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40 Memorial Avenue, Bella Vista, NSW 2153
Residential Development

# OPERATIONAL WASTE MANAGEMENT PLAN

7/08/2025
Report No. 4232
Revision G

Client


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## REVISION REFERENCE

| Revision | Date | Prepared by | Description |
|---|---|---|---|
| A | 08/09/2022 | M. Cuevas | Draft |
| B | 12/12/2022 | M. Cuevas | Updated plans |
| C | 14/12/2022 | M. Cuevas | Final |
| D | 16/04/2024 | M. Cuevas | Amendment |
| E | 15/07/2024 | M. Cuevas | RFI |
| F | 20/03/2025 | M. Cuevas | SSDA |
| G | 07/08/2025 | M. Cuevas | SSDA |

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# GLOSSARY OF ABBREVIATIONS AND TERMS

| TERM | DESCRIPTION |
|---|---|
| *Baler* | A device that compresses waste into a mould to form bales which may be self-supporting or retained in shape by strapping |
| *Bin-carting Route* | Travel route for transferring bins from the storage area to a nominated collection point |
| *Chute* | 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) |
| *Chute Discharge* | The point at which refuse exits from the refuse chute |
| *Chute Discharge Room* | A secure, enclosed area or room housing the discharge and associated equipment for the refuse chute |
| *Collection Area/Point* | The identified position or area where general waste or recyclables are loaded onto the collection vehicle |
| *Compactor* | A machine for compressing waste into disposable or reusable containers |
| *Composter* | A container/machine used for composting specific food scraps |
| *Crate* | A plastic box used for the collection of recyclable materials |
| *DA* | Development Application |
| *DCP* | Development Control Plan |
| *EPA* | Environmental Protection Authority |
| *HRV* | Heavy Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities |
| *L* | Litre(s) |
| *LEP* | Local Environmental Plans guide planning decisions for local government areas |
| *Liquid Waste* | 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) |
| *Mixed Use Development* | A development comprised of two or more different uses |
| *MUD* | 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 |
| *Mobile Garbage Bin(s) (MGB)* | A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 360, 660, 1000 or 1100 |
| *MRV* | Medium Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities |

| | |
|---|---|
| *Onsite Collection* | When the collection vehicle enters the property and services the development within the property boundary from a designated loading area |
| *Owners Corporation* | An organisation or group of persons that is identified by a particular name and acts, or may act, as an entity |
| *Service Bins* | Bin set side to be placed under a chute while the remainder of the bins are being collected |
| *SRV* | Small Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities |
| *WHS* | Workplace Health and Safety |
| *Wheel-in wheel-out service* | 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

We acknowledge Australia's First Nations People as the Traditional Custodians of this land. We pay respect to ancestors and Elders, past and present. We honour Aboriginal and Torres Strait Islander people and their connection to land, waters and seas, and their vital contribution to the vibrant nation that we share, Australia.

# 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 residential development located at 40 Memorial Avenue .

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.

## 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:

- The Hills Shire Council Development Control Plan 2012
- The Hills Shire Council Local Environmental Plan 2019

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:

- The Hills Shire Council- Guidelines for Planning Waste Management in New Development 2024
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- 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

## 3.1 COUNCIL OBJECTIVES

The Hills Shire Council recognises waste management as a key component to providing sustainable living for residents in terms of economic, social, and environmental outcomes. In this regard, Council aims to:

- Minimise the overall impact environmental impacts of waste;
- Maximise, through appropriate design, the opportunities to deal with domestic waste according to the Waste Hierarchy as given in Council's ESD objective 6;
- Provide domestic waste management systems that allow for ease of use by occupants and safe and efficient service by collection contractors;
- Encourage on-site waste collection;
- Provide waste storage and collection areas that are integrated with the design of the development;
- Ensure minimum visual impact of the waste storage facilities;
- Assist in achieving Federal and State Government waste minimisation targets.

## 4.0 DEVELOPMENT OVERVIEW

The proposed development falls under the LGA of The Hills Shire Council, and consists of:

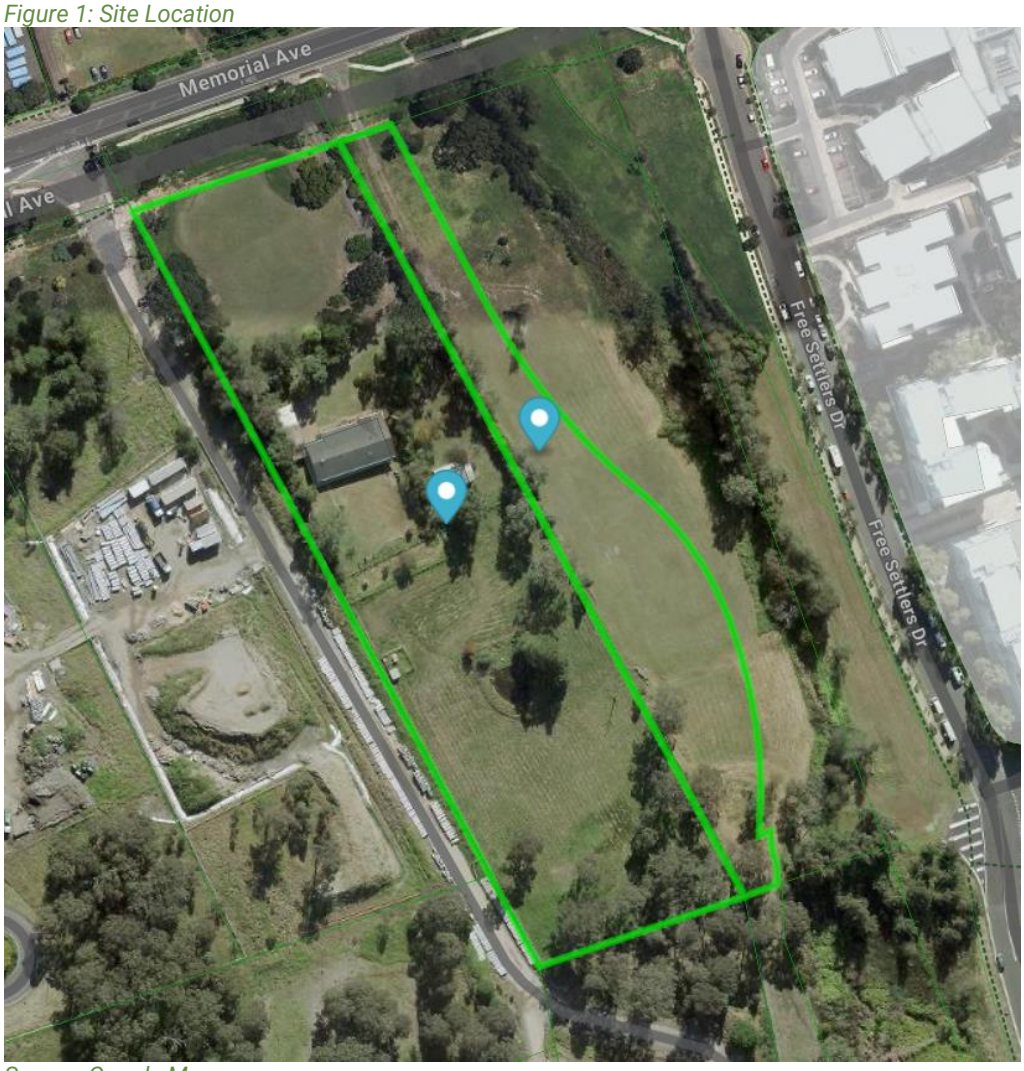
- Four buildings with various levels. Details of the development as follows:
    - Building A  87 residential units
    - Building B 126 residential units
        - 69 units in core 1
        - 57 units in core 2
    - Building C (108 residential units)
        - 59 units in core 1
        - 49 units in core 2
    - Building D 123 residential units
        - 38 units in core 1
        - 85 units in core 2
    - Total of 444 units

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 40 Memorial Avenue, Bella Vista, as shown in Figure.1 (boundaries are indicative only).

*Figure 1: Site Location*




*Source: Google Maps*

# 5.0 RESIDENTIAL 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.

## 5.1 WASTE GENERATION ESTIMATES

The *Hills Shire Council- Guidelines for Planning Waste Management in New Development 2024* has been referenced to calculate the total number of bins required for the residential areas. Calculations are based on generic waste generation rates. Actual volumes of waste and recycling in operation may differ according to the residents' waste management practice.

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

*Table 1: Estimated Waste, Recycling and FOGO Volumes – Residential*

| Building/ | Core | # Units | General Waste Generation Rate (L/unit/week) | Generated General Waste (L/week) | Commingled Recycling Generation Rate (L/unit/week) | Generated Commingled Recycling (L/week) | FOGO Waste Generation Rate (L/unit/week) | Generated FOGO Waste (L/week) |
|---|---|---|---|---|---|---|---|---|
| *A* | *1* | 87 | 60 | 5220 | 30 | 2610 | 12.5 | 750 |
| *B* | *1* | 69 | 60 | 4140 | 30 | 2070 | 12.5 | 750 |
| | *2* | 57 | 60 | 3420 | 30 | 1710 | 12.5 | 750 |
| *C* | *1* | 59 | 60 | 3540 | 30 | 1770 | 12.5 | 750 |
| | *2* | 49 | 60 | 2940 | 30 | 1470 | 12.5 | 750 |
| *D* | *1* | 38 | 60 | 2280 | 30 | 1140 | 12.5 | 750 |
| | *2* | 85 | 60 | 5100 | 30 | 2550 | 12.5 | 1062.5 |
| **TOTAL** | | **444** | | **26640** | | **13320** | | **5562.5** |

| Bins and Collections | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | General Waste Bin Size (L) | 1100 | Recycling Bin Size (L) | 1100 | FOGO Bin Size (L) | 140 | | |
| | General Waste Bins per Week | 25 | Recycling Bins per Week | 13 | FOGO Bins per Week | 40 | | |
| | General Waste Collections per Week | 1 | Recycling Collections per Week | 1 | FOGO Collections per Week | 1 | | |
| | Total General Waste Bins Required for Collection | **25** | Total Recycling Bins Required for Collection | **13** | Total FOGO Bins Required for Collection | **40** | | |
| | Number of Waste Bins Per Building per week | *A* | 5 | Number of Recycling Bins Per Building per week | *A* | 2 | Number of FOGO Bins Per Building per week | *A* | 5 |
| | | *B* | 7 | | *B* | 4 | | *B* | 11 |
| | | *C* | 6 | | *C* | 3 | | *C* | 11 |
| | | *D* | 7 | | *D* | 3 | | *D* | 13 |

*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 CHUTE DISCHARGE EQUIPMENT SUMMARY

It is strongly recommended that bins and equipment at the base of each chute allow for at least 2 days' worth of general waste and recycling generation. As such, the following equipment is recommended:

*Table 2: Chute Discharge Equipment Summary*

| Volume Handling Equipment | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| General Waste | | | | | Recycling | | | | |
| Building | Core | Generated General Waste (L/week) | # 1100L Bins Required for 2 days' Capacity | Recommended Chute Discharge Equipment | Building | Core | Generated Recycling (L/week) | # 1100L Bins Required for 2 days' Capacity | Recommended Chute Discharge Equipment |
| A | 1 | 5220 | 1.36 | 2-Bin Linear System | A | 1 | 2610 | 0.68 | Single Bin |
| B | 1 | 4140 | 1.08 | 2-Bin Linear System | B | 1 | 2070 | 0.54 | Single Bin |
| | 2 | 3420 | 0.89 | Single Bin | | 2 | 1710 | 0.44 | Single Bin |
| C | 1 | 3540 | 0.92 | Single Bin | C | 1 | 1770 | 0.46 | Single Bin |
| | 2 | 2940 | 0.76 | Single Bin | | 2 | 1470 | 0.38 | Single Bin |
| D | 1 | 2280 | 0.59 | Single Bin | D | 1 | 1140 | 0.30 | Single Bin |
| | 2 | 5100 | 1.32 | 2-Bin Linear System | D | 1 | 2550 | 0.66 | Single Bin |

## 5.3 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:** 25 x 1100L MGBs collected **weekly**

**Recycling:** 13 x 1100L MGBs collected **weekly**

**FOGO:** 40 x 140L MGBs collected **weekly**

**Service Bins**: 11 x 1100L MGB

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.

## 5.4 WASTE DISPOSAL PROCEDURES

Dual chute systems, comprising 1 waste chutes and 1 recycling chutes will be installed with access provided on each residential level of the buildings.

Residents will wrap or bag their general waste before placing in the waste chute. Bagged waste should not exceed 3kg in weight, or 35cm x 35cm x 35cm. Recycling (commingled only) must not be bagged when disposed of into the recycling chute.

The general waste will discharge from the waste chute into 1100L MGBs on linear tracks or single bins (See table 2) of the residential waste rooms located on the basement 1.

Commingled recyclables will discharge into 1100L MGBs in the chute discharge room located on the basement 1.

With the use of the chute discharge equipment recommended in Section 1.1, the bins beneath each chute will be capable of holding 2 days' worth of waste. The building caretaker will be responsible for monitoring the capacity of the bins on the linear track systems and exchanging them with empty bins.

Cardboard boxes or large containers should also not be disposed of in the chute. Space for a 240L MGBs for cardboard and paper recycling will be available adjacent to the chute access point on each level. The building manager will monitor the fullness of the Paper/Cardboard bins on each level. When full, the building manager will transport the bins to the Residential Bin Holding Room and decant the 240L MGBs into 1100L MGBs using the bin lifter. The empty 240L MGBs will be returned to the residential levels to resume use.

All full and spare bins will be kept in the Residential Bin Holding Room.

Refer to Council guidance for the types of materials accepted in the general waste and recycling streams.

### 5.4.3 COMMON AREAS

Residential common areas such as lobbies, amenities and circulation areas will be supplied with suitably branded waste and recycling bins where considered appropriate. These areas generate minimal waste, however general waste and recycling receptacles should be placed in convenient locations.

## 5.5 WASTE COLLECTION PROCEDURES

Council will be engaged to collect the residential waste, recycling and FOGO in accordance with Council's collection schedule.

On waste collection day, the caretaker is responsible for using a bin tug to transport the 1100L MGBs from the waste chute discharge rooms to the bin tug storage area located on the basement 1, where a bin hoist will then move the bins to the Lower Ground Floor. To prevent disruption during servicing, extra 1100L service bins should be placed under the chute to collect waste while the main bins are being emptied.

To service the bins, a Council collection vehicle will enter the site and park in the loading dock. Once the bins are serviced, the collection vehicle will exit the site onto the internal road in a forward direction.

All access and clearances to the waste collection room must be able to accommodate a 12.5m long HRV per AS2890.2-2002.

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 resume operational use.

## 5.6 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 2 m to allow for easy movement of large waste items in and out of the room.

The Hills Shire Council requires that size of the Bulky Waste Room provided is proportional to the number of units in the building at a rate of $4m^2$ per 50 units.

Based on this rate, the Bulky Waste Room required is as follows;

Bulky Waste Room Size
(Total number of units/50) *4 = m2 of bulky waste room
=(444/50)*4 =
=8.88 *4
=35.52
= 36
bulky waste storage area: minimum 36 $m^2$

Residents will need to liaise with building management regarding the transportation of bulky items and the availability of the bulky waste storage room located on the Lower Ground Floor (See Appendix A.1). It is the caretaker's responsibility to arrange collection dates with Council and then coordinate with the residents.

On the day of bulky waste collection, a collection vehicle will enter the site and park in the loading dock. Contractors will load items onto the vehicle. Refer to Council's website for acceptable items and other information regarding bulky waste collection.

# 6.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

*Table 3: Stakeholder Roles and Responsibilities*

| Roles | Responsibilities |
|---|---|
| Strata, Body Corporate or Management | • Ensure all waste service providers submit monthly reports on all equipment movements and waste quantities/weights;<br>• Organise internal waste audits/visual assessments on a regular basis<br>• Purchase any on-going waste management equipment or maintenance of equipment once building is operational; and<br>• Manage any non-compliances/complaints reported through waste audits. |
| Building Manager or Waste Caretaker | • Maintain and clean chute doors on each level;<br>• Coordinate general waste and recycling collections;<br>• Clean and transport bins as required;<br>• Organise replacement or maintenance requirements for bins;<br>• Organise, maintain and clean the waste holding area;<br>• Organise bulky goods collection when required<br>• Investigate and ensure prompt clean-up of illegally dumped waste materials.<br>• Prevent storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins)<br>• Abide by all relevant WH&S legislation, regulations, and guidelines;<br>• Provide staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management;<br>• Assess any manual handling risks and prepare a manual handling control plan for waste and bin transfers;<br>• Ensure site safety for residents, children, visitors, staff and contractors; and<br>• Ensure effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors. |
| Residents | • Dispose of all general waste and recycling in the allocated waste chutes and/or MGBs provided;<br>• Ensure adequate separation of general waste and recycling; and<br>• Compliance with the provisions of Council and the OWMP. |
| Waste Collection Contractor | • Provide a reliable and appropriate waste collection service;<br>• Provide feedback to building managers/residents regarding contamination of recyclables; and<br>• Work with building managers to customise waste systems where possible. |
| Gardening/ Landscaping Contractor | • Remove all garden organic waste generated during gardening maintenance activities for recycling at an offsite location. |
| Developer | • Purchase all equipment required to implement this OWMP prior to the occupation of the building to be provided to the strata/body corporate. |

# 7.0 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 4: 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 re-use, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc. | Landfill | Waste should be bagged before placing in chutes. |
| **Paper and Cardboard Recyclables** | 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. It will available paper and cardboard 240L MGBs on each level. |
| **Commingled Recyclables** | 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 recyclables must not be bagged, and instead should be placed loosely in the recycling chute. |
| **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. |
| **Food Waste** | Food waste consists of unwanted or uneaten kitchen scraps that are easily compostable/biodegradable (e.g. vegetable peels, fruit rinds, coffee grounds). | Composting facility or Landfill | FOGO should be bagged in compostable liners when deposited into the bins and will be collected by Council. |
| **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. |
| **Bulky Items** | Items that are to 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. |
| **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. |

# 8.0 EDUCATION

Educational materials encouraging correct separation of general waste and recyclables must be provided to each resident. 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.

## 8.1 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.

### 8.2 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

## 9.0 BIN WASHING

The bins will be cleaned by the building manager 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 contactor would collect the bins from the bin holding area and clean the bins with their specialised vehicle.

## 10.0 BIN MOVING PATHS

The building manager is responsible for the transportation of bins from their designated operational locations to the collection area, returning them once emptied to resume operational use.

Any movement 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 they are intended to be moved up from the basement to ground level, an in-shaft hoist will be provided to aid the movement of full bins. The developer is responsible for supplying 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 will be responsible for maintaining, repairing and replacing waste management equipment.

# 11.0 EQUIPMENT SUMMARY

*Table 5: Equipment Summary*

| | Part | Qty | Notes |
|---|---|---|---|
| Chutes | Please refer to supplier's information | 7 | (See APPENDIX B.1 for Typical Dual Chute Layout) |
| Chute Equipment | Waste<br>2-bin 1100L MGB Linear Track System | 3 | (See APPENDIX B.2 for Typical Linear System) |
| Other Equipment | Suitable Bin Moving Equipment | 1 | (See APPENDIX D.4 for Typical Bin Movers) |
| Other Equipment | Bin Lifter for 240L MGBs | 1 | (See APPENDIX C.3 for Example Bin Lifter) |

# 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.

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.)

*Table 6: Waste Room Areas*

| Tower | Level | Waste Room Type | Equipment MGBs | Estimated Area Required ($m^2$) | Actual Area Provided ($m^2$) |
|---|---|---|---|---|---|
| A | Basement 1 | Chute Discharge Room A Core 1 | 2-bin linear track for 1100L (MGBs waste)<br>1 x 1100L MGBs (Recycling)<br>1 x 1100L MGBs (service Bin) | 15 | 31 |
| | | FOGO Room A | 5 x 140L MGBs | 6 | 13 |
| B | Basement 1 | Chute Discharge Room B1 | 2-bin linear track for 1100L (MGBs waste)<br>1 x 1100L MGBs (Recycling)<br>1 x 1100L MGBs (service Bin) | 15 | 37 |
| | | Chute Discharge Room B2 | 1 x 1100L MGBs (waste)<br>1 x 1100L MGBs (Recycling)<br>2 x 1100L MGBs (service Bin)) | 12 | 25 |
| | | FOGO Room B | 11 x 140L MGBs | 10 | 19 |
| C | Basement 1 | Chute Discharge Room C1 | 1 x 1100L MGBs (waste)<br>1 x 1100L MGBs (Recycling)<br>2 x 1100L MGBs (service Bin) | 12 | 21 |
| | | Chute Discharge Room C2 | 1 x 1100L MGBs (waste)<br>1 x 1100L MGBs (Recycling)<br>2 x 1100L MGBs (service Bin) | 12 | 21 |
| | | FOGO Room C | 11 x 140L MGBs | 10 | 18 |
| D | Basement 1 | Chute Discharge Room D1 | 1 x 1100L MGBs (waste)<br>1 x 1100L MGBs (Recycling) | 15 | |

| Tower | Level | Waste Room Type | Equipment MGBs | Estimated Area Required ($m^2$) | Actual Area Provided ($m^2$) |
|---|---|---|---|---|---|
| | | | 2 x 1100L MGBs (service Bin)1 x 1100L MGBs (service Bin) | | |
| | Basement 1 | Chute Discharge Room D2 | 2-bin linear track for 1100L (MGBs waste)<br>1 x 1100L MGBs (Recycling)<br>1 x 1100L MGBs (service Bin) | 15 | 43 |
| | | FOGO Room D | 13 x 140L MGBs | 12 | 21 |
| | | Bin tug Storage | Bin tug | 6 | >6 |
| C-D | Lower Ground Floor | Residential Bin Holding Room/Collection Area | 25 x 1100 L MGBs (general waste)<br>13 x 1100L MGBs (recycling)<br>40 x 140L MGBs (FOGO)<br>Bin lifter for 240L MGBs | 144 | 171.6 |
| D | Lower Ground Floor | Bulky Goods Waste Storage Room | | 36 | 91.5 |

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 waste items must be at least 1500mm wide. The following table provides further waste room requirements.

*Table 7: Waste Room Requirements*

| Waste Room Type | Waste Room Requirements |
|---|---|
| Chute Discharge Room | • Ceiling clearance height must be a minimum of 3000mm (3100mm with compactor) (subject to penetration location)<br>• The chute penetration must have a minimum 500mm clearance of any service pipes or other overhead obstacles<br>• All chute discharge points should be caged off to ensure the safety of any personnel accessing the waste room<br>• 200mm clearance is required around compaction equipment<br>• 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) |
| Residential Bin Holding Room and/or Bin Collection Area | • Bins must not be stacked in rows that are more than two bins deep. |
| Communal FOGO Rooms | • Bins should be arranged so that all bins are accessible. Bins are not to be placed in front of one another or in such a way as to restrict access to the other bins for use.<br>• Rooms must be well ventilated either naturally or mechanically in accordance with AS1668.4.2012<br>• Cleaning facilities such as hose hock and drainage for odour and hygiene control must be provided.<br>• It is recommended a dustpan and broom is provided in this room for residents to clean up unexpected spillages when using bins. |
| Bulky Waste Room | • May be a dedicated room or screened area within another waste room<br>• Must be in close proximity to the collection area<br>• Area must also be allocated for the segregation of e-waste, gas bottles, cardboard, etc.<br>• Doorway should be a minimum of 2000mm wide |

# 12.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Hills Shire Council Development Control Plan 2012,* 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.

### LOCAL COUNCIL

| | | |
|---|---|---|
| The Hill Shire Council Customer Service | Ph: (02) 9843 0555 | E: medial@thehills.nsw.gov.au |

### 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 |

### ODOUR CONTROL

| | | |
|---|---|---|
| EF Neutralizer | Ph: 1300 435 374 | E: info@elephantsfoot.com.au |

### SOURCE SPERATION BINS

| | | |
|---|---|---|
| Source Separation Systems | Ph: 1300 739 913 | E: info@sourceseparationsystems.com.au |

### MOBILE GARBAGE BINS, BULK BINS AND BIN EQUIPMENT

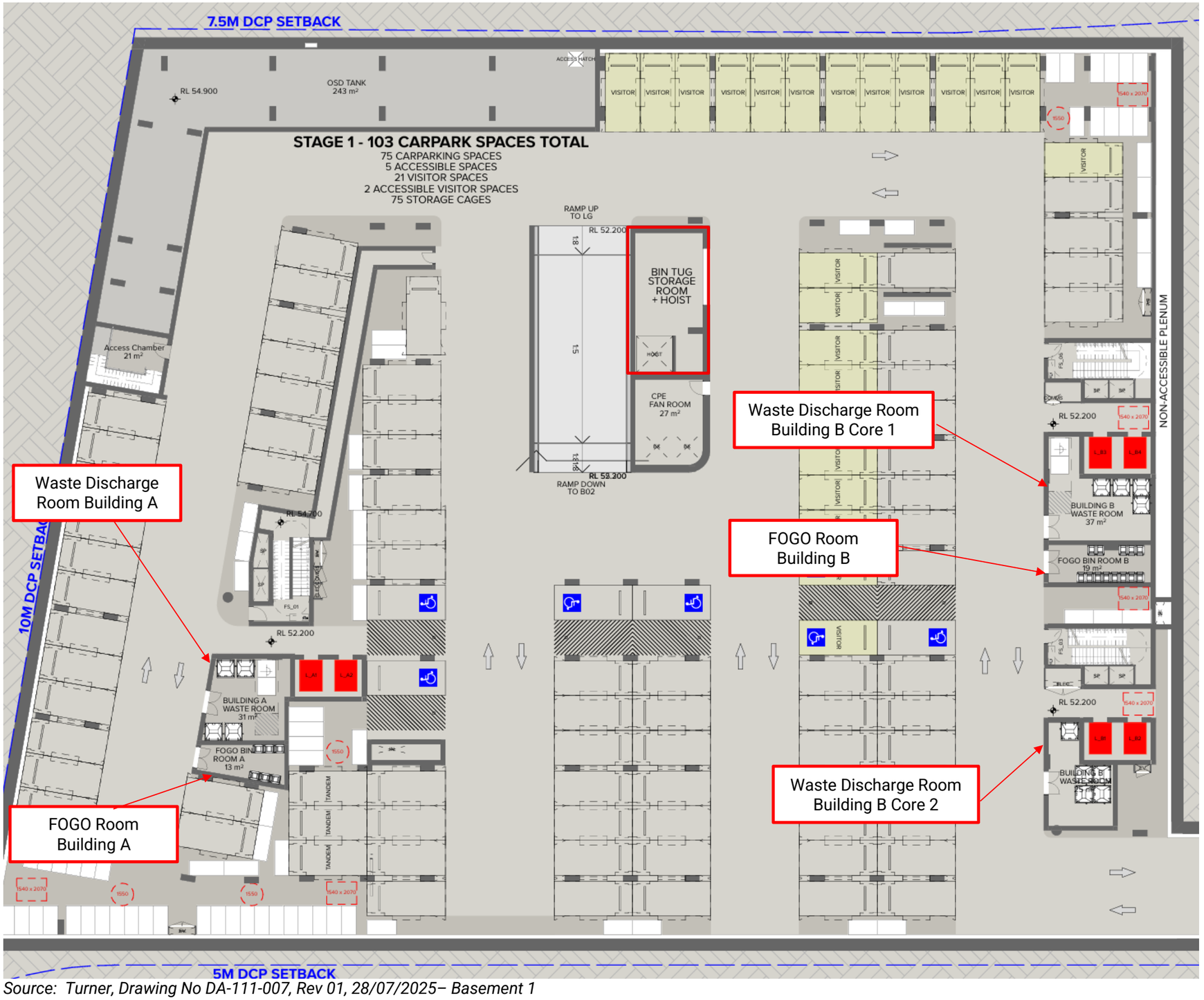
| | | |
|---|---|---|
| SULO | Ph: 1300 364 388 | E: sales@sulo.com.au |
| OTTO Australia | Ph: 02 9153 6999 | |

### CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

| | | |
|---|---|---|
| Elephants Foot | Ph: 1800 025 073 | E: info@elephantsfoot.com.au |

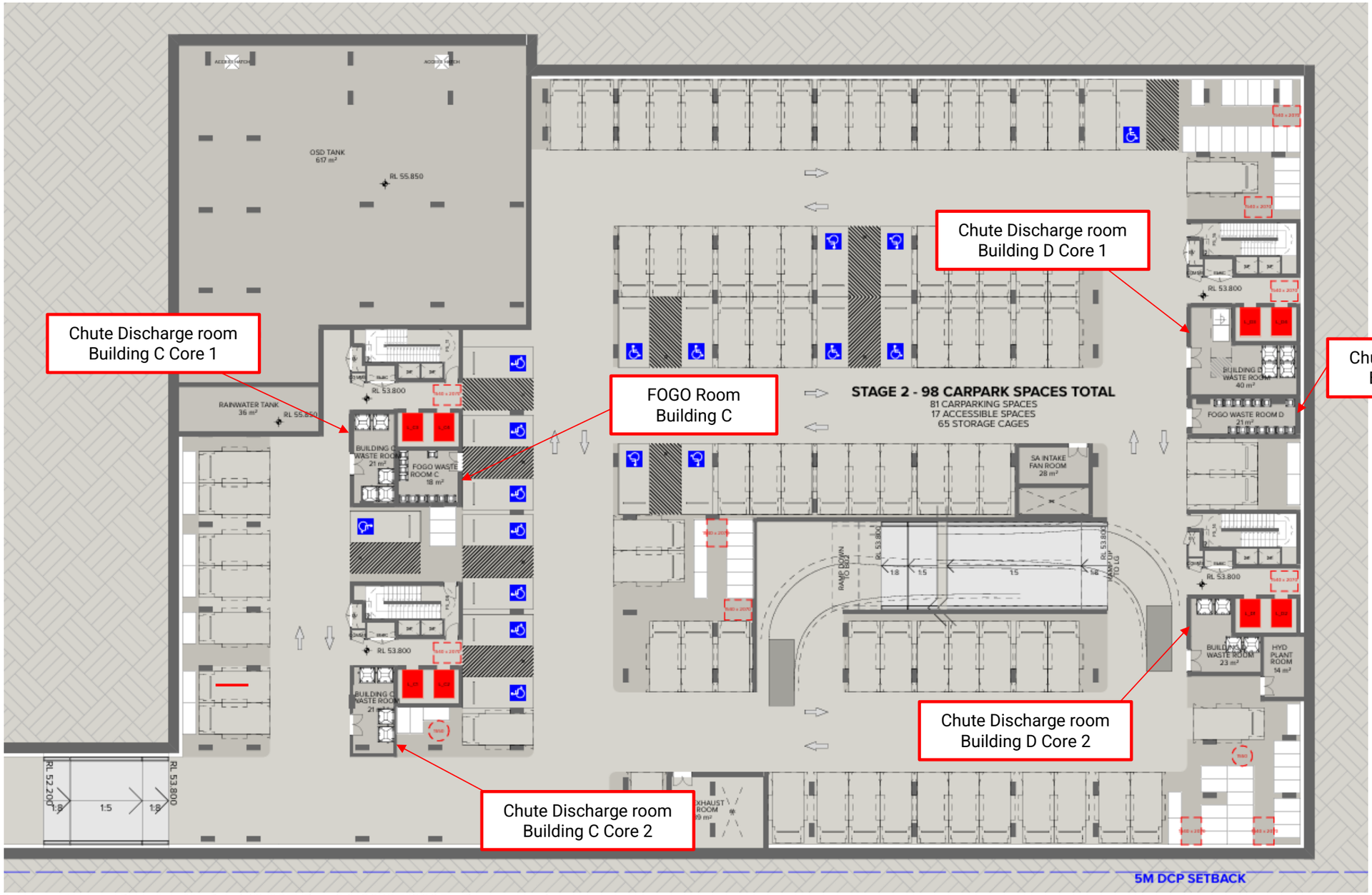
# APPENDIX A: ARCHITECTURAL PLANS

## APPENDIX: A.1 BASEMENT 1 PLAN- BUILDING A-B



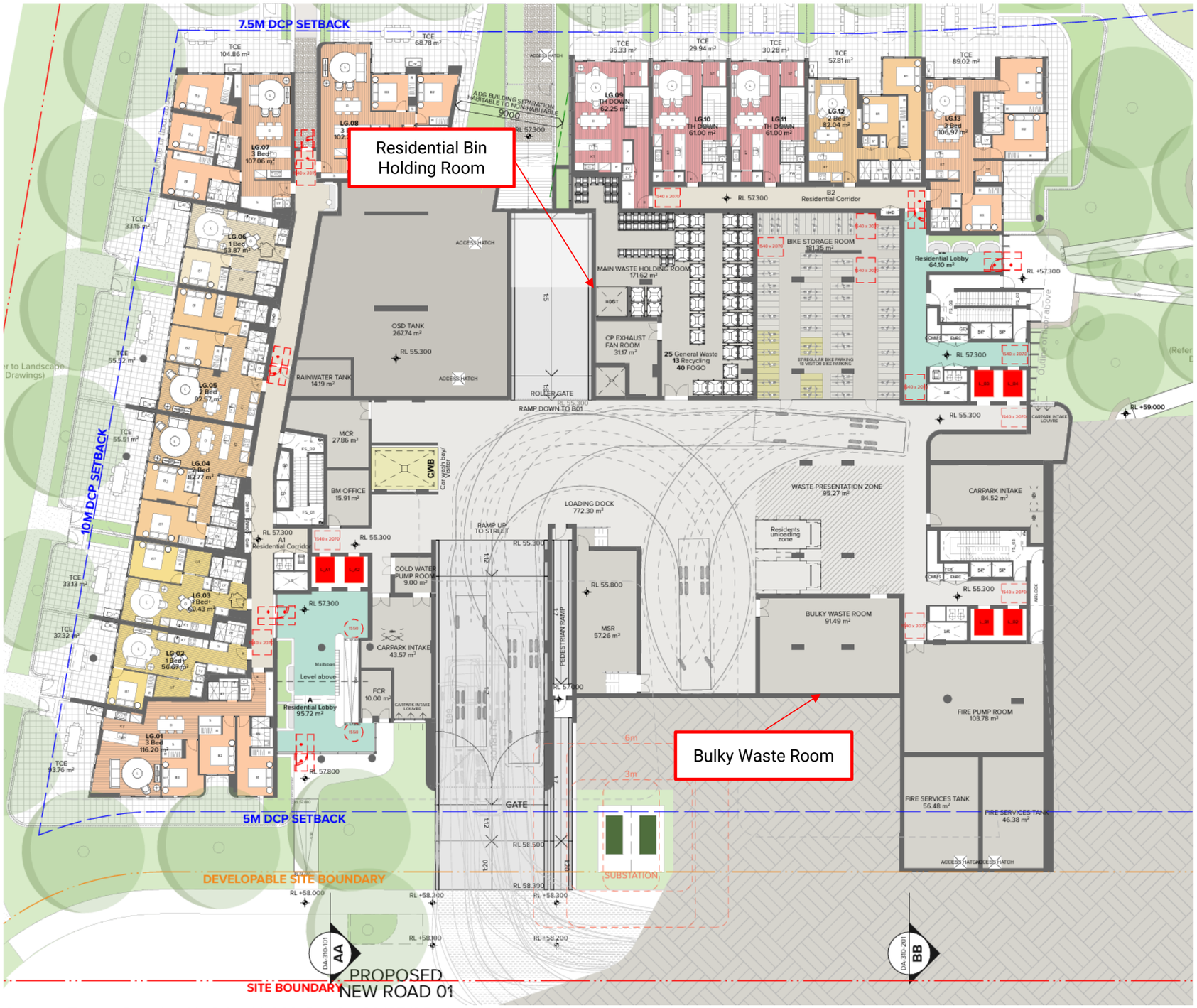

*Source: Turner, Drawing No DA-111-007, Rev 01, 28/07/2025– Basement 1*

## APPENDIX: A.2 BASEMENT 1 PLAN- BUILDING C-D




*Source: Turner, Drawing No DA-112-007, Rev 01, 28/07/2025– Basement 1*

## APPENDIX: A.3 LOWER GROUND FLOOR 1 PLAN- BUILDING A-B



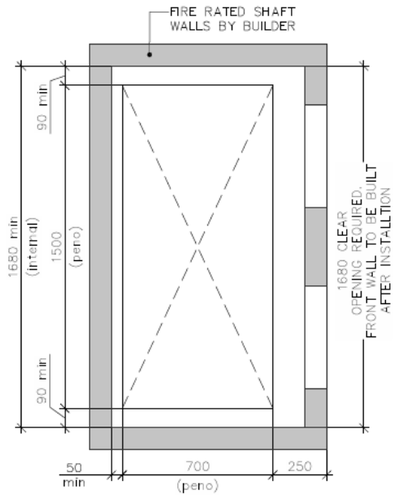

*Source: Turner, Drawing No DA-111-008, Rev 01, 28/07/25– Lower Ground Floor Plan*

# APPENDIX B: INSTALLATION EQUIPMENT

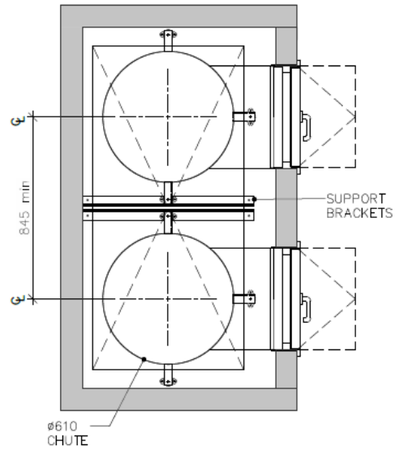
Chute Solutions.™
an Elephants Foot Company

# CHUTE SHAFT & PENETRATION SET-OUT

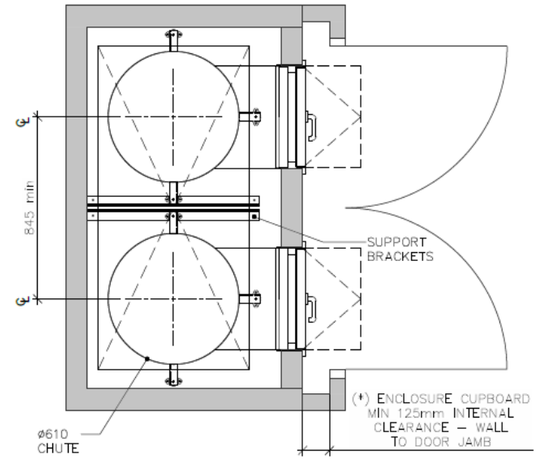
## DUAL Ø610 STEEL



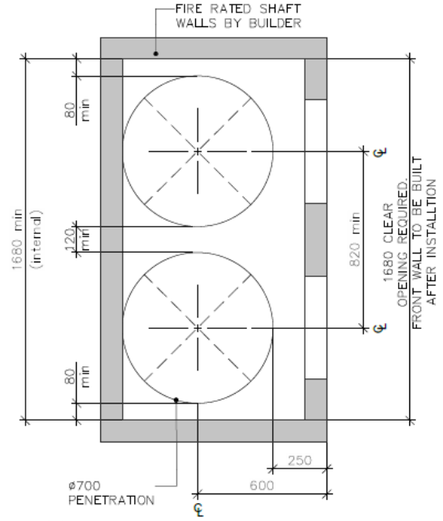

(01) DUAL (610ø) GALV. STEEL CHUTE LAYOUT PENETRATION SET–OUT



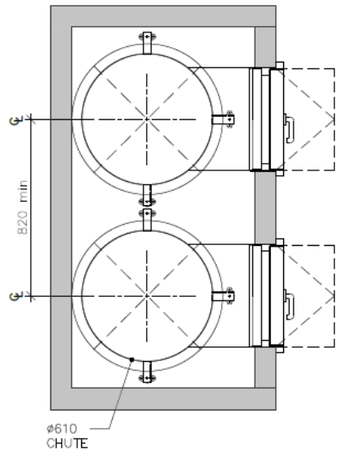

(02) DUAL (610ø) GALV. STEEL CHUTE LAYOUT



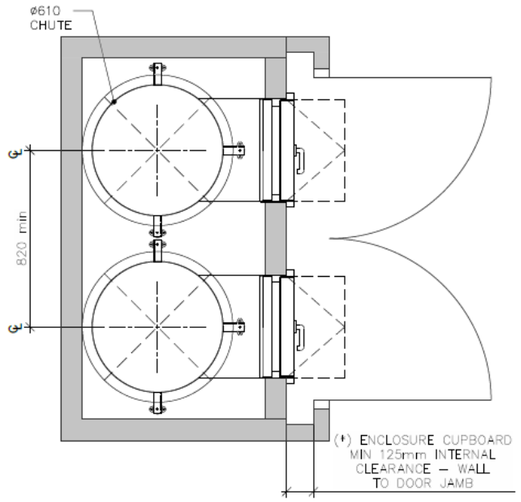

(03) DUAL (610ø) GALV. STEEL CHUTE LAYOUT with ENCLOSURE CUPBOARD (*)




(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

Chute Shaft & Peno – Ver 1.2 April 26, 2022

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

## APPENDIX: B.2 TYPICAL LINEAR TRACK SYSTEM FOR 1100L MGBS

ELEPHANTS FOOT recycling solutions

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)

# 1100 LITRE LINEAR TRACK SYSTEM

## PRODUCT INFORMATION

Elephants Foot 1100 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 the standard 2 bin option. Our 3 Bin option is available as a special order.

## SPECIFICATIONS

| | |
|---|---|
| System Control | Electric PLC |
| Power Supply | 415 V AC / 10A / 5 PIN |
| Motor Size (kW) | 1.1 |
| Maximum bin load | 440 kg |
| Noise (dBA) | <85 |
| Bin Size (L) | 1100 |
| Cycle time (sec) | 60 |
| Bin Quantity options | 2 or 3 |

## 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

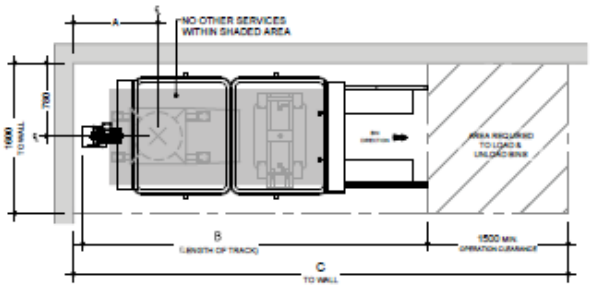
Chute Solutions.™
an Elephants Foot Company

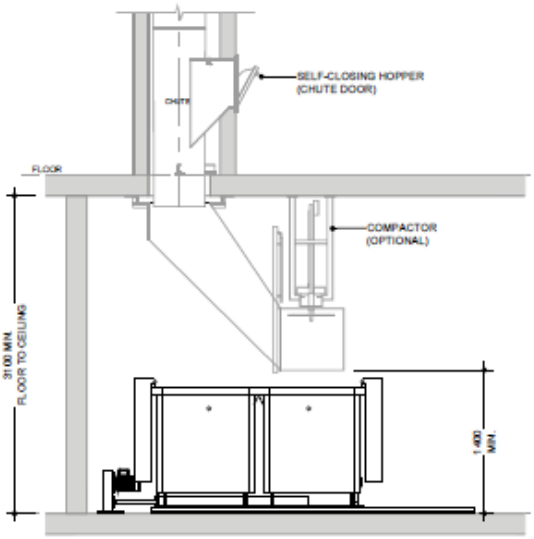
ELEPHANTS FOOT

# 1,100 LITRE LINEAR TRACK SYSTEM

| No. of Bins | Reference (mm) | | |
|---|---|---|---|
| | A | B | C |
| 2 | 900 | 3700 | 5300 |
| 3 | 2100 | 5940 | 7550 |

Available with or without compaction unit, our standard 1100 litre bin Linear Track System is available in the standard 2 bin option. Our 3 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: B.3 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/](www.elephantsfoot.com.au/equipment/)*

# 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**

**Wheelie bin**

| 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 ($m^2$) | 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 |

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**

**Dome or flat lid container**

| 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 |

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

**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 |

## 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**

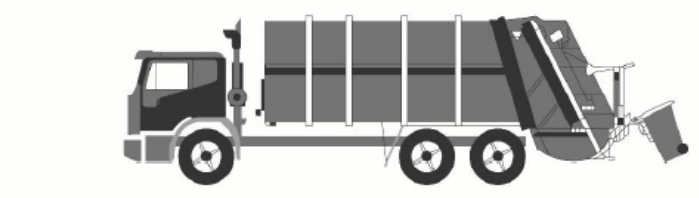
| Vehicle type | Rear-loading | Side-loading* | Front-lift-loading | Hook truck | Crane truck |
|---|---|---|---|---|---|
| Length overall (m) | 10.5 | 9.6 | 11.8 | 10.0 | 10.0 |
| Width overall (m) | 2.5 | 2.5 | 2.5 | 3.0 | 2.5 |
| Travel height (m) | 3.9 | 3.6 | 4.8 | 4.7 | 3.8 |
| Operational height 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

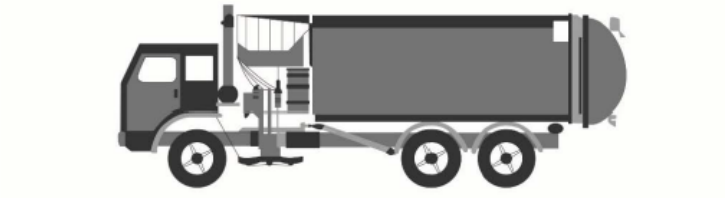
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



**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*

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

## APPENDIX: C.4 TYPICAL BIN MOVERS

# 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](http://www.electrodrive.com.au/products/tugs/tug-evo.aspx)