



194-214 Oxford Street & 2 Nelson Street, Bondi Junction
NSW
Shop Top Housing SSDA

OPERATIONAL WASTE MANAGEMENT PLAN

10/03/2025
Report No. S01072
Revision B

Client

Westgate BJ Pty Ltd

Architect

SJB Architects

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Prepared by: T. McPherson

Qualification: Bachelor of Marine Biology and Environmental Management.

Position: Senior Waste Management Consultant (as of 2021).

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TABLE OF CONTENTS

1.0	ACKNOWLEDGEMENT OF COUNTRY	3
2.0	INTRODUCTION	3
2.1	SCOPE OF REPORT	3
2.2	REPORT CONDITIONS	4
3.0	LEGISLATION & GUIDANCE	5
4.0	EXECUTIVE SUMMARY	6
5.0	INTRODUCTION	8
6.0	THE SITE	11
7.0	SURROUNDING CONTEXT	11
8.0	RESIDENTIAL WASTE MANAGEMENT	13
8.1	RESIDENTIAL WASTE GENERATION ESTIMATES	13
8.2	RESIDENTIAL BIN SUMMARY	14
8.3	RESIDENTIAL WASTE DISPOSAL PROCEDURES	14
8.3.1	RESIDENTIAL GENERAL WASTE AND RECYCLING DISPOSAL PROCEDURES	14
8.3.2	RESIDENTIAL FOGO DISPOSAL PROCEDURES	15
8.4	RESIDENTIAL BIN COLLECTION PROCEDURES	15
8.5	OTHER RESIDENTIAL WASTE MANAGEMENT CONSIDERATIONS	16
8.5.1	RESIDENTIAL COMMON AREAS	16
8.5.2	LANDSCAPED AREAS AND GARDEN ORGANICS	16
8.5.3	RESIDENTIAL BULKY WASTE PROCEDURES	16
9.0	RETAIL WASTE MANAGEMENT	17
9.1	RETAIL WASTE GENERATION ESTIMATES	17
9.2	COMMERCIAL AND RETAIL BIN SUMMARY	17
9.3	COMMERCIAL AND RETAIL WASTE DISPOSAL PROCEDURES	18
9.4	COMMERCIAL AND RETAIL WASTE COLLECTION PROCEDURES	18
9.5	OTHER COMMERCIAL AND RETAIL WASTE MANAGEMENT CONSIDERATIONS	18
9.5.1	WASHROOM FACILITIES	18
9.5.2	LIQUID WASTE	18
9.5.3	PROBLEM WASTE	18
10.0	STAKEHOLDER ROLES & RESPONSIBILITIES	19
11.0	SOURCE SEPARATION	20
12.0	EDUCATION	21
12.1	SIGNAGE	21
13.0	POLLUTION PREVENTION	22
14.0	BIN WASHING	22
15.0	BIN MOVING PATHS (BINS MOVED FOR COLLECTION)	22
16.0	EQUIPMENT SUMMARY	23

17.0	WASTE ROOMS	24
18.0	CONSTRUCTION REQUIREMENTS.....	26
18.1	ADDITIONAL CONSIDERATIONS.....	26
19.0	CONCLUDING STATEMENT	27
20.0	USEFUL CONTACTS.....	28
APPENDIX A:	ARCHITECTURAL PLANS.....	29
APPENDIX: A.1	GROUND FLOOR PLAN.....	30
APPENDIX: A.2	BASEMENT 1 FLOOR PLAN	31
APPENDIX: A.3	basement 2 floor plan	32
APPENDIX B:	INSTALLATION EQUIPMENT	33
APPENDIX: B.1	TYPICAL SINGLE CHUTE SHAFT & PENETRATION LAYOUT	34
APPENDIX: B.2	EXAMPLE RESIDENTIAL LEVEL RECYCLING BIN LAYOUT	35
APPENDIX: B.3	TYPICAL LINEAR TRACK SYSTEM FOR 1100L BINS	36
APPENDIX C:	PRIMARY WASTE MANAGEMENT PROVISIONS.....	38
APPENDIX: C.1	TYPICAL BIN SPECIFICATIONS.....	39
APPENDIX: C.2	SIGNAGE FOR WASTE AND RECYCLING BINS.....	40
APPENDIX: C.3	EXAMPLE COLLECTION VEHICLE INFORMATION.....	42
APPENDIX D:	SECONDARY WASTE MANAGEMENT PROVISIONS.....	44
APPENDIX: D.1	EXAMPLE HANDHELD BIN MOVERS	45
APPENDIX: D.2	EXAMPLE BIN LIFTER FOR 240L BINS.....	46
APPENDIX: D.3	EXAMPLE SOURCE SEPARATION RECEPTACLES	47

LIST OF TABLES

Table 1: Estimated Recycling Volumes – Residential.....	7
Table 2 SEARs requirements – SSD-77175998.....	10
Table 3: Estimated Waste and Recycling Volumes – Residential.....	13
Table 4: Estimated Waste and Recycling Volumes – Commercial and Retail.....	17
Table 5: Stakeholder Roles and Responsibilities	19
Table 6: Operational Waste Streams.....	20
Table 7: Equipment Summary.....	23
Table 8: Waste Room Areas (2:1 compaction of general waste)	24
Table 9: Waste Room Requirements.....	25

GLOSSARY OF ABBREVIATIONS AND TERMS

TERM	DESCRIPTION
<i>Bin-Carting Route</i>	Travel path for transporting bins from their allocated storage location to the nominated collection point
<i>Bin Lifter</i>	A device used to mechanically lift bins for the purpose of emptying them into larger bins and/or compactors.
<i>Bin Mover</i>	Either a handheld device (commonly referred to as a bin tug) or a ride-on device (typically a tractor or Class C vehicle with an attached bin trailer) used to facilitate the movement of bins across long distances or up ramps
<i>Bulk Bins</i>	Containers with a capacity greater than 1100L designed to be collected by a front-loading vehicle
<i>Bulky Waste</i>	Recycling items that are too large to be deposited into bins, including furniture, whitegoods, electronics and mattresses
<i>Chute</i>	A vertical pipe passing from floor to floor of a building with openings at each level for the disposal of general waste, recycling or FOGO.
<i>Chute Discharge</i>	The termination point of a chute whereby the chute offsets deposited general waste, recycling or FOGO into bins
<i>Chute Discharge Room</i>	A room enclosing the termination point of the chute/s, including bins and volume handling equipment that is accessible only to the building caretaker
<i>Collection Area/Point</i>	Designated area or point where bins are loaded onto the collection vehicle for servicing
<i>Compactor</i>	A device used for compressing general waste inside it's bin typically at a ratio of 2:1
<i>Container Recycling</i>	Waste stream for the recycling of plastic bottles, other plastics, paper, glass and metal containers
<i>DA</i>	Development Application
<i>DCP</i>	Development Control Plan
<i>EPA</i>	Environment Protect Authority
<i>FOGO</i>	Food Organics and Garden Organics
<i>General Waste</i>	All non-recyclable and non-hazardous waste that is sent to landfill
<i>L</i>	Litre
<i>LEP</i>	Local Environmental Plan
<i>Mixed Use Development</i>	A development comprising a combination of both residential and commercial units or two or more different land uses within the one development.
<i>Mobile Bins</i>	Containers with a capacity up to and including 1100L designed to be collected by a rear-loading vehicle

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

1.0 ACKNOWLEDGEMENT OF COUNTRY

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

2.0 INTRODUCTION

Elephants Foot Consulting (EFC) has been engaged to prepare the following Operational Waste Management Plan (OWMP) for the mixed-use development located at 194-214 Oxford Street & 2 Nelson Street, Bondi Junction NSW.

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

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

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

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

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

2.1 SCOPE OF REPORT

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

Note: 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 State Significant Development Application (SSDA), 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, a consent authority (Local Council or State Government) may require OWMPs to be included in new development applications. This OWMP is specifically required by:

- Waverley Development Control Plan 2022
- Waverley Local Environmental Plan 2012

The primary purpose of a development control plan (DCP) is to guide development according to the aims of the State Significant Development Applications or in locally submitted relevant Environmental Planning Instrument (EPI) which the SSDA or DA applies to.

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:

- Waverley Development Control Plan 2022
- NSW Better Practice Guide For Resource Recovery In Residential Developments 2019
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste Classification Guidelines 2014
- Australia's National Waste Policy 2018

4.0 EXECUTIVE SUMMARY

This Operational Waste Management Plan (OWMP) has been prepared by T. McPherson to accompany a State Significant Development Application (SSDA) for a shop top housing development at 194-214 Oxford Street, 2 Nelson Street and part of Osmund Lane, Bondi Junction. The site is made up of nine (9) lots. The legal description of the site is outlined in Table 1.

Property Address	Title Description
194 Oxford Street Bondi Junction	Lot 10 in DP260116
196 Oxford Street Bondi Junction	Lot 11 in DP260116
198 Oxford Street Bondi Junction	Lot 12 in DP 260116
200 Oxford Street Bondi Junction	Lot 13 in DP260116
204 Oxford Street Bondi Junction	Lot 16 in DP68010 Lot 1 in DP79947
214 Oxford Street Bondi Junction	Lot 1 in DP708295
2 Nelson Street Bondi Junction	Lot 1 in DP583228
Part of Osmund Lane	Lot 1 in DP1300781

This report has been prepared to address the Secretary's Environmental Assessment Requirements (**SEARs**) issued for the project (SSD-77175998).

This report concludes that the proposed development is suitable and warrants approval subject to the implementation of the following mitigation measures.

Table 1: Estimated Recycling Volumes – Residential

Mitigation Number/ Name	When is Mitigation Measure to be complied with	Mitigation Measure	Reason for Mitigation Measure
Waste reduction	Construction and Operation	Encourage practices that reduce waste generation at the source, such as using fewer materials or opting for less packaging.	Reducing waste at the source minimizes the volume of waste generated.
Recycling and Reuse	Construction and Operation	Implement recycling programs to recover valuable materials from waste.	Recycling conserves natural resources, reduces energy consumption, and lowers greenhouse gas emissions, helping to create a circular economy.
Education	Construction and Operation	Conduct campaigns to inform the community about proper waste disposal and the benefits of reducing waste.	Increasing public awareness leads to better waste sorting, reduces contamination in recycling streams.
Safe disposal Methods	Construction and Operation	Ensure proper management and disposal of all waste streams.	Effective waste management minimizes environmental contamination.
Monitoring and Reporting	Construction and Operation	Implement data collection and reporting systems for waste management activities.	Monitoring provides insights into waste generation patterns, helping identify areas for improvement and ensuring compliance with regulations.
Policy and Regulation Compliance	Construction and Operation	Regularly review and update waste management plans to comply with environmental regulations.	Compliance with regulations ensures that waste management practices are environmentally responsible.

Following the implementation of the above mitigation measures, the remaining impacts are appropriate.

5.0 INTRODUCTION

Following a design excellence competition, development consent was granted to DA-400/2021 (herein, referred to as the parent development consent) which authorised demolition of existing buildings and the construction of a shop top housing development comprising ground floor retail and 10 storeys of residential apartments above the retail podium, across two tower buildings (herein referred to as Building A and Building B).

Subsequently, an amending DA (DA-360/2023) was approved on 28 August 2024 which amended the Basement Levels 4, 3, 2 and 1 and the Ground Floor Level of the approved development under the parent development consent. The proposed SSDA generally seeks approval for the redevelopment of 194-214 Oxford Street, 2 Nelson Street and part of Osmund Lane, Bondi Junction, proposing to retain key design principles in accordance with the parent consent.

The proposal will provide additional residential dwellings, in accordance with the in-fill affordable housing provisions under the *State Environmental Planning Policy (Housing) 2021* and incorporate a 30% increase in Gross Floor Area (GFA) and building height. The development of the site has physically commenced pursuant to the development consent, with demolition and excavation completed. Construction Certification has been obtained and construction is intended to continue for the lower portion of the building (up to Level 8).

Simultaneously with the construction of the lower parts of the building, the proponent seeks approval for new works to the remaining levels of the building (above level 9) as well as the internal fit out and servicing for the whole of the building (Basement to Level 16). It is intended that the relationship between the approval of the SSDA and the existing consents be managed through the imposition of a condition pursuant to s 4.17(1)(b) of the EP&A Act and lodgement of a Notice of Modification pursuant to cl. 67 of the EP&A Regulation to ensure consistency across all development consents.

Specifically, this SSDA seeks development consent for:

Proposed New Works:

- Construction of Levels 9 – 16 of the residential towers including Buildings A (Western Tower) and Building B (Eastern Tower) comprising:
 - Building A (Western Tower, Residential Levels 9 -13) – with a maximum height of 42.5m
 - Building B (Eastern Tower, Residential Levels 9 -16) – with a maximum height of 54.0m
 - Communal open space on Level 11 (Building A)
 - Plant and lift overrun
 - Public Domain Works
- Internal fit out of Levels 09 - 16

Proposed Amendments to Existing Parent Development Consent

- Internal fit out from Basement Levels 01 - 04
- Internal fit out from Ground Level to Level 08

- The allocation of 1,708m² of affordable housing on Levels 1,2 and 3 of Building A and Building B
- Additional services to overall development including an additional plant area at ground floor and an addition of a second substation
- Basement services , including additional parking spaces and updated storage and waste storage areas
- Awning over the ground retail along Oxford St and addition of a glazing window to create visual continuation from the neighbouring retail.

Cumulative Development (Existing Parent Development Consent and Subject SSDA)

- Construction of a shop-top housing development, comprising a podium with ground floor retail, two residential towers (Building A and Building B) as well as four levels of basement parking and associated public domain works.
 - The delivery of a total of 11,288m² of GFA.
 - 467m² of retail GFA.
 - 85 apartments, equating to a total residential GFA of 10,792m² including 1,708m² (17 apartments) of affordable housing GFA.
 - 29m² GFA for communal amenities, incl. WC, steam room and sauna
 - The apartments will comprise the following mix:
 - 1 bedroom 2 (2%)
 - 2 bedroom 35 (42%)
 - 3 bedroom 48 (56%)
 - 4 levels of basement for 138 car parking spaces and 45 motorbike parking spaces, with vehicular access from Osmund Lane.
 - Storage areas and services.
 - Communal open space and associated landscaping.

Purpose of this Report

The purpose of the project is to facilitate the delivery of (market and affordable) housing at a strategically located site and to deliver a built form outcome that is consistent with the outcomes of the design competition.

This report has been prepared in response to the requirements contained within the Secretary's Environmental Assessment Requirements (SEARs) dated 25/10/2024 and issued for the SSDA (SSD-77175998). Specifically, this report has been prepared to respond to the SEARs requirement issued below.

Table 2 SEARs requirements – SSD-77175998

SEARs Requirement 17: Waste Management	Elephant Foots Response
Identify, quality and classify the likely waste systems to be generated during construction and operation.	<i>Section 8.2 and 9.2.</i>
Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste in accordance with any council waste management requirements.	<i>Sections 8.3.1, 8.5.3, and 9.3.</i>
Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site.	<i>Sections 8.4 and 9.4.</i>
If buildings are proposed to be demolished or altered, provide a hazardous materials survey.	<i>This will be provided by others.</i>

6.0 THE SITE

The site is located at 194-214 Oxford Street and 2 Nelson Street, Bondi Junction within the Waverley LGA. The site is comprised of multiple allotments and is legally described as:

- 194-214 Oxford Street:
 - Lot 10, 11, 12, 13 & 16 / DP 260116,
 - Lot 1 / DP 708295,
 - Lot 1 / DP 79947, and
- 2 Nelson Street:
 - Lot 1 / DP 583228.
- Part of Osmund Lane (Lot 1 in DP1300781)

The land size is 2,480m² (2,599.1m² including the land beneath Osmund Lane) with a northern frontage to Sydney Enfield Drive, an eastern frontage to Nelson Street, a southern frontage to Oxford Street and western frontage to York Road.

7.0 SURROUNDING CONTEXT

The immediate urban context surrounding the site is characterised by a mix of commercial, retail, residential, and recreational land uses with Centennial Park located to the west and south-west of the site.

The site is in proximity to the Bondi Junction shopping and transport hub to the east, comprising Bondi Junction Westfield Shopping Centre, a pedestrian shopping mall and Bondi Junction Train Station. The site is located within the Western Precinct of Bondi Junction. The site is closely located to two (2) bus stops recognised as ID 202260 'Oxford St before York Rd' approximately 57m from the site and ID 202238 'Oxford St after York Rd' approximately 96m from the site. The site is in proximity to the Bondi Junction Train Station being within 800m from the site (5-minute walk).

The lot at 2 Nelson Street contains a local landscape heritage item I506 'Norfolk Pine-Landscape'. The remainder of the site has recently been demolished in accordance with the existing development consents. The site will be progressively developed under the existing approvals and the remaining works will be the subject of this application.

Figure 1 Local Context

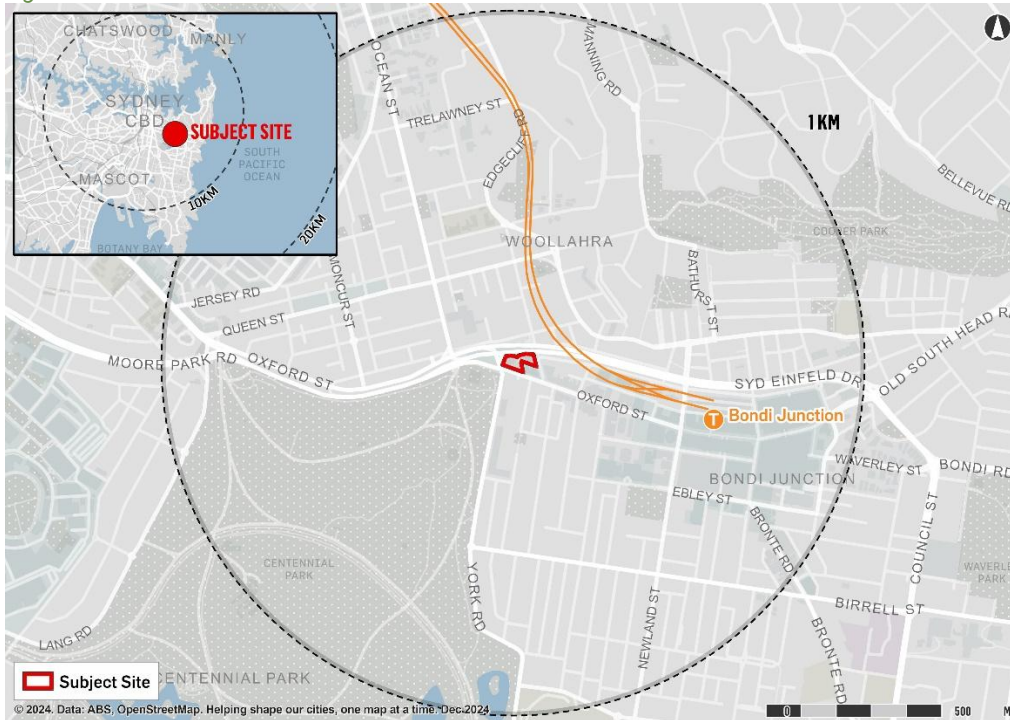


Figure 2 The Site



8.0 RESIDENTIAL WASTE MANAGEMENT

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

8.1 RESIDENTIAL WASTE GENERATION ESTIMATES

The 'Waverley Council Development Control Plan 2022 (Part B: General Provisions, B1: Waste)' has been referenced to calculate the total number of bins required for the residential units. Calculations are based on generic general waste, recycling. The NSW EPA's 'Better Practice Guidelines for Resource Recovery in New Developments 2019' has been referenced for the Food Organics and Garden Organics (FOGO) rates. Actual volumes of general waste, recycling and FOGO generated in operation may differ according to the residents' actual waste management practices.

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

Table 3: Estimated Waste and Recycling Volumes – Residential

Core	# Units	Waste Generation Rate (L/Unit/Week)	Generated Waste (L/Week)	Compacted Waste 2:1 (L/Week)	Recycling Generation Rate (L/Unit/Week)	Generated Recycling (L/Week)	Paper/cardboard Recycling Generation Rate (L/Unit/Week)	Generated Recycling (L/Week)	FOGO Generation Rate (L/Unit/Week)	Generated FOGO (L/Week)
A	49	120	5880	2940	60	2940	60	2940	25	1225
B	36	120	4320	2160	60	2160	60	2160	25	900
TOTAL	85		10200	5100		5100		5100		2125
Bins & Collections	General waste Bin Size (L)		660	660	Recycling Bin Size (L)	660	Recycling Bin Size (L)	660	FOGO Bin Size (L)	140
	General waste Bins per Week		16	8	Recycling Bins per Week	8	Recycling Bins per Week	8	FOGO Bins per Week	16
	General Waste Collections per Week		1	1	Recycling Collections per Week	0.5	Recycling Collections per Week	0.5	FOGO Collections per Week	1
	Total General Waste Bins Required		16	9	Total Recycling Bins Required	16	Total Recycling Bins Required	16	Total FOGO Bins Required	16
Bins Per Building Core	Core	# Bins	# Bins (Compacted 2:1)		Core	# Bins	Core	# Bins	Core	# Bins
	A	9	5		A	9	A	9	A	9
	B	7	4		B	7	B	7	B	7

Note: An additional bin 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 generation.

8.2 RESIDENTIAL BIN SUMMARY

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

<u>General Waste:</u>	9 x 660L bins collected 1 x weekly <i>*(Compacted 2:1)</i>
<u>Container Recycling:</u>	16 x 660L bins collected 1 x fortnightly .
<u>Paper/cardboard Recycling:</u>	16 x 660L bins collected 1 x fortnightly
<u>FOGO:</u>	16 x 240L bins collected 1 x weekly
<u>Waste Service Bins:</u>	2 x 660L bins.

During operation, it is the responsibility of the building manager to monitor the number of bins required for the residential component of the development. General waste, recycling and FOGO volumes may change according to residents' attitudes to waste disposal, building occupancy levels or the development's management.

Any requirements for adjusting the capacity of the waste facilities may be achieved by changing the number of bins, the bin sizes or collection frequencies. Building management will be required to negotiate any changes to bins or collections with the collection service provider.

8.3 RESIDENTIAL WASTE DISPOSAL PROCEDURES

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

8.3.1 RESIDENTIAL GENERAL WASTE AND RECYCLING DISPOSAL PROCEDURES

A single general waste chute will be installed with access provided to all residents on each residential level. Space for 2 x 240L recycling bins (container and paper/cardboard) will be provided in a compartment adjacent to the general waste chute for the storage of the Councils two recyclable streams. When required, the building manager will transport the 240L recycling bins, and decant them into a larger 660L bin via the aid of a bin lifter.

Residents will be responsible for walking their general waste and recyclables to their allocated disposal point and placing their general waste into the general waste chute and recycling into the 240L recycling bin. 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 recycling into the 240L bins. Recycling should be clean and must not be bagged as soft plastics contaminate recycling.

The general waste will discharge from the chute into 1100L bins in the residential chute discharge rooms located on the basement 1 level. General waste will be compacted into a 2:1 ratio. The building manager will monitor bin capacities under the general waste chute and exchange full bins with empty bins on the track systems when required. Recycling bins on each level will also be monitored by the building caretaker and full bins will be exchanged with empty bins as required.

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

8.3.2 RESIDENTIAL FOGO DISPOSAL PROCEDURES

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

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

The building will be provided with an allocated space for FOGO in each chute discharge room which contains 240L bins. The residents will be responsible for walking their FOGO down to the communal FOGO bins and placing it into the bins. Note that the chute discharge equipment is required to be caged off to prevent unauthorised access.

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

8.4 RESIDENTIAL BIN COLLECTION PROCEDURES

Council will be engaged to collect the residential waste and recycling bins in accordance with Council's collection schedule. This report assumes general waste and FOGO will be collected once weekly, with container recycling and paper/cardboard recycling collected once fortnightly.

On the nominated waste collection day, the building caretaker will be responsible for transporting all bins to the loading bay located on the ground level adjacent to the vehicle via the aid of a bin tug using the vehicle ramp (see APPENDIX A.2 and A.3). Bins will be actively transported directly to their designated storage rooms once emptied, and rotated with a full bin to the collection vehicle to minimise the space required in the collection area by the appointed building caretakers and cleaners.

Cardboard recyclables are collected on alternating weeks to comingle recyclables, hence only one recycling stream needs to be presented in the bin holding area at any given time. It is recommended that extra 660L service bins are placed under the chutes to collect discharge while the other bins are being serviced.

To service the bins, a Council collection vehicle will enter the site from Osmund Lane and park in the loading bay to service all bins positioned in the bin holding area (see APPENDIX A.1). Once the bins are serviced, the collection vehicle will exit the site onto Osmund Lane in a forward direction.

All access and clearances to the bin holding area must be able to accommodate a 10.6m long HRV.

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.

8.5 OTHER RESIDENTIAL WASTE MANAGEMENT CONSIDERATIONS

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

8.5.1 RESIDENTIAL COMMON AREAS

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

8.5.2 LANDSCAPED AREAS AND GARDEN ORGANICS

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

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

8.5.3 RESIDENTIAL BULKY WASTE PROCEDURES

An area will be made available for the storage of discarded residential bulky waste items (e.g. whitegoods, furniture, etc.). This room should be located within close proximity of the collection point and must have a minimum doorway width of 1.5m to facilitate the movement of large items in and out of the room. Additional space for textiles and problem wastes have also been considered within the bulky waste room (maximum of 2m² additional).

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

Prior to bulky waste collections, the building manager will transport the bulky waste items from the bulky waste room on the basement level to the collection area on the ground floor via the bin hoist/lift.

On the day of bulky waste collection, a Council collection vehicle will enter the site from Osmund Lane and park in the loading bay. Collection staff will collect the bulky waste items from the collection point. Once bulky items have been loaded onto the vehicle, the collection vehicle will exit the site onto Osmund Lane in a forward direction.

9.0 RETAIL WASTE MANAGEMENT

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

9.1 RETAIL WASTE GENERATION ESTIMATES

The 'Waverley Council Development Control Plan 2022 (Part B: General Provisions, B1: Waste)' has been referenced to calculate the total number of bins required for the anticipated tenants. Calculations are based on generic generation rates. Actual volumes of waste and recycling may differ in operation according to the tenants' actual waste management practices.

The following table shows the estimated volume (L) of general waste and recycling that will be generated by the retail tenants. The total GFA of the retail component has been divided into thirds to take into account the waste generation of future possible tenancies. It is assumed that retail tenancies will share bins, bin storage facilities and collections.

The following estimates are based on a seven-day operating week.

Table 4: Estimated Waste and Recycling Volumes – Commercial and Retail

Tenancy Type	GFA m ²	Waste Generation Rate (L/100m ² /Day)	Generated Waste (L/Week)	Recycling Generation Rate (L/100m ² /Day)	Generated Recyclables (L/Week)
Restaurants	195	660	8993.6	200	2725.3
Café	195	300	4088.0	200	2725.3
Shop (>100sqm)	195	50	681.3	50	681.3
TOTALS	584		13763		6132
Bins and Collections		Bin Size (L)	1100	Bin Size (L)	1100
		Bins/Week	12.5	Bins/Week	5.6
		Collections/Week	3	Collections/Week	3
		Total Bins	5	Total Bins	2

9.2 COMMERCIAL AND RETAIL BIN SUMMARY

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

General Waste: 5 x 1100L bins collected **3 x weekly**.

Recycling: 2 x 1100L bins collected **3 x weekly**.

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

9.3 COMMERCIAL AND RETAIL WASTE DISPOSAL PROCEDURES

All tenancies will be responsible for their general waste and recycling disposal procedures within their vicinity. On completion of each trading day or as required, nominated staff or contracted cleaners will transport all general waste and recycling to the retail bin room on Basement 2, and place into the appropriate collection bins.

9.4 COMMERCIAL AND RETAIL WASTE COLLECTION PROCEDURES

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

On the day of service, a private waste collection vehicle will enter the site from Osmund Lane and park in the loading bay on the basement level. The building caretaker will provide the driver with access to the retail bin room. Once the bins are serviced, the collection vehicle will exit the site onto Osmund Lane in a forward direction.

Please note: The collection of commercial/retail bins should occur on separate days from the collection of residential bins to ensure proper segregation of waste streams.

9.5 OTHER COMMERCIAL AND RETAIL WASTE MANAGEMENT CONSIDERATIONS

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

9.5.1 WASHROOM FACILITIES

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

9.5.2 LIQUID WASTE

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

9.5.3 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 the general waste stream as they can have adverse impacts to human health and the environment if disposed of in landfill. Retail and commercial tenants must liaise with the building manager when disposing of problem waste streams.

Problem waste streams include:

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

10.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 5: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Strata, Body Corporate or Management	<ul style="list-style-type: none"> Co-ordinate the waste strategy within the site. 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"> Co-ordinate general waste, recycling and FOGO collections Clean and transport bins as required. Maintain and clean chute doors on each level. Organise replacement or maintenance requirements for bins. Organise, maintain and clean bin storage areas. Organise bulky waste collections 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 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.
Residents	<ul style="list-style-type: none"> Dispose of all general waste, recycling and FOGO in the allocated chutes and/or bins provided. Ensure adequate separation of general waste, recycling and FOGO; and Comply with the provisions of Council and the OWMP.
Retail/Commercial Tenants	<ul style="list-style-type: none"> Management co-ordinates own private contractor collections. Manage general waste and recycling within their tenancy during daily operations. Correctly separate general waste and recycling streams. Flatten cardboard within the recycling bin. If required, arrange for storing used and unused cooking oil in a bunded area, Organise grease interceptor trap servicing, and Ensure the suitable storage for chemicals, pesticides and cleaning products waste back of house.
Waste Collection Contractor	<ul style="list-style-type: none"> Provide a reliable and appropriate bin 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 organics 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.

11.0 SOURCE SEPARATION

Better practice waste management includes the avoidance, reuse, and recovery of unwanted items, which can be achieved through source separation. Waste . 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 6: 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, or in designated waste bins.
Paper and Cardboard Recycling	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.
Container 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).	Materials Recovery Facility (MRF)	Commingle recycling must not be bagged, and instead should be placed loosely in the designated recycling bins.
FOGO	FOGO consists of unwanted or uneaten kitchen scraps that are easily compostable/biodegradable (e.g. vegetable peels, fruit rinds, coffee grounds) and garden organics including lawn clippings, leaves, pruning's and branches.	Composting Facility	FOGO should be bagged in compostable liners when deposited into the chute/s or bins and will be collected by Council.
Garden Organics	Garden organics consists of unwanted organic materials that are easily biodegradable and/or compostable (e.g. lawn clippings, branches)	Resource Recovery Centre	Landscape Maintenance Contractors will remove the garden organics from site during scheduled maintenance. Garden organics will be collected in Council or private contractor bins and removed from site.
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. Commercial tenants arrange for recycling of their e-waste.
Bulky Waste 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. Commercial tenants are 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.

12.0 EDUCATION

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

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

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

12.1 SIGNAGE

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

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

The building manager 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.

13.0 POLLUTION PREVENTION

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

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

14.0 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 contractor would collect the bins from the bin holding area and clean the bins with their specialised vehicle.

15.0 BIN MOVING PATHS (BINS MOVED FOR COLLECTION)

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 the distance of the bin moving paths exceeds 10m, a bin moving device will be required 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.

Bins may have to be fitted with hitches to enable the simultaneous transportation of multiple bins to the collection area. Council must be informed of any hitch attachments required to be installed on bins.

16.0 EQUIPMENT SUMMARY

Table 7: Equipment Summary

	Part	Qty	Notes
Chutes	Please refer to supplier's information	1	(See APPENDIX: B.1 for Typical Single Chute Layout)
Chute Equipment	General Waste 2-bin 1100L bin Linear Track System with Compactor	2	(See APPENDIX: B.3 for Typical Linear System)
Other Equipment	Suitable Bin Moving Device	1	(See APPENDIX D.1 for Bin Tug Device)
	Bin Tipper	1	(See APPENDIX D.2 for Typical Bin Lifter)

17.0 WASTE ROOMS

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

The equipment recommended in the chute discharge rooms is to manage 2 days' worth of estimated general waste from that building core. Therefore, this represents the minimum equipment required in these rooms to satisfy best practice requirements. Additional bins or volume handling equipment can be included in these rooms to increase days of capacity or manual labour required in operation.

Table 8: Waste Room Areas (2:1 compaction of general waste)

Level	Waste Room Type	Equipment	Estimated Area Required (m ²)
B1	Core A Chute Discharge Room	General waste: 5 x 660L bins Container recycling: 9 x 660L bins Paper/cardboard: 9 x 660L bins FOGO: 9 x 240L bins General waste: 2-bin 660L linear system	64
B1	Core B Chute Discharge Room	General waste: 4 x 660L bins Container recycling: 7 x 660L bins Paper/cardboard: 7 x 660L bins FOGO: 7 x 240L bins General waste: 2-bin 660L linear system	54
B1	Residential Bin Holding Room	General waste: 9 x 660L bins Container recycling: 16 x 660L bins Paper/cardboard: 16 x 660L Bins 1 x Bin Lifter 1 x Bin Tug	41
B1	Bulky Waste Room		14
B2	Commercial / Retail Bin Room	General waste: 5 x 1100L bins Recycling: 2 x 1100L bins	20

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

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 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 1500mm wide.

The following table provides further waste room requirements.

Table 9: Waste Room Requirements

Waste Room Type	Waste Room Requirements
Chute Discharge Room	<ul style="list-style-type: none"> • Ceiling clearance height must be a minimum of 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 chute 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 30 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.
Residential 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.
Communal FOGO Rooms	<ul style="list-style-type: none"> • 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. • Rooms must be well ventilated either naturally or mechanically in accordance with AS1668.4.2012 • Cleaning facilities such as hose hock and drainage for odour and hygiene control must be provided. • 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	<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
Retail/Commercial 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 • Bins must be coordinated with the hinge of the lid facing the back. This is to allow for ideal access to the bin.

18.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Waverley Development Control Plan 2022*, 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.

18.1 ADDITIONAL CONSIDERATIONS

- Waste room floor to be sealed with a two-pack epoxy;
- All corners coved and sealed 1,200mm up, this is to eliminate build-up of dirt;
- Hot and cold water tap height and light switch height of 1.6m;
- Storm water access preventatives (grate);
- All walls painted with light colour and washable paint;
- Equipment electric outlets to be installed 1700mm above finished floor level;
- Optional automatic odour and pest control system installed
- If 660L or 1100L bins are utilised, 2 x 820mm (minimum) double-doors must be used;
- All personnel doors are hinged, lockable and self-closing;
- Conform to the Building Code of Australia, Australian standards and local laws; and
- Childproofing and public/operator safety shall be assessed and ensured
- Waste and recycling rooms must have their own exhaust ventilation system either;
 - Mechanically - exhausting at a rate of 5L/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.

19.0 CONCLUDING STATEMENT

In conclusion, this Operational Waste Management Plan, prepared by T. McPherson supports the waste requirements listed in the SSDA waste management requirements. The report promotes best practice waste management, minimizing waste generation, and maximizing reuse. It ensures efficient design, storage, and equipment for sustainable operations, meeting the SSDA requirements for waste management.

20.0 USEFUL CONTACTS

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

LOCAL COUNCIL

Waverley Customer Service	Ph: (02) 9803 8000	E: info@waverley.nsw.gov.au
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PRIVATE WASTE COLLECTION PROVIDER

Capital City Waste Services	Ph: 02 9599 9999	E: service@ccws.net.au
Sydney Waste	Ph: 02 8661 0031	
Waste Clear	Ph: 1300 525 352	E: admin@wasteclear.com.au

BIN MOVING DEVICE SUPPLIERS

Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
Sitecraft	Ph: 1300 363 152	E: sales@sitecraft.com.au

BALER SUPPLIERS

Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
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ORGANIC DIGESTERS AND DEHYDRATORS

Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
Waste Master	Ph: 1800 614 272	E: hello@wastemasterpacific.com.au

COOKING OIL CONTAINERS AND DISPOSAL

Cookers	Ph: 1300 882 299	E: info@cookers.com.au
Auscol	Ph: 1800 629 476	E: sales@auscol.com

ODOUR CONTROL

Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
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SOURCE SPERATION BINS

Method Recycling	Ph: 0499 890 455
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BINS AND BIN EQUIPMENT

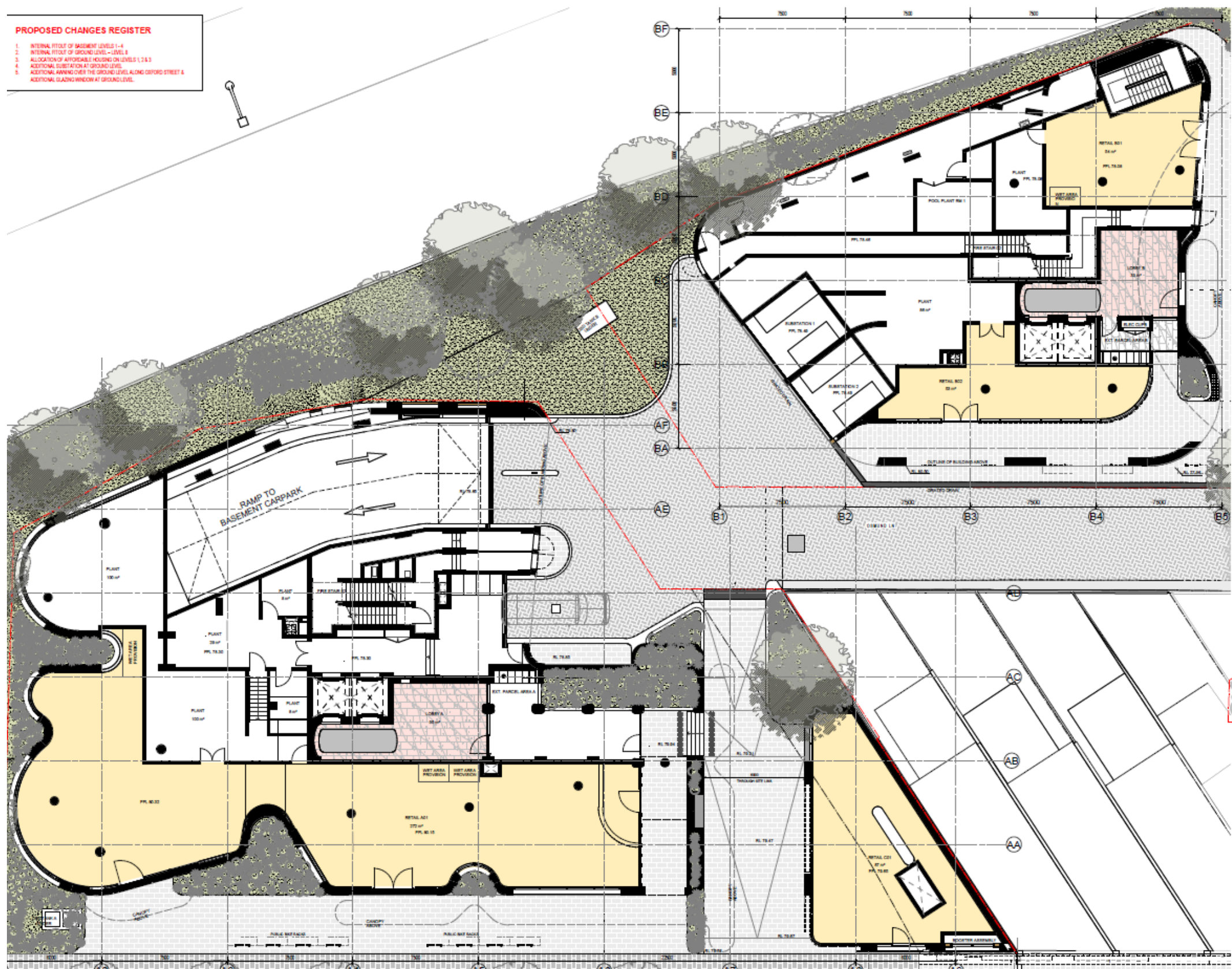
Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
SULO	Ph: 1300 364 388	E: sulosales@pactgroup.com

CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

Elephants Foot Chute Solutions	Ph: 1300 435 374	E: chutes@elephantsfoot.com.au
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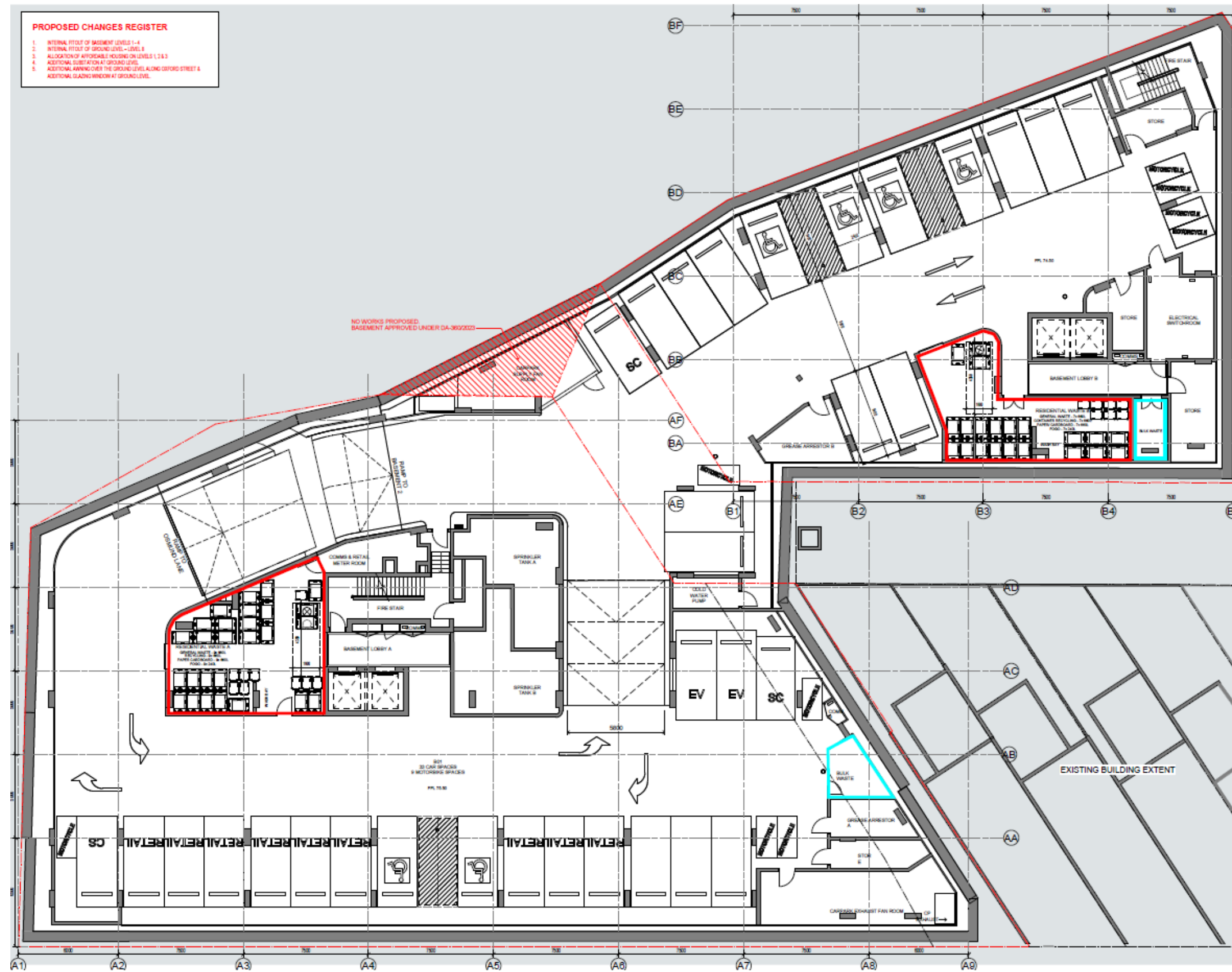
APPENDIX A: ARCHITECTURAL PLANS

APPENDIX: A.1 GROUND FLOOR PLAN



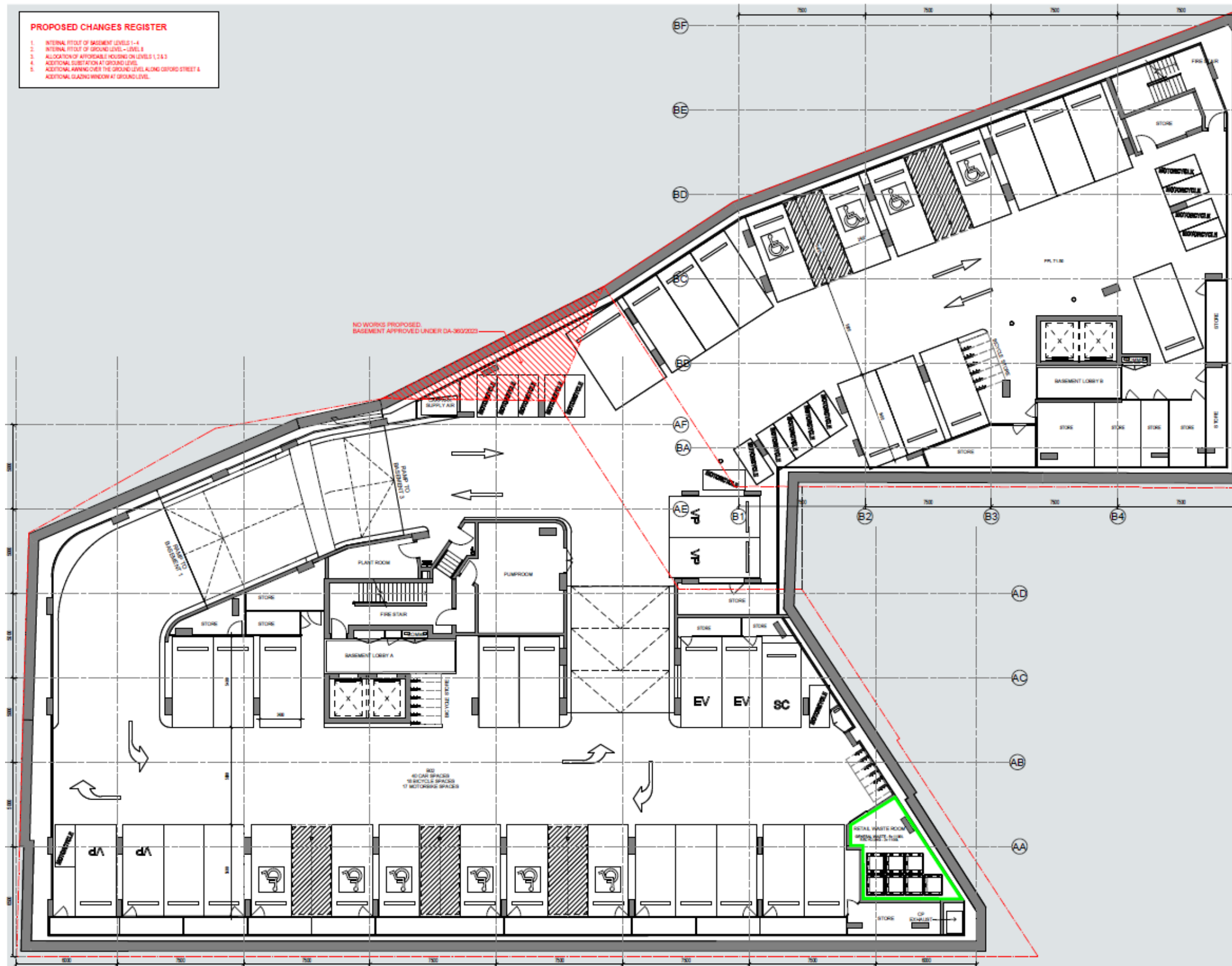
Source: SJB Architects, Drawing no. DA-1011, Rev 3, 28.02.2025 – Ground Floor Plan.

APPENDIX: A.2 BASEMENT 1 FLOOR PLAN



Source: SJB Architects, Drawing no. DA-1003, Rev 3, 28.02.2025 – Basement 01.

APPENDIX: A.3 BASEMENT 2 FLOOR PLAN



Source: SJB Architects, Drawing no. DA-1002, Rev 3, 28.02.2025 – Basement 02.

APPENDIX B: INSTALLATION EQUIPMENT

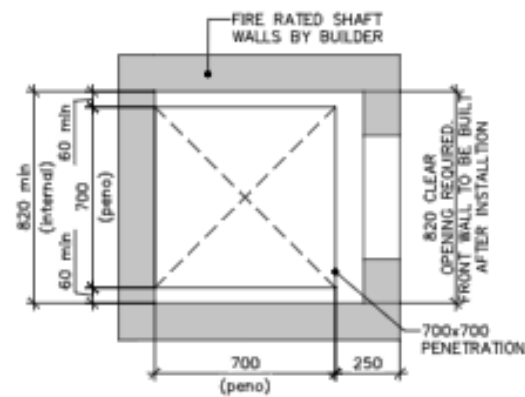
APPENDIX: B.1 TYPICAL SINGLE CHUTE SHAFT & PENETRATION LAYOUT



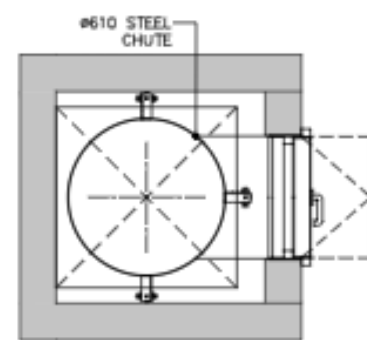
Chute Solutions.™
an Australian First Class company

CHUTE SHAFT & PENETRATION SET-OUT

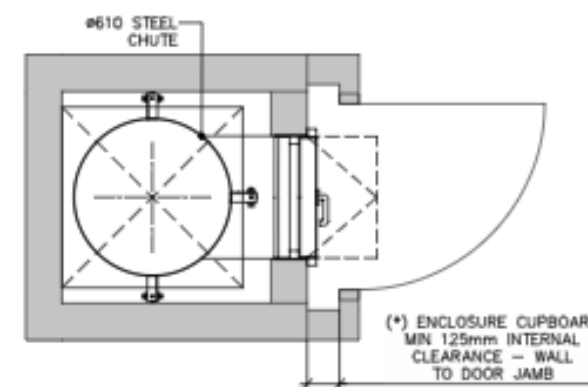
SINGLE Ø610 STEEL



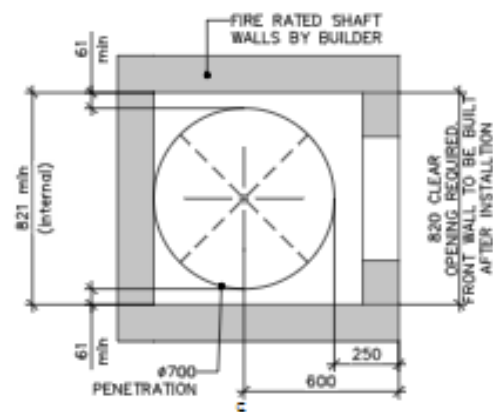
01 SINGLE (610Ø) GALV. STEEL CHUTE PENETRATION SET-OUT



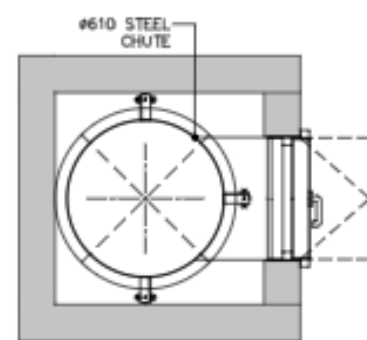
02 SINGLE (610Ø) GALV. STEEL CHUTE LAYOUT



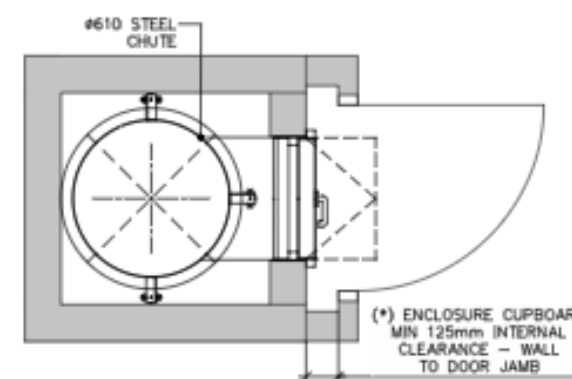
03 SINGLE (610Ø) GALV. STEEL CHUTE LAYOUT with ENCLOSURE CUPBOARD (*)



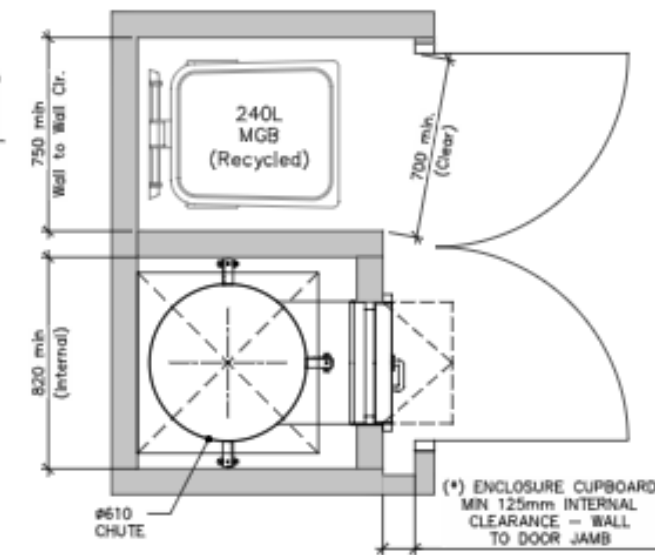
04 SINGLE (610Ø) GALV. STEEL CHUTE WITH CIRCULAR PENETRATION SET-OUT



05 SINGLE (610Ø) GALV. STEEL CHUTE LAYOUT (WITH CIRCULAR PENETRATION)



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



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

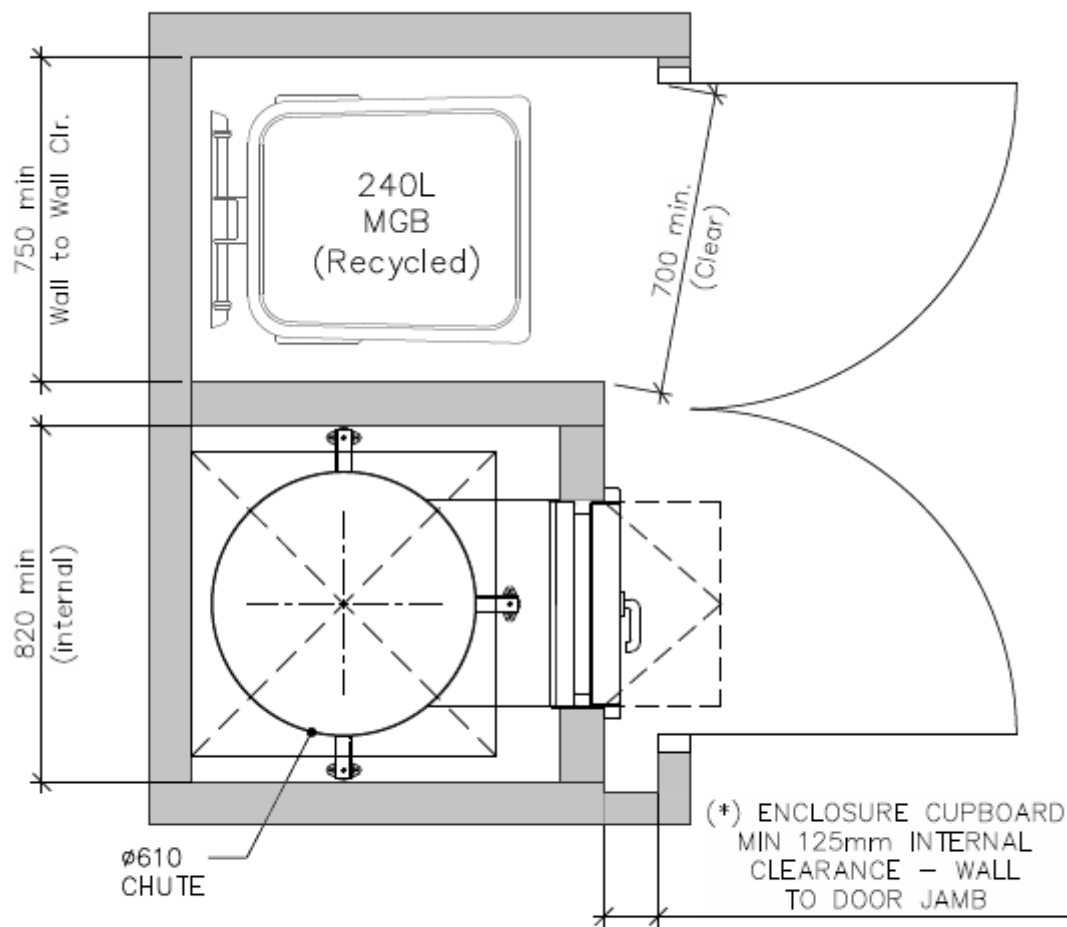
(*) NOTE: ENCLOSURES ARE RECOMMENDED IF THE CHUTE OPENS DIRECTLY TO A CORRIDOR OR IS NOT LOCATED IN A WASTE ROOM. IF CHUTE ACCESS IS WITHIN A WASTE ROOM THEN THE CUPBOARD ENCLOSURES ARE NOT REQUIRED.

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 specification.

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: B.3 TYPICAL LINEAR TRACK SYSTEM FOR 1100L BINS



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

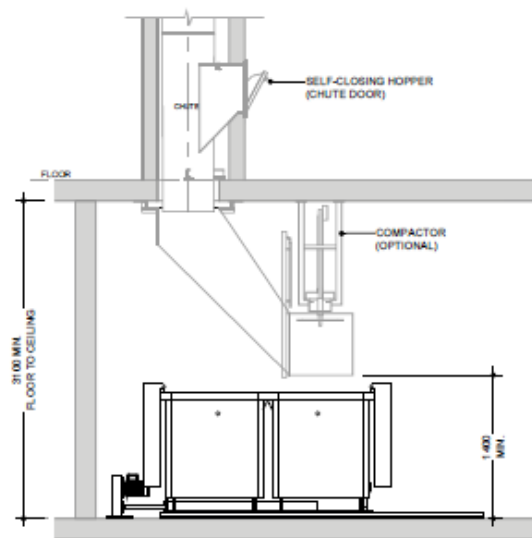
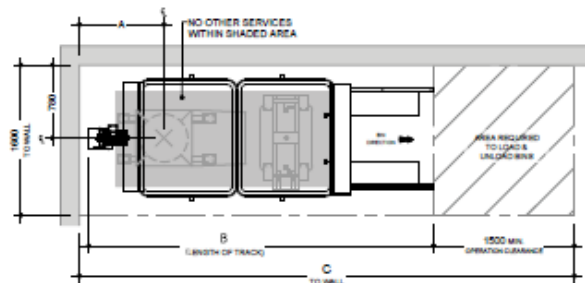


1,100 LITRE LINEAR TRACK SYSTEM



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 C: PRIMARY WASTE MANAGEMENT PROVISIONS

APPENDIX: C.1 TYPICAL BIN SPECIFICATIONS


Mobile bins

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

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

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

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




Bin capacity	80L	120L	140L	240L	360L
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	530	540	735	820
Width (mm)	450	485	500	580	600
Approximate footprint (m 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

Wheelie bin

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

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



Bin capacity	660L	770L	1100L	1300L	1700L
Height (mm)	1250	1425	1470	1480	1470
Depth (mm)	850	1100	1245	1250	1250
Width (mm)	1370	1370	1370	1770	1770
Approx footprint (m 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 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 EXAMPLE COLLECTION VEHICLE INFORMATION

General

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

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

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

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

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

Large collection vehicles

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

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

Table B2.1: Collection vehicle dimensions

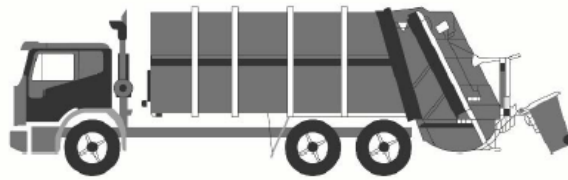
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0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

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

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

Rear-loading collection vehicles

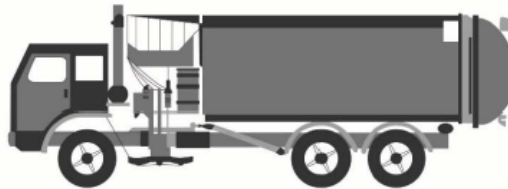
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



Rear-loading waste collection vehicle

Side-loading collection vehicles

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



Side-loading waste collection vehicle

Front-lift-loading collection vehicles

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



Front-lift-loading waste collection vehicle

Small collection vehicles

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

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

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

APPENDIX D: SECONDARY WASTE MANAGEMENT PROVISIONS

APPENDIX: D.1 EXAMPLE HANDHELD BIN MOVERS

movexx
smart electric tugs

MOVEXX T2500 BIN MOVER BATTERY ELECTRIC

Movexx T2500 Tow Tug is an extremely user friendly battery powered mobile towing unit that is ideal for applications where trolleys and rolling objects need to be moved from one place to another simply, efficiently and without physical effort. Some standard features included are: battery indicator, on board battery charger, battery, adjustable handle, dual speed and electric brake.

These units are fitted with an electromagnetic brake system for use on ramps and slopes

Features

- Electromagnetic brake for use on ramps and slopes
- Adjustable height handle



SPECIFICATION				
MODEL	DIMENSIONS (MM)	OPTIONS	PULL - PUSH CAPACITY (KG)	BATTERY
T2500-D	511 (w) x 757 (l)	* Centre mount 2x 240 lt. wheelie bin attachment	2500	AGM batteries 2x 85AH up to 8 hrs continuous operation
TOWING CAPACITY - ON FLAT GROUND (all models)			TOWING CAPACITY - SLOPE (all models)	
Towing up to 4x 660 lt. Wheelie Bin			Towing up to 2x 660 lt. Wheelie Bin Up / Down maximum 25% (1:4 slope)	
Towing up to 4x 1100 lt. Wheelie Bin			Towing up to 1x 1100 lt. Wheelie Bin Up / Down maximum 25% (1:4 slope)	
**Electromagnetic brake for use on ramps and slopes				



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

Source: Sitecraft - www.sitecraft.net.au

APPENDIX: D.2 EXAMPLE BIN LIFTER FOR 240L BINS

versatip

Versatip Bin Tipper – 1500mm Tip



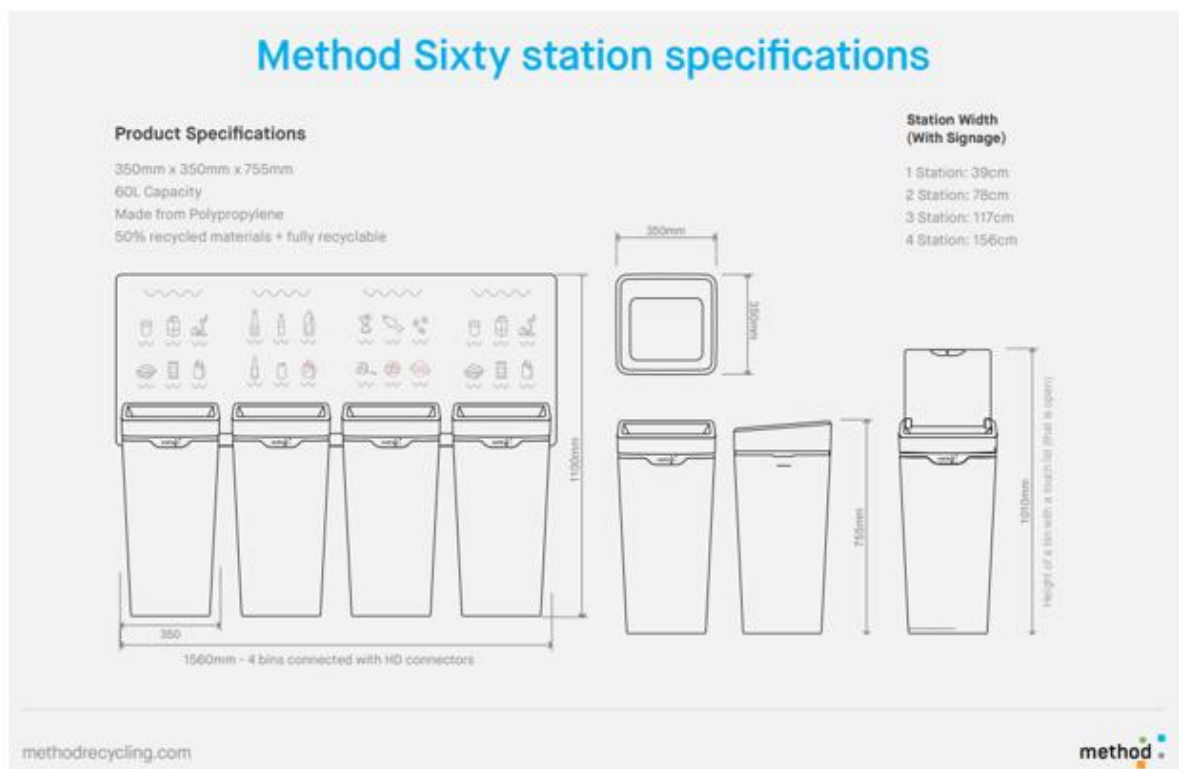
Specifications

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/

APPENDIX: D.3 EXAMPLE SOURCE SEPARATION RECEPTACLES



Source: Method Recycling - www.methodrecycling.com