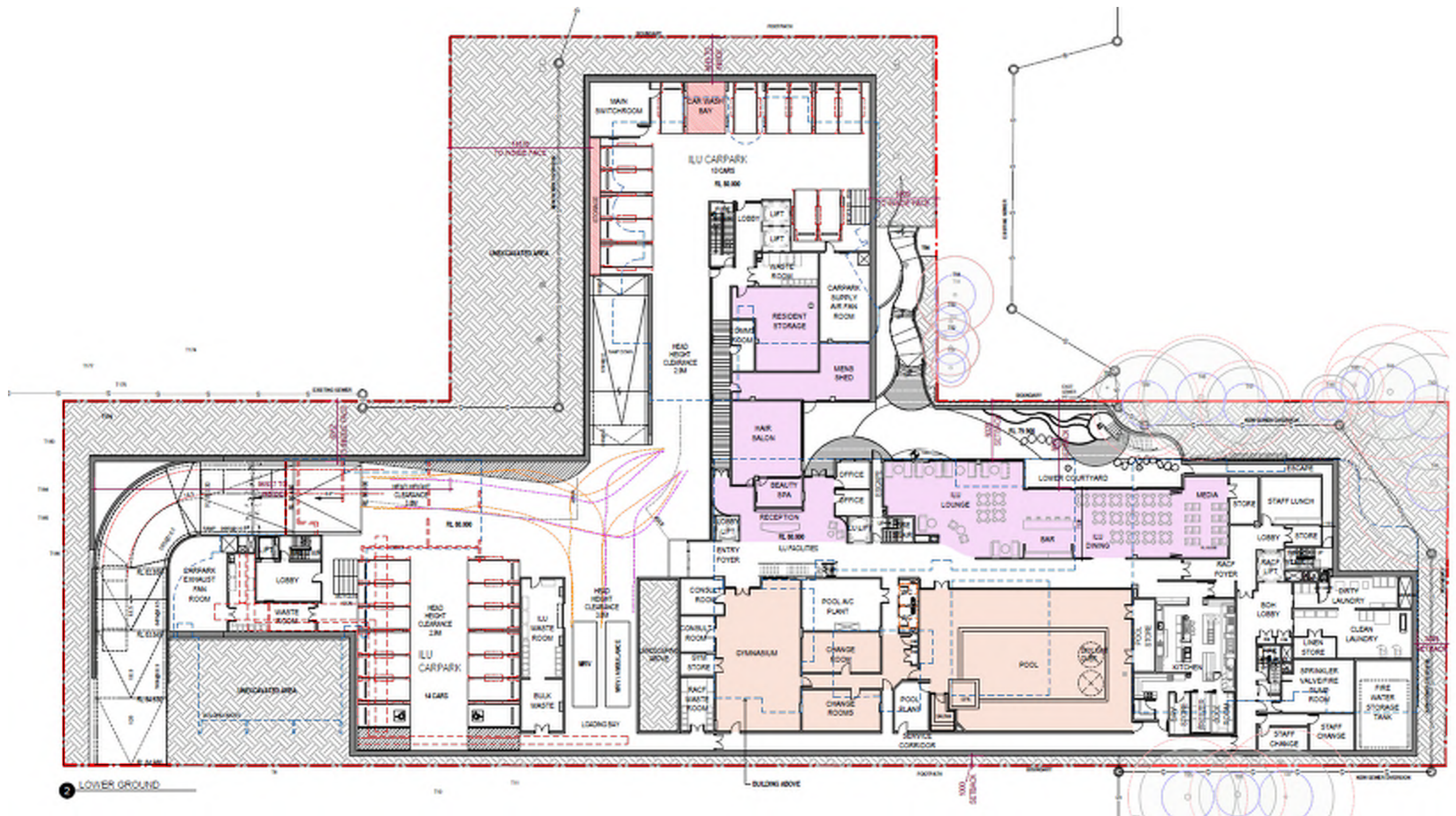
SULO	Ph: 1300 364 388	E: sales@sulo.com.au
OTTO Australia	Ph: 02 9153 6999	

CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

Elephants Foot	Ph: 1800 025 073	E: info@elephantsfoot.com.au
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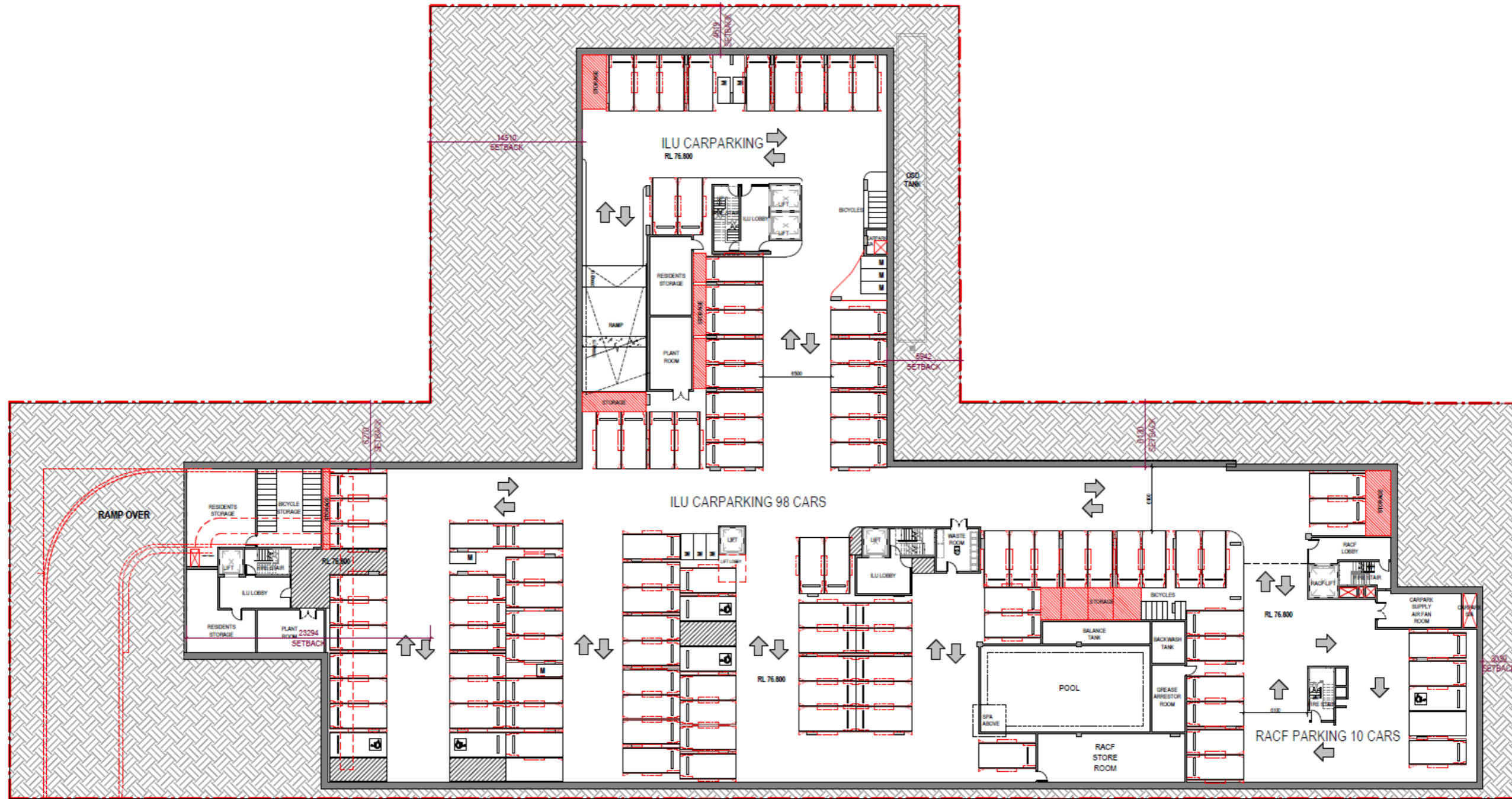
APPENDIX A: ARCHITECTURAL PLANS

APPENDIX: A.1 LOWER GROUND PLAN – WASTE AREAS



Source: MDP Architecture, Drawing No 10.02 Rev DA02, June2023 – Lower Ground Plan

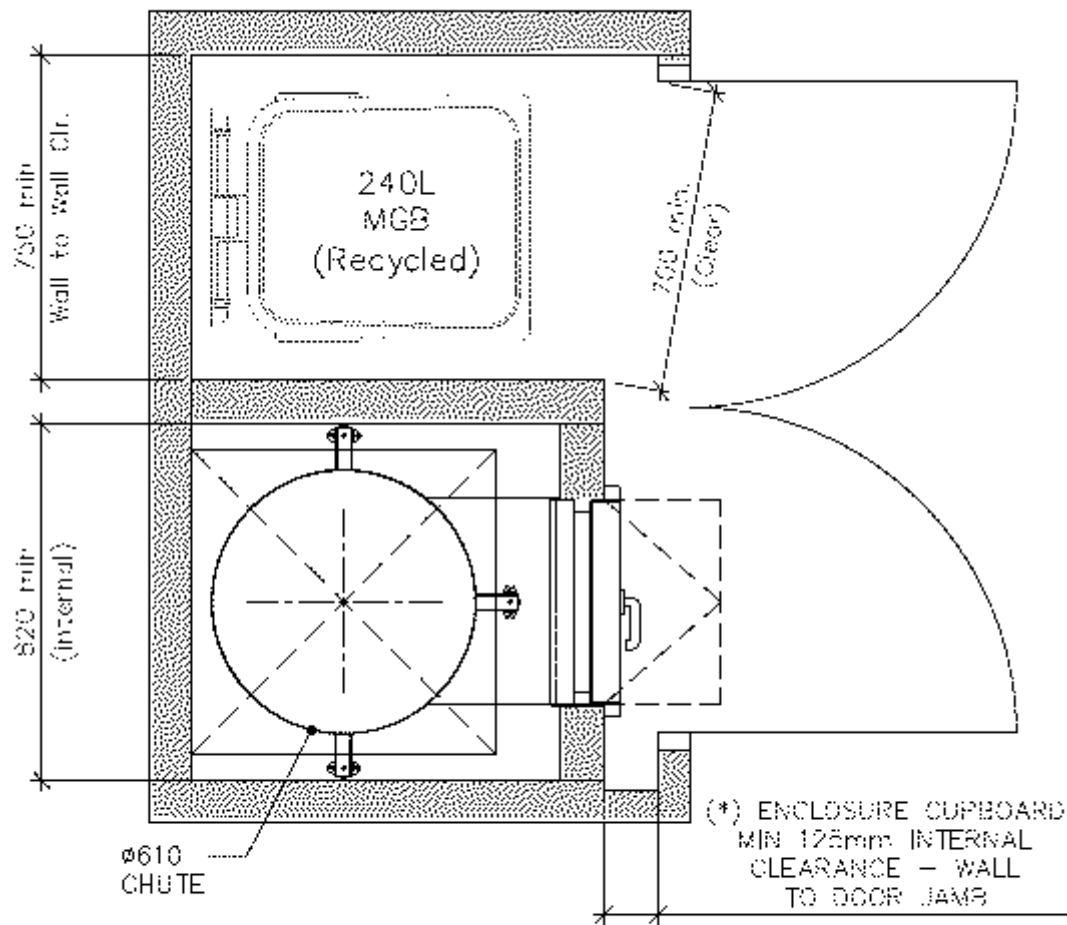
APPENDIX: A.2 BASEMENT PLAN – WASTE AREAS



Source: MDP Architecture, Drawing No 10.01 Rev DA02, June2023 – Basement Plan

APPENDIX B: INSTALLATION EQUIPMENT

APPENDIX: B.2 EXAMPLE RESIDENTIAL LEVEL RECYCLING BIN LAYOUT



07 TYPICAL (610 ϕ) GALV. STEEL CHUTE LAYOUT with ENCLOSURE(*) & RECYCLING COMPARTMENT

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	1055	1080	1100
Depth (mm)	530	530	540	735	820
Width (mm)	450	485	500	580	600
Approximate footprint (m ²)	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

Wheelle bin

Sources include Sulo, Single Waste, Cleanaway, SUEZ, Just wheelle 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 ²)	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 Wheelle 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

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 TYPICAL 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

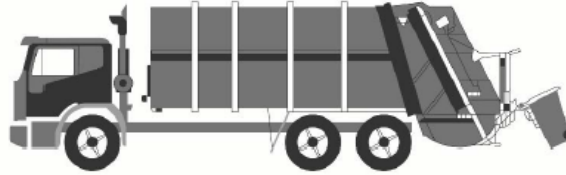
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0	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: C.4 EXAMPLE BIN MOVER

Battery powered tug with a 1 or 2 tonne tow capacity



Features at a glance

One tonne (Evo 1T) or two tonne (Evo 2T) tow capacity

Auto latching hitch

Three speed motor with emergency stop

Typical applications

The Tug Evo is suitable for airports, factories, warehouses, apartment buildings or large facilities. This powered tug is also suitable for transporting medical carts around hospitals or moving heavy specialist equipment.

Features:

- 1 or 2 tonne tow capacity of inclines up to 6 degrees
- 500kg tow capacity if inclines up to 14 degrees
- CE Compliant
- 5 km/h max speed
- 2 x 12V 42Ah MK-gel batteries with 24V smart charger.
- Powerful transaxle

Safety Features:

- Intuitive control with standard automatic safety brake, forward and reverse drive.
- Emergency stop button.

Emergency back-off button

Source: <http://www.electrodrive.com.au/products/tugs/tug-evo.aspx>

APPENDIX: C.5 EXAMPLE SEATED BIN MOVERS

SITECRAFT

MATERIALS HANDLING EQUIPMENT



17 Macquarie Drive, Thomastown, VIC 3074
 Phone: 1300 363 152 Fax: 1300 722 383
 E: sales@sitecraft.com.au ABN: 36 423 328 526

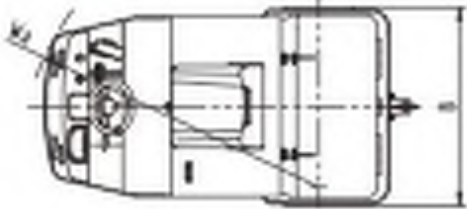
SITECRAFT HEAVY DUTY ELECTRIC TOW TRACTOR

- > Towing capacities from 2000 kg to 6,000 kg
- > **Full AC electric system** has a brake-releasing function, making the unit easy and effortless to operate; The maintenance-free motor completely solves the issues of DC motor carbon brush.
- > Batteries located in the lowest part of frame ensures excellent stability
- > Quick open back service cover for easy maintenance and part replacement
- > CANbus technology reduces wiring complexity and increases reliability
- > H type axle design provides excellent stability
- > New high range steering design, light steering and easy to maintain.
- > New large-screen instrument display provides information clearly and directly to the operator.





12 MONTH WARRANTY



Model		ST-2000AC	ST-3000AC	ST-5000AC	ST-6000AC
Towing Capacity	Kg	2000	3000	5000	6000
Operator Control Height	As/25th/42nd mm	290/350/420	290/350/420	290/350/420	290/350/420
Motor	Kw / V	3kw / 30V	3kw / 30V	5kw / 48V	5kw / 48V
Total Size	L x B x H mm	1720 x 968 x 1270	1700 x 968 x 1270	1870 x 1100 x 1270	1870 x 1100 x 1270
Total Weight (With Batteries)	Kg	790	790	1240	1280
Wheel Size	Solid Rubber	15" x 4.8	15" x 4.8	15" x 4.8	15" x 4.8
Wheelbase	L1 mm	1055	1055	1280	1280
Rear Hanging Distance	L2 mm	182	182	500	500
Seat Height	mm	920	920	920	920
Ground Clearance	X mm	90	90	90	90
Turning Radius	Wt mm	1500	1500	1650	1650
Maximum Speed	Km/h	10	8	14	12
Battery	V/Ah	36/200	36/230	48/340	48/400
Battery Weight	Kg	200	230	520	650
Charger	On-board V/Ah	36/30	36/30	48/50	48/50

SITECRAFT

MATERIALS HANDLING EQUIPMENT



17 Macquarie Drive, Thomastown, VIC 3074
 Phone: 1300 363 152 Fax: 1300 722 383
 E: sales@sitecraft.com.au ABN: 36 423 328 526

SITECRAFT HEAVY DUTY ELECTRIC TOW TRACTOR



Sitecraft ST3000 AC tow tug moving 660 & 1100 litre bins



Sitecraft ST3000 AC tow tug moving 660 & 1100 litre bins



ST3000 AC tow tug complete with 6 x 230AH heavy duty batteries



Optional steel / aluminium trailers for moving waste bins, linen trolleys, food trolleys, delivery boxes, etc ...

Source: <https://www.sitecraft.net.au/materials-handling/tow-tugs-powered-vehicles/electric-tow-vehicles/>

versatip



Premium Industry Rated Bin Lifter for Effortless Bin Tipping

The Australian made Versatip bin lifter is designed to provide a reliable, quality and robust solution to allow a single operator to quickly, safely and effortlessly empty a variety of wheelie bins including 80 litre, 120 litre, 140 litre & 240 litre sizes.

Tip Height Options



Power Options



Manufactured by



SITECRAFT
MATERIALS HANDLING EQUIPMENT

versatip

Versatip bin lifters are supplied widely to a broad range of industries including: waste & recycling, construction & civil, facility & strata management, education, mining, retail, aged care & healthcare.

✓ Quality

The Versatip Wheelie Bin Lifter is designed for use in industrial environments and is manufactured to be a robust, reliable and long serving piece of equipment. Designed and manufactured in Australia the Versatip range is built with a focus on providing our customers with the safest and highest quality bin tipper on the market.

⚙️ Ergonomics

The Versatip bin tipper has been designed and manufactured with the following features to optimize operator ergonomics and remove the manual handling risks traditionally associated with the emptying of wheelie bins.

- The bin cradle returns to ground level, there is no need for bin to be lifted into bin tipper
- The bin does not require strapping or restraints, it is securely held by the wheels
- Full height door provides easy access for bin loading and unloading
- High quality castors with very low rolling resistance provide excellent & easy maneuverability
- Two push handles at the rear of the machine provide the operator with a secure and ergonomic grip when moving unit
- Built-in Forklift Pockets all the safe and secure transportation of the bin lifter if required

🛡️ Safety

Operator safety was of paramount importance in the design of the Versatip. The following class-leading safety features have been included to ensure the safety of the operator whilst maintaining operational speed and efficiency

- Full-Height guarding including foot guards
- Dual Hand controls ensures operator is in correct position during operation
- Interlocked door which prevents the unit from being operated in event the door is open
- Keyed on / off switch



versatip

CUSTOMER SERVICE

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Manufactured by

SITECRAFT
MATERIALS HANDLING EQUIPMENT

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

APPENDIX D: SECONDARY WASTE MANAGEMENT PROVISIONS

APPENDIX: D.1 TYPICAL COOKING OIL CONTAINERS



Drums 205L



Pour in Bulk Tank

[View Brochure](#)



Oil Kaddy System

[View Brochure](#)



Eco System 700 fixed Eco System 2100 mobile

Eco Systems



Direct-Connect to Fryer

Source: <http://www.auscol.com/services/collection-systems/>

APPENDIX: D.2 TYPICAL SOURCE SEPARATION BINS



Source: <https://www.sourceseparationsystems.com.au/>