



Stage 2a – 27 Railway St, Corrimal NSW
State Significant Development Application (SSDA) - Residential

OPERATIONAL WASTE MANAGEMENT PLAN

11/11/2025
Report No. 6589
Revision B

Client

Legpro 70 Pty Ltd ATF Legpro 70 Unit Trust

Architect

DKO

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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 Hoist</i>	A device used for lifting or lowering bins between different levels
<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>Comingled Recycling</i>	Waste stream for the recycling of plastic bottles, other plastics, paper, glass and metal containers
<i>Communal Bin Room</i>	A central, shared bin room accessible to all residents or staff to dispose of their waste stream
<i>DA</i>	Development Application
<i>DCP</i>	Development Control Plan
<i>eDiverter</i>	A single chute fitted with a diversion system to allow two separate waste streams (typically general waste and recycling) to be disposed of concurrently.
<i>EPA</i>	Environment Protect Authority
<i>FOGO</i>	Food Organics and Garden Organics
<i>General Waste</i>	All non-recyclable and non-hazardous waste that is sent to landfill
<i>HRV</i>	Heavy Rigid Vehicle
<i>L</i>	Litre
<i>LEP</i>	Local Environmental Plan

<i>Mixed Use Development</i>	A development comprising a combination of both residential and commercial units or two or more different land uses within the one development.
<i>Mobile Bins</i>	Containers with a capacity up to and including 1100L designed to be collected by a rear-loading vehicle
<i>Multi-unit Residential Development</i>	Also known as MUD's, residential flat buildings, or apartment blocks, this is a residential development with multiple units that typically share facilities and services such as bins and collections.
<i>Onsite Collection</i>	A collection arrangement whereby all bins are serviced by a collection vehicle within the property boundary, either in the building's basement or at grade and off-street.
<i>Owners Corporation</i>	An organisation or group of persons that is identified by a particular name and that acts, or may act, as an entity
<i>Recycling</i>	Waste stream that combines all recycling, including comingled recycling, paper/cardboard and metals.
<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>SRV</i>	Small Rigid Vehicle
<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.

1.1 SCOPE OF REPORT

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

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

2.0 LEGISLATION & GUIDANCE

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

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

The primary sources of guidance to assist with the delivery of this report include:

- Wollongong Development Control Plan 2009; Part E – General Controls Chapter E7: Waste Management
- NSW Better Practice Guide for Resource Recovery in Residential Developments 2019
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste and Sustainable Materials Strategy 2041
- NSW Waste Classification Guidelines 2014
- Australia's National Waste Policy 2018

2.1 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 EXECUTIVE SUMMARY

This Operational Waste Management Plan (OWMP) has been prepared by T. McPherson to accompany a State Significant Development Application (**SSDA**) which seeks development consent for the construction of four (4) residential flat buildings, providing a total of 206 x residential apartments (including 57 affordable housing apartments).

The SSDA is referred to as the Stage 2a Built Form SSDA (SSD-83789711). The Stage 2a Built Form SSDA implements the second built form stage of the urban renewal of the former Corrimal Coke Works site. The project will deliver vibrant and contemporary residential-led urban renewal, which celebrates the site’s industrial history and leverages its highly accessible and strategic location in proximity to Corrimal town centre and local amenities and services.

The proposal will deliver high amenity residential dwellings of various sizes and typologies, including a dedicated affordable housing building. The Stage 2a Built Form SSDA is submitted concurrently with a separate (but interrelated) Stage 2-4 civil works SSDA (SSD-86131212), which comprises the construction of the Central Park, the Southern Park, and roads, drainage and stormwater infrastructure, and paper subdivision.

This OWMP has been prepared to address the requirements of [17 # Waste Management]. This Stage 2a Built Form SSDA was declared as State Significant Development (**SSD**) in the State Significant Development Declaration Ministerial Order (No 10) 2025 (dated 30 June 2025) at Clause 5(1)(n) in Schedule 1 (Amendment SSD Declaration Order 2025 (No 5)).

SEAR17: Waste Management	Section
<ul style="list-style-type: none"> Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste, including in accordance with any council waste management requirements. 	Refer to sections 4.4, 4.6 and 5.0.
<ul style="list-style-type: none"> Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site. 	Refer to section 4.5.

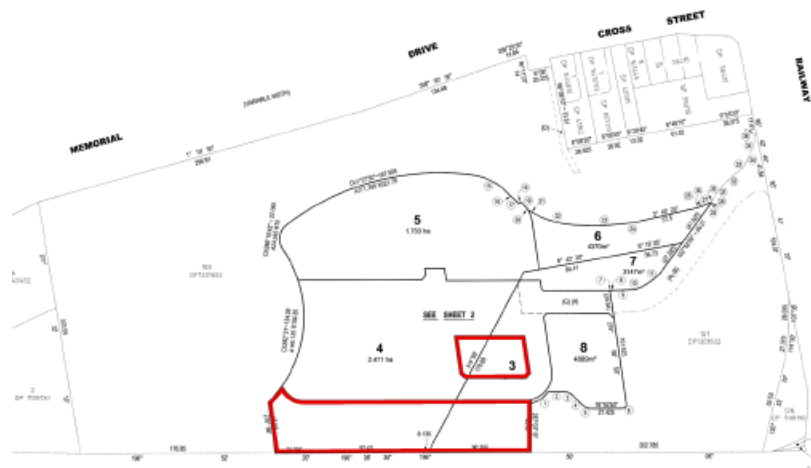
3.1 PROJECT AND SITE DESCRIPTION

Descriptor	Site Details
Proponent / Applicant	Legpro 70 Pty Ltd ATF Legpro 70 Unit Trust (Legacy)
Site Ownership	Illawarra Coke Company
SSD Reference	SSD-83789711 [SEARs issued 12 May 2025]
Project Name	Corrimal Coke Works - Stage 2A – Built Form
Street Address	Corrimal Coke Works, 27 Railway Street, Corrimal
Country	<p>Dharawal Country The Stage 2a Built Form SSDA seeks consent for the following:</p> <ul style="list-style-type: none"> • Construction of four (4) residential flat buildings, providing a total of 206 x residential apartments (including 57 x affordable housing units). The unit typologies, per residential flat building, are as follows: <ul style="list-style-type: none"> o Building 2.1 - 30 x apartments (8 x one-bedroom, 17 x two-bedroom, and 5 x three-bedroom units) o Building 2.2 - 57 x affordable housing apartments (3 x one-bedroom, 27 x two-bedroom, and 27 x three-bedroom units) o Building 2.3 - 59 x apartments (16 x one-bedroom, 31 x two-bedroom, and 12 x three-bedroom units) o Building 2.4 - 60 x apartments (12 x one-bedroom, 32 x two-bedroom, and 16 x three-bedroom units) • Construction of three (3) separate single-level basements as follows: <ul style="list-style-type: none"> o Basement 01 (to service Building 2.1) <ul style="list-style-type: none"> – 41 x residential car parking spaces – 6 x visitor car parking spaces – Bicycle parking spaces – Motorcycle parking spaces – Waste and recycling storage areas o Basement 02 (to service Building 2.2) <ul style="list-style-type: none"> – 34 x residential car parking spaces – 11 x visitor car parking spaces – Bicycle parking spaces – Motorcycle parking spaces – Waste and recycling storage areas o Basement 03 (to service Building 2.3 and Building 2.4) <ul style="list-style-type: none"> – 151 x residential car parking spaces – 24 x visitor car parking spaces – Bicycle parking spaces – Motorcycle parking spaces – Waste and recycling storage areas • Creation of a series of deep soil areas and communal open space areas (including lawns and play areas, BBQ areas, and seating spaces) and accessible open space areas within Stage 2a. • Staged construction of the residential flat buildings, as follows: <ul style="list-style-type: none"> o Stage ...: Building 2.1 o Stage ...: Building 2.2 o Stage ...: Buildings 2.3 and 2.4
Existing Legal Description	<p>The existing legal property description of the former Corrimal Coke Works site is Lot 101 DP1301632, Lot 201 DP1308649, Lot 202 DP1308649, and Lot 103 DP1301632 (registered titles). The former Corrimal Coke Works site boundary extent is identified in blue below.</p> <p>The proposed works associated with the Stage 2a Built Form SSDA extend across Lot 201 DP1308649 (part) and Lot 202 DP1308649 (part).</p> <p>The land to which the Stage 2a Built Form SSDA relates is identified in red.</p>



Note. On [... September 2025], Wollongong City Council approved a development application for the paper subdivision of the former Corrimal Coke Works site to create eight (8) new Torrens Title lots (DA-2025/388). The new lots are described as Lot 1 – Lot 8 in DP1313981.

The new lots have not yet been registered with the NSW Land Registry Services. However, it is anticipated that formal registration will occur prior to the determination of the subject SSSA. **For information only**, the below identifies in **red** the land to which the Stage 2a built form SSSA **will** relate at the point the newly created lots (approved by DA-2025/388) are formally registered.



Site Area

The area of the land to which the Stage 2a Built Form SSSA relates is 10,597 sqm. This land is identified in the image above in **red**.

Note. For the purposes of assessing the proposed development to which the subject Stage 2a Built Form SSSA against the numerical development standards and planning controls in the relevant environmental planning instruments, the site area is ... sqm. This comprises the combined area of the three proposed residential lots which will be created by the Torrens subdivision in the concurrent Stage 2-4 Civil Works SSSA, being:

- Proposed Lot 201 (Building 2.1) - ... sqm [DKO to confirm]
- Proposed Lot 203 (Building 2.2) - ... sqm [DKO to confirm]
- Proposed Lot 204 (Buildings 2.3 and 2.4) - ... sqm [DKO to confirm]

	More broadly, the area of the Corrimal Coke Works site is 18.2 hectares.
Existing Development	<p>Existing features across the Corrimal Coke Works site are as follow:</p> <ul style="list-style-type: none"> • Structures and infrastructure associated with the former coke work production have been demolished under the Demolition DA (DA-2022/1249). • Towradgi Creek forms the southern boundary of the site and drains in a west to east direction. A tributary of the Creek traverses the site. The western portion of the site is occupied by scattered bush and stockpiling areas. <p>Separate development applications (DAs) have been lodged to Wollongong City Council, and either have been determined or are under assessment. These DAs propose works relating to subdivision, built form (apartment buildings), bulk earthworks, and vegetation management.</p>
Heritage	<p>The site, in part, is subject to the following heritage listings:</p> <ul style="list-style-type: none"> • Local heritage listing in the Wollongong LEP 2009 (ID 6607); and • State heritage listing on the State Heritage Register in the NSW Heritage Act 1977 ('Corrimal Coke Works Site', Item No. 02061).
Local Context	<p>The site has an irregular rectangular configuration and is bounded by:</p> <ul style="list-style-type: none"> • East boundary: main southern railway line (Corrimal Train Station) • West boundary: dual carriageway (Memorial Drive) • North boundary: Railway Street • South boundary: Towradgi Creek
Regional Context	<p>The site is approximately 1km to the east of the Corrimal Town Centre. Corrimal is approximately 6.5 kilometres north of Wollongong City Centre. The site is located within close proximity to education and recreation facilities, including the Corrimal High School, Corrimal East Public School, Robert Ziems Park, Corrimal Memorial Park, Towradgi Beach Park, and Bowls and Recreation Club.</p>

4.0 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.

4.1 RESIDENTIAL WASTE GENERATION ESTIMATES

The NSW EPA's 'Better Practice Guide for Resource Recovery in Residential Developments (2019)' has been referenced to calculate the total number of bins required for the residential units. Calculations are based on generic general waste, recycling and 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 tables show the estimated volume (L) of general waste, recycling and FOGO generated by the residential component of the development.

Table 1: Estimated Waste, Recycling and FOGO Volumes – Bldg. 2.1

Building/ Core	# Beds	# Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Recycling Generation Rate (L/unit/week)	Generated Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
2.1	1 Bed	9	80	720	80	720	25	225
	2 Beds	17	100	1700	100	1700	25	425
	3+ Beds	5	120	600	120	600	50	250
TOTAL		31		3020		3020		900
Bins & Collections			General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100	FOGO Waste Bin Size (L)	240
			General Waste Collections per Week	1	Recycling Collections per Week	1	FOGO Waste Collections per Week	1
			Total General Waste Bins Required	3	Total Recycling Bins Required	3	Total FOGO Waste Bins Required	4
Bins per Building/ Core			Building/ Core	# Bins	Building/ Core	# Bins	Building/ Core	# Bins
			2.1	3	2.1	3	2.1	4

Table 2: Estimated Waste, Recycling and FOGO Volumes – Bldg. 2.2 A & B

Building/ Core	# Beds	# Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Recycling Generation Rate (L/unit/week)	Generated Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
2.2 A	1 Bed	20	80	1600	80	1600	25	500
	2 Beds	11	100	1100	100	1100	25	275
	3+ Beds	0	120	0	120	0	50	0
2.2 B	1 Bed	9	80	720	80	720	25	225
	2 Beds	17	100	1700	100	1700	25	425
	3+ Beds	0	120	0	120	0	50	0
TOTAL		57		5120		5120		1425
Bins & Collections			General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100	FOGO Waste Bin Size (L)	240
			General Waste Collections per Week	1	Recycling Collections per Week	1	FOGO Waste Collections per Week	1
			Total General Waste Bins Required	6	Total Recycling Bins Required	6	Total FOGO Waste Bins Required	7
Bins per Building/ Core			Building/ Core	# Bins	Building/ Core	# Bins	Building/ Core	# Bins
			2.2 A	3	2.2 A	3	2.2 A	4
			2.2 B	3	2.2 B	3	2.2 B	3

Table 3: Estimated Waste, Recycling and FOGO Volumes – Buildings 2.3 and 2.4 A & B.

Building/ Core	# Beds	# Units	General Waste Generation Rate (L/unit/week)	Generated General Waste (L/week)	Recycling Generation Rate (L/unit/week)	Generated Recycling (L/week)	FOGO Waste Generation Rate (L/unit/week)	Generated FOGO Waste (L/week)
2.3 A	1 Bed	11	80	880	80	880	25	275
	2 Beds	17	100	1700	100	1700	25	425
	3+ Beds	3	120	360	120	360	50	150
2.3 B	1 Bed	6	80	480	80	480	25	150
	2 Beds	15	100	1500	100	1500	25	375
	3+ Beds	8	120	960	120	960	50	400
2.4 A	1 Bed	6	80	480	80	480	25	150
	2 Beds	18	100	1800	100	1800	25	450
	3+ Beds	6	120	720	120	720	50	300
2.4 B	1 Bed	6	80	480	80	480	25	150
	2 Beds	14	100	1400	100	1400	25	350
	3+ Beds	10	120	1200	120	1200	50	500
TOTAL		120		11960		11960		3675
Bins & Collections			General Waste Bin Size (L)	1100	Recycling Bin Size (L)	1100	FOGO Waste Bin Size (L)	240
			General Waste Collections per Week	1	Recycling Collections per Week	1	FOGO Waste Collections per Week	1
			Total General Waste Bins Required	12	Total Recycling Bins Required	12	Total FOGO Waste Bins Required	17
Bins per Building/ Core			Building/ Core	# Bins	Building/ Core	# Bins	Building/ Core	# Bins
			2.3 A	3	2.3 A	3	2.3 A	4
			2.3 B	3	2.3 B	3	2.3 B	4
			2.4 A	3	2.4 A	3	2.4 A	4
			2.4 B	3	2.4 B	3	2.4 B	5

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

4.2 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:

Table 4: Bin Summary per Buildings

Bldg.	General Waste	Recycling	Food Waste
2.1	3 x 1100L MGBs	3 x 1100L MGBs	4 x 240L MGBs
2.2 (A&B)	6 x 1100L MGBs	6 x 1100L MGBs	7 x 240L MGBs
2.3 and 2.4 (A&B)	12 x 1100L MGBs	12 x 1100L MGBs	17 x 240L MGBs
TOTAL	21 x 1100L MGBs	21 x 1100L MGBs	28 x 240L MGBs

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.

4.3 RESIDENTIAL CHUTE DISCHARGE EQUIPMENT SUMMARY

It is strongly recommended that the bins and equipment at the base of each chute allows for at least 2 days' worth of general waste generation. Based on the estimated general waste volumes generated by each building/core, the following equipment is recommended:

Table 5: Chute Discharge Equipment Summary

Volume Handling Equipment			
General Waste			
Bldg./ Core	Generated General Waste (L/week)	# 1100L Bins Required for 2 days' Capacity	Recommended Chute Discharge Equipment
2.1	2940	0.76	Single Bin
2.2 A	2700	0.70	Single Bin
2.2 B	2420	0.63	Single Bin
2.3 A	2940	0.76	Single Bin
2.3 B	2940	0.76	Single Bin
2.4 A	3000	0.78	Single Bin
2.4 B	3080	0.80	Single Bin

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

4.4 RESIDENTIAL WASTE DISPOSAL PROCEDURES

All units across the buildings 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.

4.4.1 RESIDENTIAL GENERAL WASTE AND RECYCLING DISPOSAL PROCEDURES

A single general waste chutes will be installed in each building core of the building with access provided to all residents on each residential level. Separate 240L recycling bins will be provided in a compartment adjacent to the general waste chute for the storage of recycling.

Residents will be responsible for walking their general waste and recycling to their allocated disposal point and placing their general waste into the general waste chute and 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 single 1100L bins in the Chute Discharge Rooms located on the basement level of each building core. The building manager will monitor bin capacities under the general waste chute and exchange full bins with empty bins under the chutes 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.

The 240L recycling bins will also be moved down when full by the building staff to the basement and decanted using a bin lifter into larger 1100L recycling bins in the bin storage room of each building.

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

4.4.2 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 Wollongong City Council's future FOGO collection service procedures (for example a compostable liner). Any plant clippings from residential units can also be disposed of with the FOGO.

The buildings will be each provided with a separate Communal FOGO Bin Room which contains 240L bins for FOGO. The residents will be responsible for walking their FOGO down to the Communal FOGO Bin Room and placing it into the bins.

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.

4.5 RESIDENTIAL BIN COLLECTION PROCEDURES

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

Prior to collections, the Building Manager/Caretaker will be responsible for transporting the bins from Chute Discharge Rooms, each residential level and Communal FOGO Rooms to the bin storage rooms of each building located on the basement level. The bins will then be moved up using the bin hoist to the collection area of each building located on the ground level.

The Building Manager/Caretaker is also responsible for ensuring that the bins are adequately arranged for an efficient collection. It is recommended that additional 1100L service bins be placed under the chute to collect discharge while the other bins are being serviced. Bins may be transported between levels via the aid of a bin hoist.

It is the responsibility of the caretaker to ensure that the loading area is clear of any vehicles or obstructions prior to waste collection. On the day of collection, a Council collection vehicle will enter the building from their respective internal roads and park in the loading bays of building basement separately.

The Building Manager/Caretaker will be responsible for ensuring that the collection staff have access to the collection point. The collection staff will exit the vehicle and collect the bins from the collection area and return the empty bins once serviced. Each lot collection area will be serviced separately.

Upon completion of servicing, the collection vehicle will exit the site onto the internal roads in a forward direction. The Building Manager/Caretaker is responsible for returning the bins to their operational location to resume use.

All access and clearances to the waste area has been designed to accommodate the Councils 10.24 meter-long as per the Wollongong DCP 2008 (Chapter E7: Waste Management).

4.6 OTHER RESIDENTIAL WASTE MANAGEMENT CONSIDERATIONS

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

4.6.1 RESIDENTIAL COMMON AREAS

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

4.6.2 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 chute or bins.

4.6.3 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.

The NSW EPA's Better Practice Guide for Resource Recovery in Residential Developments (2019) requires that size of the Bulky Waste Room provided is proportional to the number of units in the building at a rate of 10m² for the first 40 units then 2m² for every 10 units thereafter.

Based on this rate, the Bulky Waste Room required for each building lot are as follows;

Buildings	Units	Bulky Waste Area (m²)
2.1	30	10
2.2 (A&B)	57	14
2.3 and 2.4 (A&B)	120	26

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/Caretaker will transport the bulky waste items from the Bulky Waste Room on the basement level to the Collection Area of each lot on ground level using the bin hoist.

On the day of bulky waste collection, a Council collection vehicle will enter the site from the internal roads and park in the loading bay of each building basement separately. Collection staff will collect the bulky waste items from the collection area of each lot. Once bulky items have been loaded onto the vehicle, the collection vehicle will exit the site onto the internal roads in a forward direction. Each lot collection area will be collected separately.

5.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 6: 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.

6.0 SOURCE SEPARATION

Better practice waste management includes the avoidance, reuse, and recovery of unwanted items, which can be achieved through source separation. 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 7: 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.
Recycling	A mixture of items that are commonly recycled usually segregated through a MRF. Typically include food and beverage containers (e.g. aluminium, glass, steel, hard plastics, cartons). Also included cardboard and paper products.	Resource Recovery Centre	Recycling must not be bagged, and instead should be placed loosely in the designated recycling bins. Bulky cardboard must not be placed in any chute. Cardboard should be flattened before placing in the designated recycling bin.
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.
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.
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.

7.0 MITIGATION MEASURES

The following sections provide additional recommended mitigation measures for the operational phase:

7.1.1 EDUCATION

Educational material encouraging correct separation of general waste and recycling must be provided to all tenants and contractors. This should include the correct disposal process for bulky waste such as desks, chairs, large, discarded items, and other materials including electronic and chemical wastes. It is recommended that building management ensures that information is provided in multiple languages to support correct behaviours, and to minimise the possibility of 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 tenants, or cleaning staff. Information should include:

- Descriptions of items accepted in the general waste and recycling streams (refer to Council guidance);
- How to dispose of bulky waste and any other items that are not general waste or recycling;
- Staff and tenants obligations to health and safety as well as building management; and
- How to prevent cross contamination among waste streams.

7.1.2 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.

Building management 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 signage should conform to the relevant Australian Standards.

7.1.3 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

7.1.4 BIN WASHING

The bins will be cleaned by the building manager and or cleaners 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. It is recommended that a dustpan and a broom is provided in this room for staff and cleaners to clean up unexpected spillages when using bins.

7.1.5 BIN MOVING PATHS

The building managers are 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 school management 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 school management should contact a bin-tug, trailer or tractor consultant to provide equipment recommendations.

Once the site is operational, the building manager 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.

8.0 EQUIPMENT SUMMARY

Table 8: Equipment Summary

	Part	Qty	Notes
Chutes	Please refer to supplier's information	7	(See APPENDIX: B.1 for Typical Single Chute Layout)
Other Equipment	Suitable Bin Moving Device	2	(See APPENDIX: D.1 and APPENDIX: D.2 for Typical Bin Movers)
	Suitable Bin Lifter	2	(See APPENDIX: D.5 for Typical Bin Lifters)

9.0 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 9: Waste Room Areas

	Level	Waste Room Type	Equipment	Estimated Area Required (m ²)
2.1	B	Chute Discharge Room	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	FOGO Bin Room	FOGO: 4 x 240L Bins	4
	B	Bin Storage Room	General waste: 3 x 1100L Bin Recycling: 3 x 1100L Bin FOGO: 4 x 240L Bins 1 x Bin Lifter	24
	B	Bulky Waste Room		10
	GF	Bin Collection Area	General waste: 3 x 1100L Bin Recycling: 3 x 1100L Bin FOGO: 4 x 240L Bins	21
2.2	B	Chute Discharge Room (Core A)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	Chute Discharge Room (Core B)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	FOGO Bin Room	FOGO: 6 x 240L Bins	6
	B	Bin Storage Room	General waste: 6 x 1100L Bin Recycling: 6 x 1100L Bin FOGO: 7 x 240L Bins 1 x Bin Lifter	44
	B	Bulky Waste Room		14
	GF	Bin Collection Area	General waste: 6 x 1100L Bin Recycling: 6 x 1100L Bin FOGO: 7 x 240L Bins	41
2.3 & 2.4	B	Chute Discharge Room (Core A)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	Chute Discharge Room (Core B)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	FOGO Bin Room	FOGO: 8 x 240L Bins	7
	B	Chute Discharge Room (Core A)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	Chute Discharge Room (Core B)	General waste: 1 x 1100L Bin Service bin: 1 x 1100L Bin	6
	B	FOGO Bin Room	FOGO: 9 x 240L Bins	8
	B	Bin Storage Room	General waste: 12 x 1100L Bins	87

			Recycling: 12 x 1100L Bins FOGO: 17 x 240L Bins 1 x Bin Lifter	
	B	Bulky Waste Room		26
	GF	Bin Collection Area	General waste: 12 x 1100L Bins Recycling: 12 x 1100L Bins FOGO: 17 x 240L Bins	84
Allocated space for a minimum of 2 bin movers				

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

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 70% of bin GFA factored in for manoeuvrability. In addition, all doorways and passageways facilitating the movement of bins and/or bulky waste items must be at least 1500mm wide.

EFC can confirm that the recommendations and requirements for waste storage areas and collection have been considered and incorporated into the design as per the waste room areas table displayed above.

The following table provides further waste room requirements.

Table 10: 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 3000mm (3100mm with compactor) (subject to penetration location) • The chute penetration must have a minimum 500mm clearance of any service pipes or other overhead obstacles • All 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 cock 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

10.0 CONCLUDING STATEMENT

In conclusion, this Operational Waste Management Plan, prepared by T. McPherson, supports the State Significant Development Application (SSDA) for Stage 2a - 27 Railway St, Corrimal NSW. 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 Secretary's Environmental Assessment Requirements (SEARs).

11.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Wollongong Development Control Plan 2009*, 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.

11.1 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.

12.0 USEFUL CONTACTS

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

LOCAL COUNCIL

Wollongong Customer Service Ph: (02) 4227 7111 E: council@wollongong.nsw.gov.au

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

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

SOURCE SPERATION BINS

Method Recycling Ph: 0499 890 455

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

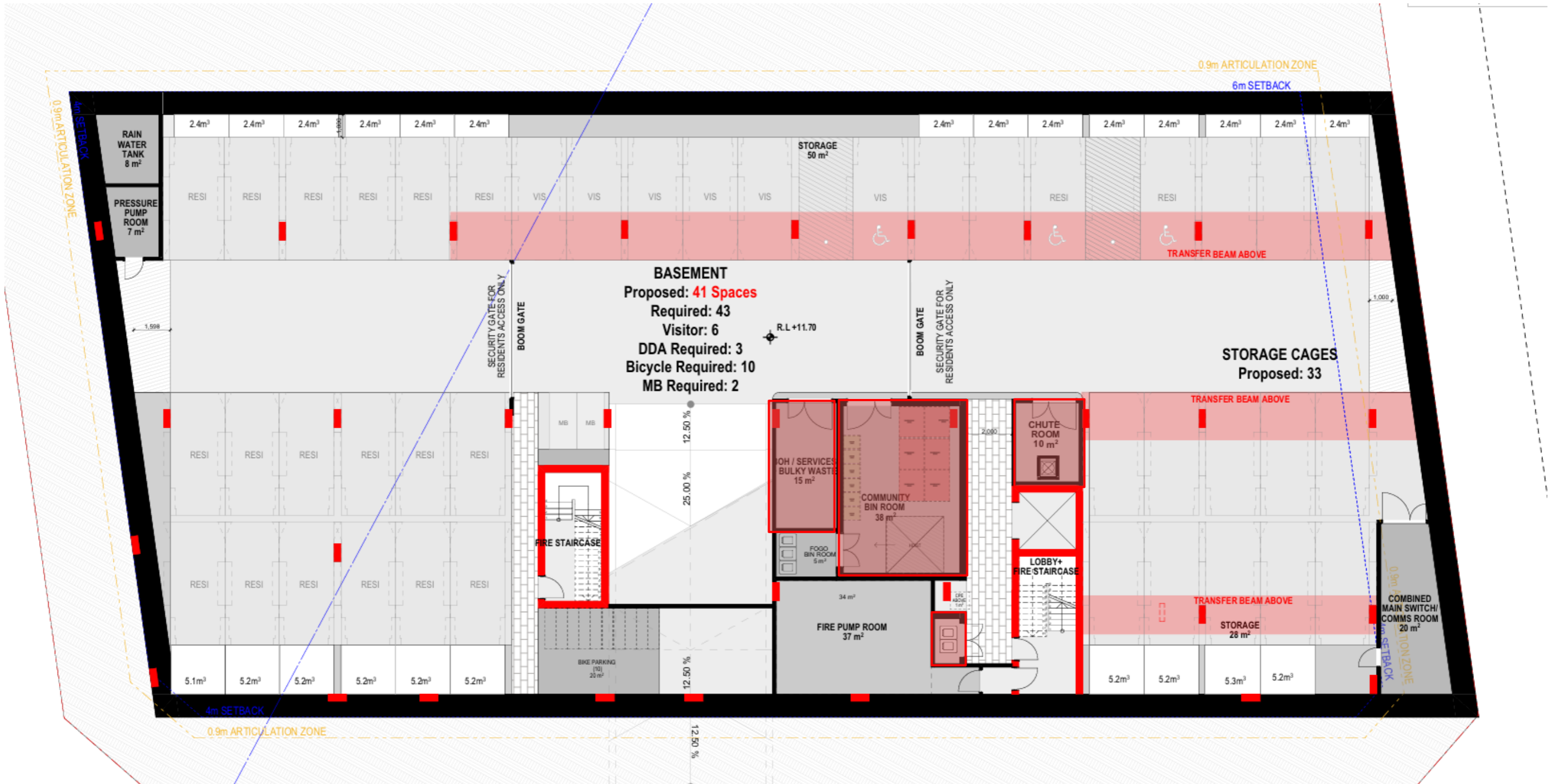
APPENDIX A: ARCHITECTURAL PLANS

APPENDIX: A.1 GROUND FLOOR PLAN



Source: DKO, Drawing No. DA1200, Revision P01 – Stage 2a – Basement Level 1

APPENDIX: A.2 BASEMENT FLOOR PLAN – BUILDING 2.1



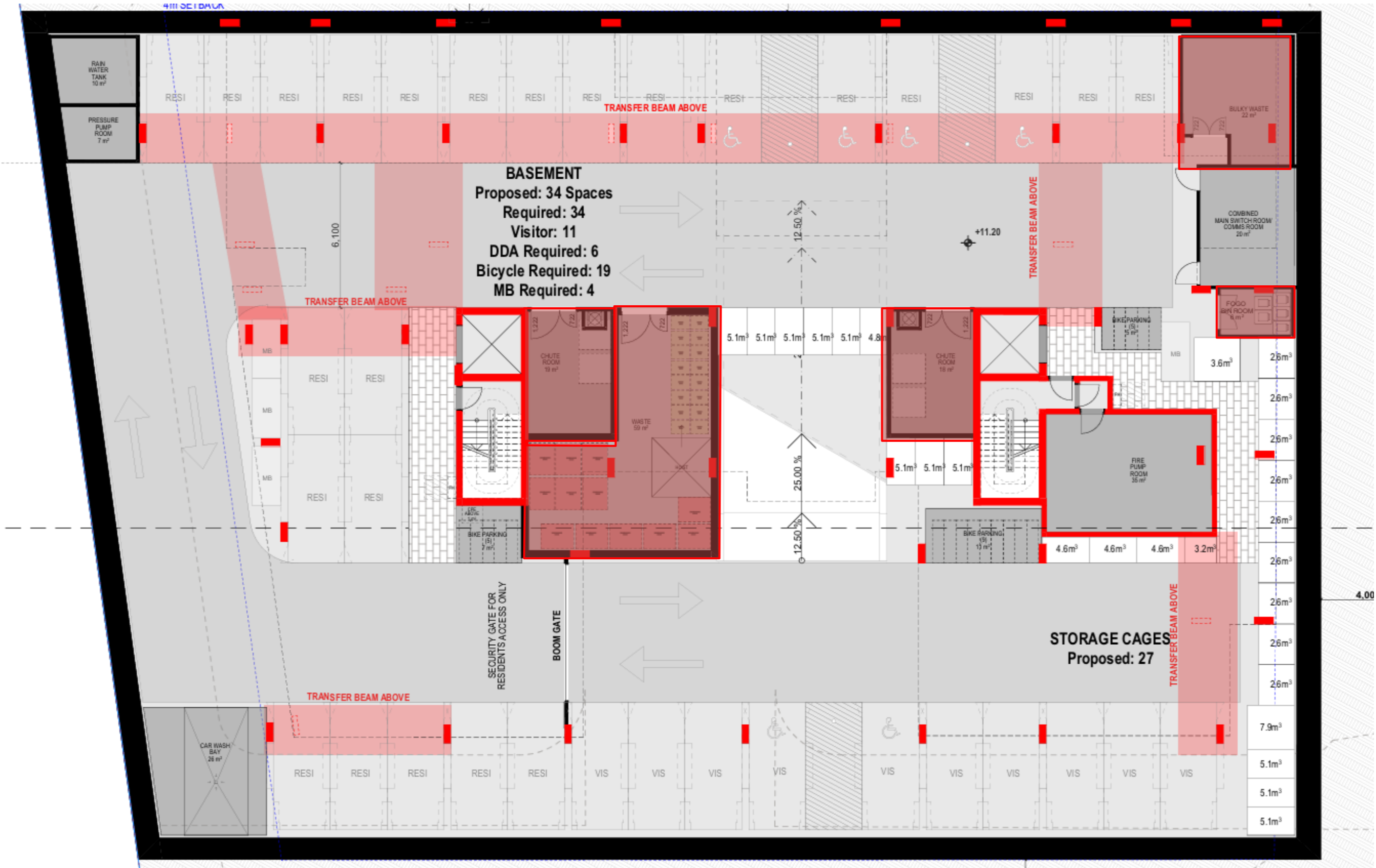
Source: DKO, Drawing No. DA2200, Rev. P02 - B2.1 Basement Level 1

APPENDIX: A.3 GROUND FLOOR PLAN – BUILDING 2.1



Source: DKO, Drawing No. DA2201, Rev. P02 – B2.1 Ground Level Plan

APPENDIX: A.4 BASEMENT FLOOR PLAN – BUILDINGS 2.2 (CORE A AND B)



Source: DKO, Drawing No. DA3200, Rev. P02 – B2.2 Basement Level 1

APPENDIX: A.5 GROUND FLOOR PLAN – BUILDINGS 2.2 (CORE A AND B)



Source: DKO, Drawing No. DA3201, Rev. P02 – B2.2 Ground Level Plan

APPENDIX: A.6 BASEMENT FLOOR PLAN – BUILDING 2.3 AND 2.4 (CORES A AND B)



Source: DKO, Drawing No. DA4200, Rev. P02 – B2.3 & B2.4 Basement Level 1

APPENDIX: A.7 GROUND FLOOR PLAN – BUILDING 2.3 AND 2.4 (CORES A AND B)



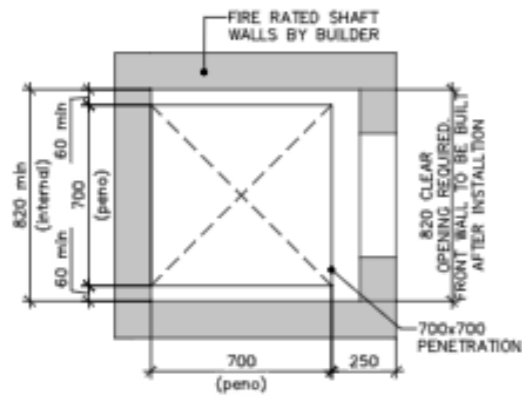
Source: DKO, Drawing No. DA4201, Rev. P02 – B2.3 & B2.4 Ground Level Plan

APPENDIX B: INSTALLATION EQUIPMENT

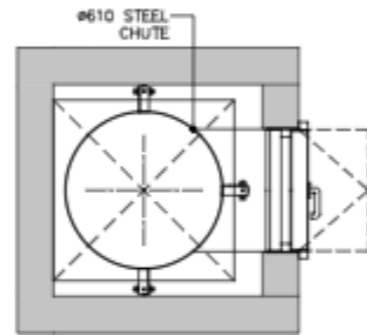


CHUTE SHAFT & PENETRATION SET-OUT

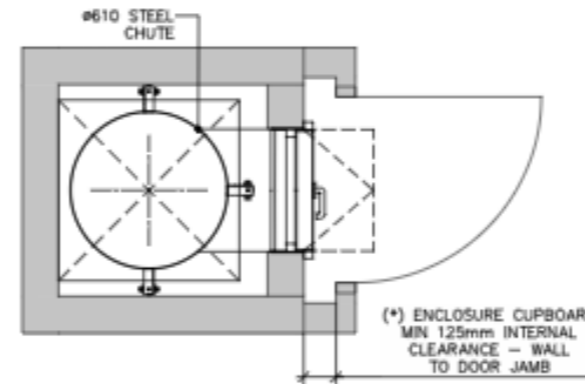
SINGLE Ø610 STEEL



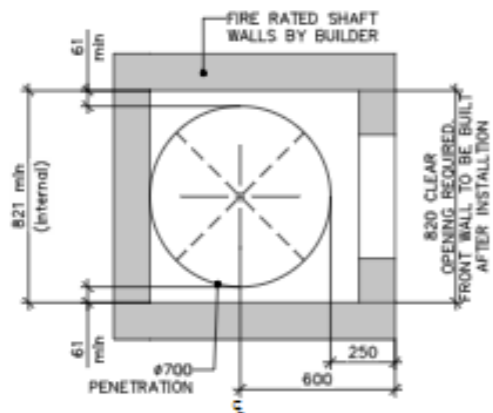
01 SINGLE (610Ø) GALV. STEEL CHUTE PENETRATION SET-OUT



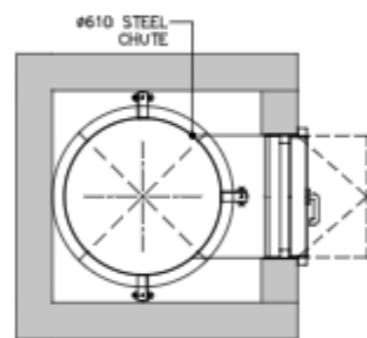
02 SINGLE (610Ø) GALV. STEEL CHUTE LAYOUT



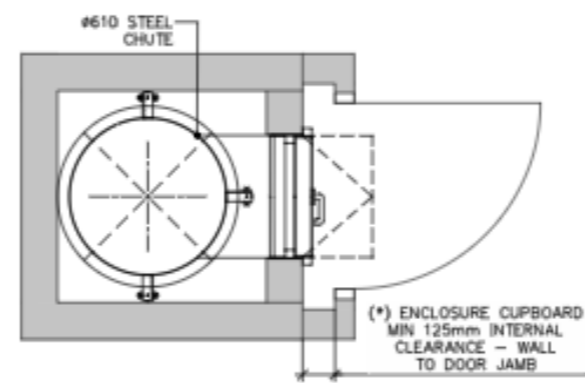
03 SINGLE (610Ø) GALV. STEEL CHUTE LAYOUT with ENCLOSURE CUPBOARD (*)



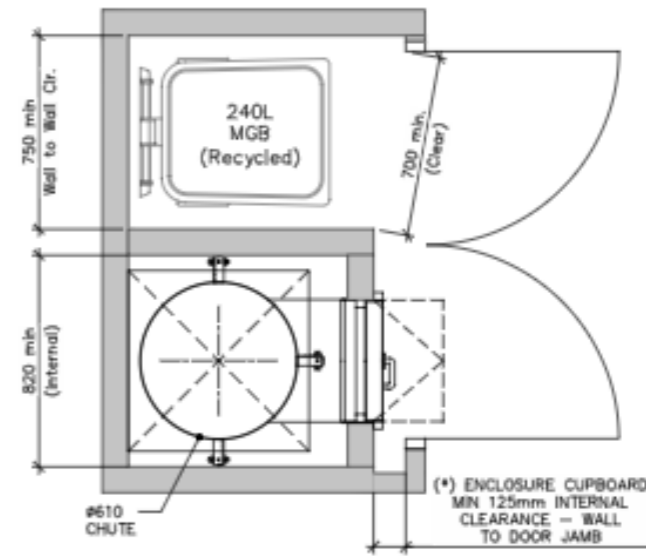
04 SINGLE (610Ø) GALV. STEEL CHUTE WITH CIRCULAR PENETRATION SET-OUT



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

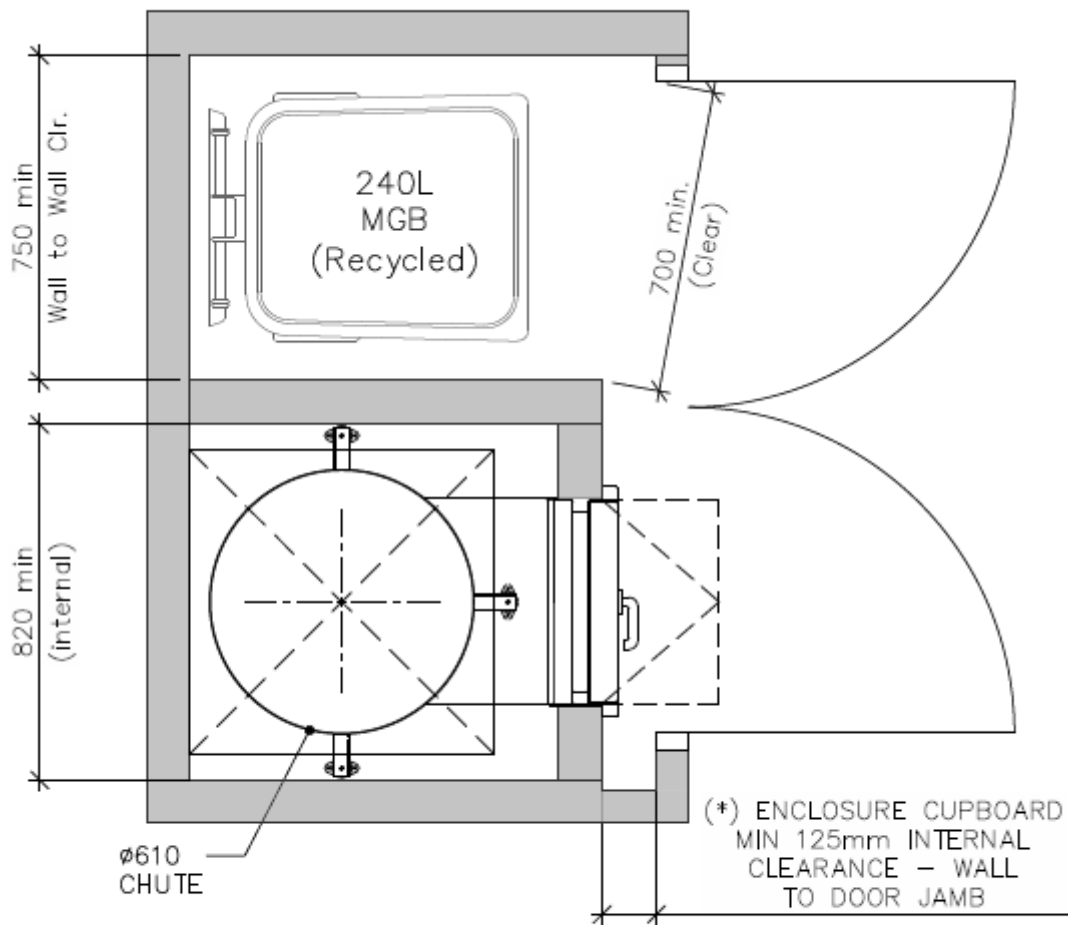
(*). NOTE: ENCLOSURES ARE RECOMMENDED IF THE CHUTE OPENS DIRECTLY TO A CORRIDOR OR IS NOT LOCATED IN A WASTE ROOM. IF CHUTE ACCESS IS WITHIN A WASTE ROOM THEN THE CUPBOARD ENCLOSURES ARE NOT REQUIRED.

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 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

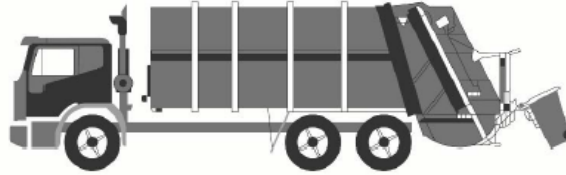
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0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

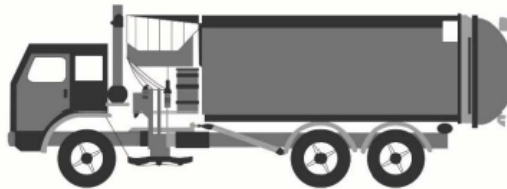
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



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 SEATED BIN MOVERS



MOTREC MT180 36V BATTERY ELECTRIC BIN MOVER

This hardworking tow device delivers outstanding performance. With its efficient motor and 4,500kg push-pull capacity. The MT180 is ideal for moving bin trailer also narrow enough to fit through most door openings. From its all-steel construction to its all-wheel braking, this tow tractor is built for years of heavy use in total comfort and safety. All this combined with superior AC technology makes short work of tough requests.

Features

- Front & rear brakes
- Pneumatic Tyres
- Comfortable ergonomic adjustable seat
- Complete with headlight, break lights, tailing lights & horn



SPECIFICATION				
MODEL	DIMENSIONS (MM)	OPTIONAL EXTRAS	PULL - PUSH CAPACITY (KG)	BATTERY
MT180 36V	760 (w) x 2030 (l) x 1160 (h)	Flashing light on pole Conditional registration kit Cabin includes windscreen Weather Curtains	4500	48V TPPL battery pack, 157AH
TOWING CAPACITY - ON FLAT GROUND / SLOPE (all models) (all models)				
Towing up to 5x 660 lt. Wheelie Bin Up / Down maximum 25% (1:4 slope)				
Towing up to 4x 1100 lt. Wheelie Bin Up / Down maximum 25% (1:4 slope)				



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

Source: Sitecraft - www.sitecraft.net.au

APPENDIX: D.3 EXAMPLE BIN TRAILERS



BIN TRAILER WITH ALUMINUM RAMP

Bin trailer suitable for moving 240lt, 660lt and 1,100lt bins including a 1200mm rear ramp complete with locking latches and gas strut assist. Height draw bar fitted with a jockey wheel large pneumatic tyres with precision bearing hubs



SPECIFICATION

MODEL	DIMENSION (MM)	SUITABLE FOR MOVING	PART NUMBERS	REAR RAMP DIMENSION (MM)
4x Bins Trailer	Internal - 1560 (l) x 1200 (w)	4x 240lt. Wheelie Bin	78811604	1200mm rear ramp complete with positive locking and gas strut assist
	External - 2300 (l) x 1500	2x 660lt. Wheelie Bin		
		1x 110lt. Wheelie Bin		
6x Bins Trailer	Internal - 2350 (l) x 1200 (w)	6x 240lt. Wheelie Bin	78811065	1200mm rear ramp complete with positive locking and gas strut assist
	External - 3100 (l) x 1500 (w)	3x 660lt. Wheelie Bin		
		2x 1100lt. Wheelie Bin		
8x Bins Trailer	Internal - 3200 (l) x 1200 (w)	8x 240lt. Wheelie Bin	78811066	1200mm rear ramp complete with positive locking and gas strut assist
	External - 3900 (l) x 1500 (w)	4x 660lt. Wheelie Bin		
		3x 1100lt. Wheelie Bin		
10x Bins Trailer	Internal - 3900 (l) x 1200 (w)	10x 240lt. Wheelie Bin	78811067	1200mm rear ramp complete with positive locking and gas strut assist
	External - 4600 (l) x 1500 (w)	5x 660lt. Wheelie Bin		
		4x 1100lt. Wheelie Bin		

OPTIONS

- Full registration
- Upgrade Includes : Lights | Wiring | Suspension | aaa Tyres | Compliance Plate

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

Source: Sitecraft - www.sitecraft.net.au

APPENDIX: D.4 EXAMPLE BIN TOWING ATTACHMENTS



UNIVERSAL BIN TOWING ATTACHMENTS

SUITE 660LT / 1100LT WHEELIE BINS

PARTS & FEATURES

Front Only - Part Number: 78811672

- Suit Sulo & Otto 600lt / 1100lt MGBs
- Spring loaded draw bar folds up
- No drilling of holes in the bin required
- Solidly fixed to the base of the bin using the castor mounting bolts
- Passivated zinc finish for long life
- Correct Rear Fixed or Directional Lock castors should be used

Rear Only - Part Number: 78811673

- Suit Sulo & Otto 600lt / 1100lt MGBs
- No drilling of holes in the bin required
- Solidly fixed to the base of the bin using the castor mounting bolts
- Passivated zinc finish for long life
- Correct Rear Fixed or Directional Lock castors should be used

For Steel Bin Front Only - Part Number: 78811781

- Suit Sulo & Otto 600lt / 1100lt MGBs
- No drilling of holes in the bin required
- Solidly fixed to the base of the bin using the castor mounting bolts
- Passivated zinc finish for long life
- Correct Rear Fixed or Directional Lock castors should be used

Direction Lock : 53191001

- Suit Sulo & Otto 600lt / 1100lt MGBs
- No drilling of holes in the bin required
- Solidly fixed to the base of the bin using the castor mounting bolts
- Passivated zinc finish for long life
- Correct Rear Fixed or Directional Lock castors should be used



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

Source: Sitecraft - www.sitecraft.net.au

APPENDIX: D.5 EXAMPLE BIN LIFTER FOR 240L BINS

versatip

Versatip Bin Tipper – 1500mm Tip



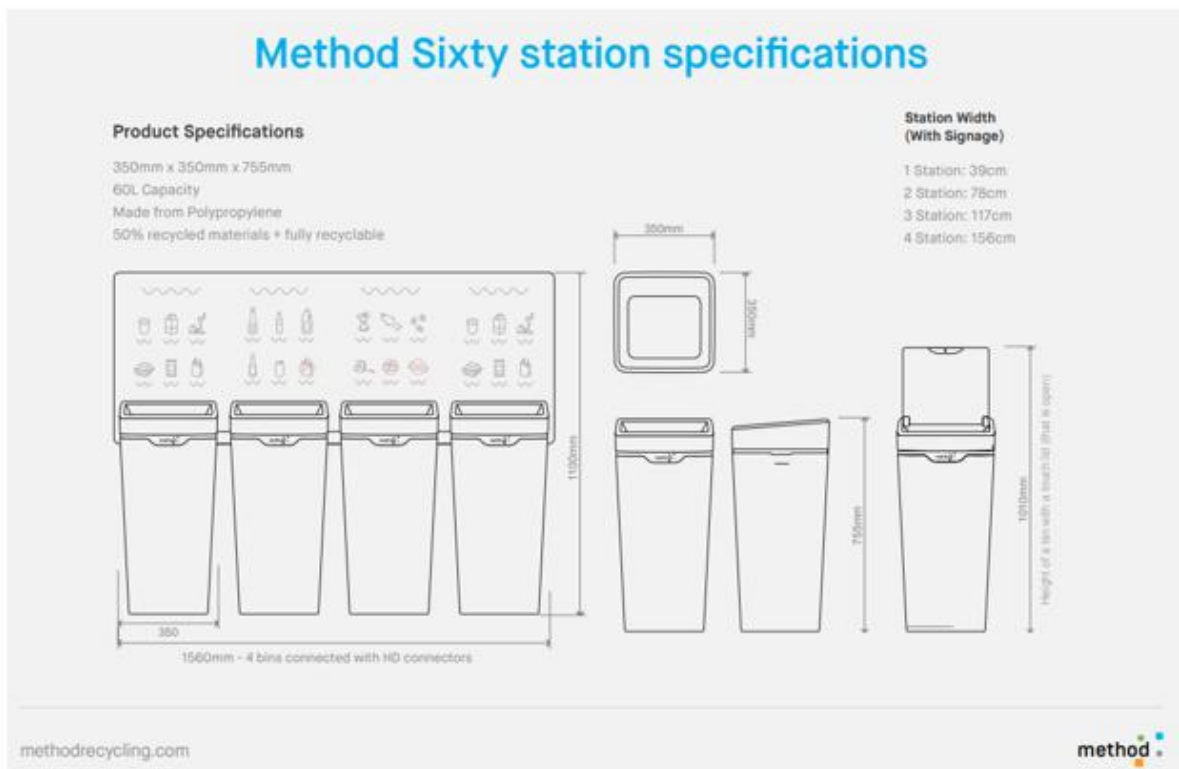
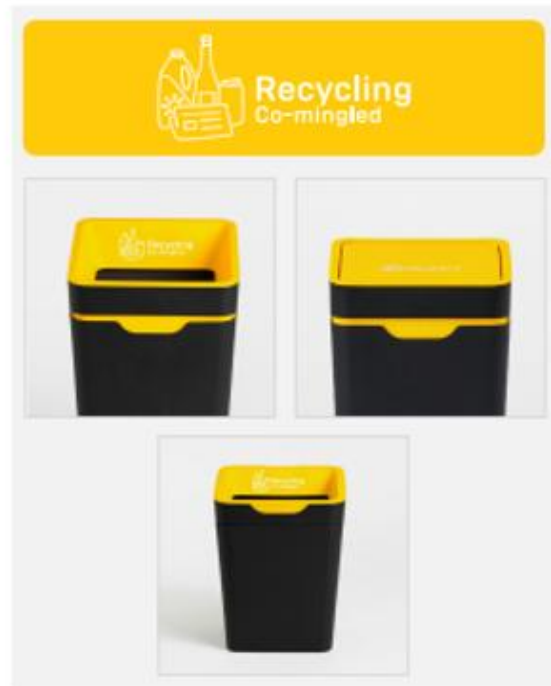
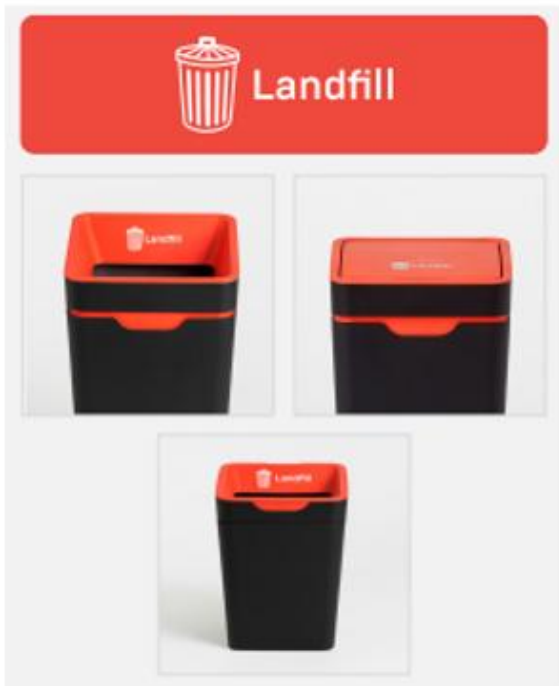
Specifications

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.6 EXAMPLE SOURCE SEPARATION RECEPTACLES



Source: Method Recycling - www.methodrecycling.com