The Yards
25 Moss Vale Rd, Bomaderry NSW 2540
Mixed-Use Development

OPERATIONAL WASTE MANAGEMENT PLAN

16/01/2025
Report No. 6508
Revision D

Client

Southern Cross Community Housing
https://scch.org.au/

Architect

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REVISION REFERENCE

Revision	Date	Prepared by	Reviewed by	Description
A	13/11/2024	S. Dib	M. Cuevas	Draft
B	19/12/2024	S. Dib	M. Cuevas	Amendment
C	08/01/2024	M. Cuevas	J. Parker	Final
D	16/01/2025	M. Cuevas	J. Parker	Final amendment

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GLOSSARY OF ABBREVIATIONS AND TERMS

TERM	DESCRIPTION
Bin-Carting Route	Travel path for transporting bins from their allocated storage location to the nominated collection point
Bin Lifter	A device used to mechanically lift bins for the purpose of emptying them into larger bins and/or compactors.
Bin Mover	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
Bulky Waste	Recycling items that are too large to be deposited into bins, including furniture, whitegoods, electronics and mattresses
Collection Area/Point	Designated area or point where bins are loaded onto the collection vehicle for servicing
Communal Bin Room	A central, shared bin room accessible to all residents or staff to dispose of their waste stream
DA	Development Application
DCP	Development Control Plan
EPA	Environment Protect Authority
General Waste	All non-recyclable and non-hazardous waste that is sent to landfill
HRV	Heavy Rigid Vehicle
Kerbside Collection	A collection arrangement whereby bins are presented in a single row along the kerb and serviced by a collection vehicle on the street.
L	Litre
LEP	Local Environmental Plan
Mixed Use Development	A development comprising a combination of both residential and commercial units or two or more different land uses within the one development.
Mobile Bins	Containers with a capacity up to and including 1100L designed to be collected by a rear-loading vehicle
Multi-unit Residential Development	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.
MRV	Medium Rigid Vehicle
Onsite Collection	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.
Owners Corporation	An organisation or group of persons that is identified by a particular name and that acts, or may act, as an entity

Recycling	Waste stream that combines all recycling, including comingled recycling, paper/cardboard and metals.
Source Separation Receptacles	Communal containers used throughout the development for the day-to-day disposal of different waste streams
SRV	Small Rigid Vehicle
Waste Stream	A classification used to describe waste of a particular type (eg. food waste stream)
WHS	Workplace Health and Safety
Wheel-Out Wheel Back	A collection arrangement whereby a collection vehicle parks on the street and collection staff exit the vehicle to wheel each bin from a designated storage area to the vehicle for servicing and returns them upon completion.

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) to satisfy the conditions of the Development Application Shoalhaven City Council requires for the mixed-use development, The Yards, located at 25 Moss Vale Rd, Bomaderry NSW 2540.

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.

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

2.2 REPORT CONDITIONS

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

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

3.0 LEGISLATION & GUIDANCE

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

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

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

- Shoalhaven Development Control Plan 2014
- Shoalhaven Local Environmental Plan 2014

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

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

- Shoalhaven City Council - Waste Minimisation and Management Guidelines
- 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 DEVELOPMENT OVERVIEW

The proposed development falls under the LGA of City of Shoalhaven, and consists of 13 Areas with multi-unit buildings, individual houses and retail/commercial tenancies:

- 7 Areas with multi-unit apartment buildings - 151 residential units in total:
  - Area A – 6 Units (short-term accommodation on top reserved for SCCH's staff when they're staying overnight in Nowra)
  - Area B – 19 Units (Boarding House)
  - Area F – 14 Units
  - Area J – 27 Units
  - Area K – 28 Units
  - Area M – 30 Units
    - Core M1: 15 Units
    - Core M2: 15 Units
  - Area N – 27 Units

- 5 Areas with individual houses – 47 residential units in total:
  - Area C – 12 Units
  - Area D – 9 Units
  - Area E – 10 Units
  - Area G – 8 Units
  - Area H – 8 Units

- 2 Areas with retail tenancies – total GFA of 677 m^2:
  - Area A – 215 m^2
  - Area K – 462 m^2

- 2 Areas with commercial tenancies – total GFA of 813 m^2:
  - Area A – 880 m^2
  - Area L – 233 m^2

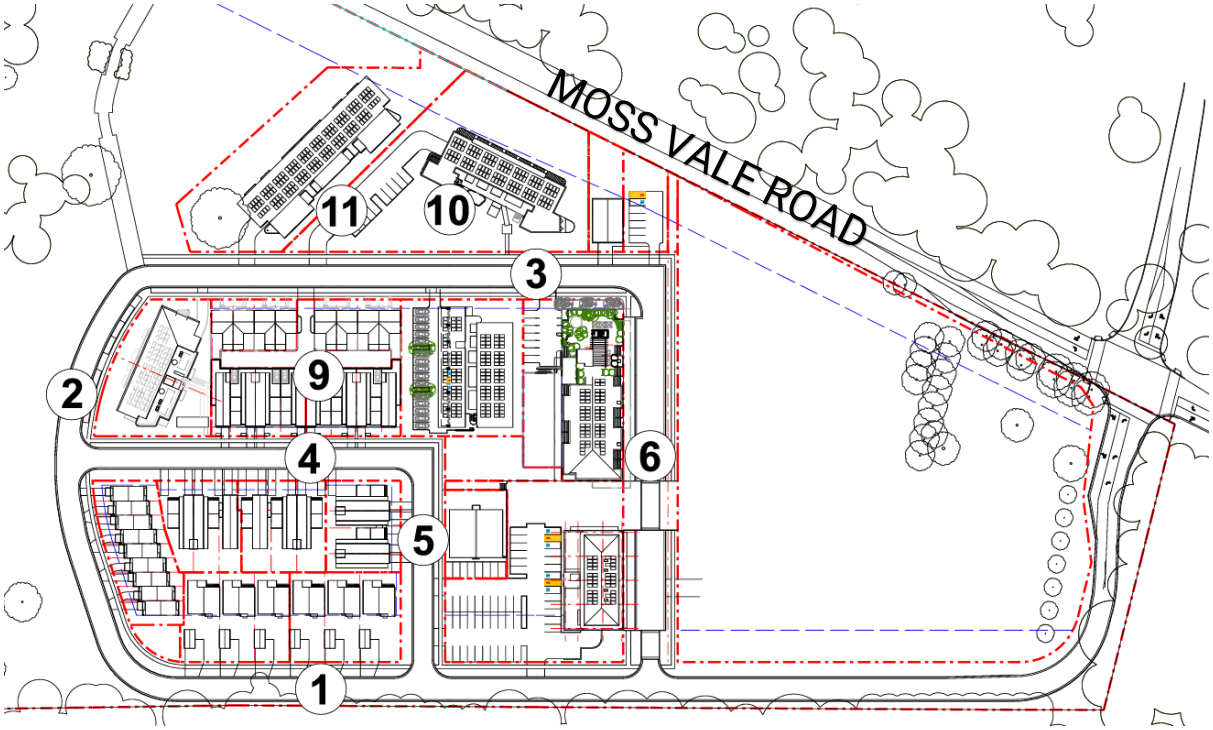
- Area K - Childcare Centre with 55 spots

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

4.1 SITE LOCATION

The site is located at 25 Moss Vale Rd, Bomaderry NSW 2540, as shown in *Figure 1* below (boundaries are indicative only). The outer borders of the site have frontages and vehicular access via Moss Vale Road. Within the site, areas and buildings will be provided with new roads (numbered below) for access to buildings and individual houses.

Figure 1: Site Location



Source: SPARC Development, MP400, Rev C, 21/10/2024 – Master Plan Concept – SSDA, Road Typology Key Plan

5.0 RESIDENTIAL WASTE MANAGEMENT

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

5.1 RESIDENTIAL WASTE GENERATION ESTIMATES

5.1.1 MULTI-UNIT BUILDINGS – AREAS A, B, F, J, K, M & N

The Shoalhaven City Council- Waste Minimisation and Management Guidelines 2019 has been referenced to calculate the total number of bins required. Calculations are based on generic general waste and recycling rates. Actual volumes in operation may differ according to the residents' actual waste management practices.

The following table shows the estimated volume (L) of general waste and recycling generated by the multi-unit buildings of the development located in areas A, B, F, J, K, M & N.

Table 1: Estimated General waste and recycling Volumes - Areas A, B, F, J, K, M & N

Building/ Core	**# Units**	**General Waste Generation Rate** (L/unit/week)	**Generated General Waste** (L/week)	**Recycling Generation Rate** (L/unit/week)	**Generated Recycling** (L/week)
A	**6**	30	180	10	60
B	**19**	30	570	10	190
F	**14**	120	1680	60	840
J	**27**	120	3240	60	1620
K	**28**	120	3360	60	1680
M1	**15**	120	1800	60	900
M2	**15**	120	1800	60	900
N	**27**	120	3240	60	1620
TOTAL	**151**		**15870**		**7810**
Bins & Collections		General Waste Bin Size (L)	240	Recycling Bin Size (L)	240
		General Waste Collections per Week	1	Recycling Collections per Week	0.5
		Total General Waste Bins Required	**69**	**Total Recycling Bins Required**	**68**
Bins per Building/ Core		**Building/ Core**	**# Bins**	**Building/ Core**	**# Bins**
		A	1	A	1
		B	3	B	2
		F	7	F	7
		J	14	J	14
		K	14	K	14
		M1	8	M1	8
		M2	8	M2	8
		N	14	N	14

5.2 RESIDENTIAL BIN SUMMARY

5.2.1 MULTI-UNIT BUILDINGS – AREAS A, B, F, J, K, M & N

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

General Waste: 69 x 240L bins collected **1 x weekly**

Recycling: 68 x 240L bins collected **Fortnightly**

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

5.2.2 INDIVIDUAL HOUSES – AREAS C, D, E, G & H

Shoalhaven Council offer a two-bin service to all single residential dwellings consisting of separate bins for general waste and recycling. General waste is collected weekly, while recycling is collected fortnightly.

AREAS C, E, H

General Waste: 60 x 120L bins collected **1 x weekly**

Recycling: 30 x 240L bins collected **Fortnightly**

AREAS D & G

General Waste: 17 x 120L bins collected **1 x weekly**

Recycling: 17 x 240L bins collected **Fortnightly**

5.3 RESIDENTIAL WASTE DISPOSAL PROCEDURES

Each unit/townhouse will be provided with a storage area capable of holding separate receptacles for general waste and recycling. 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 and recycling.

5.3.1 RESIDENTIAL GENERAL WASTE AND RECYCLING DISPOSAL PROCEDURES

For multi-unit buildings (areas A, B, F, J, K, M & N), each building/core will be provided with a communal bin room on the ground level/ undercroft/ basement containing shared 240L bins for general waste and shared 240L bins for recycling.

For townhouses (areas C, D, E, G & H), residents will be provided with an external bin storage area for storage of individual 120L general waste and 240L recycling bins. Bin storage areas are typically positioned in a courtyard or garage area on the ground level behind the building line of the townhouse, or where it is screened and cannot be viewed from public areas.

In all cases, residents will be responsible for depositing their own bagged general waste into the general waste bins and unbagged recycling into the recycling bins.

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

5.4 RESIDENTIAL BIN COLLECTION PROCEDURES

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

5.4.1 MULTI-UNIT BUILDINGS – AREAS A, B, F, J, K, M & N

Prior to collections, each Building Manager/Caretaker will be responsible for transporting the bins from their respective communal bin room to their allocated collection point in the kerbside ensuring that the bins are adequately arranged for an efficient collection.

On the day of collection, a Council collection vehicle will park in the kerbside on each building's respective street and service the bins.

The Building Manager/Caretaker is responsible for returning the bins to their operational location to resume use.

5.4.2 INDIVIDUAL HOUSES – AREAS C, D, E, G & H

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

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

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

5.5 RESIDENTIAL BULKY WASTE PROCEDURES

5.5.1 MULTI-UNIT BUILDINGS – AREAS A, B, F, J, K, M & N

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.

According to the NSW EPA's Better Practice Guide for Resource Recovery in New Developments 2019, the size of the Bulky Waste Room provided should be proportional to the number of units in the building at a rate of $10m^2$ for the first 40 units then $2m^2$ for every 10 units thereafter.

As all multi-unit buildings in these areas have fewer than 40 units, each will require a $10m^2$ Bulky Waste Room. The only exception is Area A, which has only 6 units and may utilize kerbside bulky waste collection instead.

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.

On the day of bulky waste collection, Council will park at the kerb on each building's respective street and collect the bulky waste from the kerbside.

Once bulky items have been loaded onto the vehicle, the collection vehicle will proceed onto their respective street in a forward direction.

5.5.2 INDIVIDUAL HOUSES – AREAS C, D, E, G & H

Council will provide two 'household waste disposal vouchers' which can be used by residents to receive a free bulky waste kerbside collection for items less than $1m^3$. Residents will need to pre-book a collection service before any items are placed on the kerbside. If vouchers are used up, residents can pay for extra collections if required.

The evening prior to the booked collection date, bulky waste items can be placed just outside the property boundary. The location should be away from the footpath and not to close to the road where it could become a hazard.

Refer to Council's website for further information or to make bookings

5.6 OTHER RESIDENTIAL WASTE MANAGEMENT CONSIDERATIONS

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

5.6.1 RESIDENTIAL COMMON AREAS

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

5.6.2 LANDSCAPED AREAS AND GARDEN ORGANICS

Garden organics generated from 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 general waste bins.

6.0 COMMERCIAL AND RETAIL WASTE MANAGEMENT

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

6.1 COMMERCIAL AND RETAIL 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 for the childcare. The Shoalhaven City Council- Waste Minimisation and Management Guidelines 2019 has been referenced to calculate the total number of bins required for the rest of the tenancies. 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 tables show the estimated volume (L) of general waste and recycling that will be generated by the commercial and retail tenants in each area (areas A, K & L). The estimates are based on a five-day operating week for the offices and childcare centre and a seven-day operating week for the rest of the tenancies.

Table 2: Estimated Waste and Recycling Volumes – Area A Commercial and Retail

Tenancy (Area A)	**Category**	**Floor Area** (m^2)	**General Waste Generation Rate** (L/100m^2/day)	**Generated General Waste** (L/week)	**Recycling Generation Rate** (L/100m^2/day)	**Generated Recycling** (L/week)
SSCH Office	**Offices**	**880**	8	493	6	370
Retail/Community	**All Retail**	**215**	80	1204	70	1054
TOTAL		**1095**		**1697**		**1423**
Bins & Collections			General Waste Bin Size (L)	240	Recycling Bin Size (L)	240
			General Waste Collections per Week	2	Recycling Collections per Week	2
			Total General Waste Bins Required	**4**	**Total Recycling Bins Required**	**3**

Table 3: Estimated Waste and Recycling Volumes – Area K Medical/ Retail and Childcare

Tenancy (Area K)	Category	# Children	General Waste Generation Rate (L/child/day)	Generated General Waste (L/week)	Recycling Generation Rate (L/child/day	Generated Recycling (L/week)
Childcare	**Childcare**	**55**	5	1375	5	1375
Tenancy (Area K)	**Category**	**Floor Area (m^2)**	**General Waste Generation Rate ($L/100m^2/day$)**	**Generated General Waste (L/week)**	**Recycling Generation Rate ($L/100m^2/day$)**	**Generated Recycling (L/week)**
Medical/Retail	**Medical and Optical**	**231**	35	566	10	162
Medical/Retail	**All Retail**	**231**	80	1294	70	1132
TOTAL		**462**		**1860**		**1294**
Bins & Collections			General Waste Bin Size (L)	240	Recycling Bin Size (L)	240
			General Waste Collections per Week	2	Recycling Collections per Week	2
			Total General Waste Bins Required	**7**	**Total Recycling Bins Required**	**6**

Table 4: Estimated Waste and Recycling Volumes – Area L Commercial

Tenancy (Area L)	Category	Floor Area (m^2)	General Waste Generation Rate ($L/100m^2/day$)	Generated General Waste (L/week)	Recycling Generation Rate ($L/100m^2/day$)	Generated Recycling (L/week)
SSCH Admin	**Offices**	**233**	8	93	6	70
Bins & Collections			General Waste Bin Size (L)	240	Recycling Bin Size (L)	240
			General Waste Collections per Week	1	Recycling Collections per Week	1
			Total General Waste Bins Required	**1**	**Total Recycling Bins Required**	**1**

6.2 COMMERCIAL AND RETAIL BIN SUMMARY

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

AREA A:

General Waste: 4 x 240L bins collected **2 x weekly**
Recycling: 3 x 240L bins collected **2 x weekly**

AREA K:

General Waste: 7 x 240L bins collected **2 x weekly**
Recycling: 6 x 240L bins collected **2 x weekly**
Sharps: Containers located in key areas (consultation rooms)

AREA L:

General Waste: 1 x 240L bins collected **1 x weekly**
Recycling: 1 x 240L bins collected **1 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.

6.3 COMMERCIAL AND RETAIL WASTE DISPOSAL PROCEDURES

The following sections outline the waste disposal procedures for general waste, recycling and medical wastes streams.

6.3.1 GENERAL WASTE AND RECYCLING

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

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

6.3.2 MEDICAL WASTE

The medical tenancies will generate medical waste in addition to general waste and recycling. Dedicated medical waste bins will be supplied as per the medical waste contractor's recommendations for the site.

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

It is the responsibility of each of the medical tenancies' operators to determine the types of medical waste that would be generated by their operations and to arrange for the appropriate bins and collection services for the relevant medical waste types. The medical tenancies are

also responsible for appointing a medical waste collection contractor prior to the operation of the site to provide and service the appropriate medical waste bins.

Medical waste must be managed and disposed of in accordance with the Protection of the Environment Operations Act 1997 and the Protection of the Environment Operations (Waste) Regulation 2005.

Please refer to the table below for storage and collection requirements for any medical waste streams to be generated by the site in operation.

Table 5: Storage and Collection Requirements for Medical Waste

Area	Location
Storage	According to best practice as detailed in Waste Management Association of Australia, Biohazardous Waste Industry Group, *Manual for the Management of Biohazardous Waste*, 6th edition 2010, storage can be in a dedicated and purpose-built room or dedicated storage area for mobile garbage bins back of house. The appropriate storage will depend on the type of medical waste, volumes and servicing processes. In accordance with NSW Health's *Clinical and Related Waste Management for Health Services* 2017, Health services must provide an enclosed structure such as a shed, garage, cage or fenced area or separate loading bay to store medical waste. The storage area for anatomical and/or clinical waste may require refrigeration to prevent decomposition of the waste, if this waste stream is not removed on a frequent basis. Any medical waste holding area must: • Be located away from food and clean storage areas, • Be inaccessible to the public, • Have a lockable door, • Have rigid impervious flooring, • Allow for regular cleaning, and • Prevent odour and vermin. An EPA licence may be required to store Hazardous Wastes.
Containers	All medical waste must be stored in the correct medical waste container with correct colour coding and labelling in accordance the *Australian Dangerous Goods Code Edition 7.3 (ADG Code).* All containers of medical waste to be stored in a secure location.
Spillages	Clean up facilities, spills kits, appropriate drainage and bunding should be provided within the Waste Storage Area. Ensure all necessary equipment required to clean and disinfect the area in case of accidental spillage is easily available and accessible. It is essential that personnel involved in spill management receive education and training in emergency procedures and handling requirements. Spill kits that have been used should be disposed of with the type of waste that has been cleaned up, eg used cytotoxic spill kits should be disposed of with cytotoxic waste.
Mixed waste	Any waste mixed with medical waste must be treated as medical waste
Sharps	Sharps containers should be placed within "arms reach" of where the sharps are generated. Full containers will be sealed and then transported utility rooms/ designated storage area to awaiting collection by contractors.
Collections	It is intended that as per normal practice for these types of facilities, that the appointed contractor will service the medical waste containers/bins from their operational location within the facility and replace them at the same time with empty containers/bins. Medical waste shall remain within the storage areas and only be moved during collections. Collections will be performed by a transporter licensed by the EPA to collect, transport and dispose of the medical waste stream accordingly.

6.4 COMMERCIAL AND RETAIL WASTE COLLECTION PROCEDURES

The following sections outline the waste disposal procedures for general waste, recycling medical wastes streams.

6.4.1 GENERAL WASTE AND RECYCLING 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 waste and recycling are collected twice per week.

On the day of collection, a private waste collection vehicle will park in the kerbside on building's street and service the bins.

6.4.2 MEDICAL WASTE COLLECTION PROCEDURES

All medical waste generated by the development will be collected by an appropriate private contractor to an agreed schedule. The days and hours of collections will need to be confirmed in the agreement with the contractor.

For the medical waste streams stored within the medical bin room, on the day of service, a private waste collection vehicle will enter the site from Clarke Lane and park in the loading bay. Collection staff will collect the bins from the medical bin room then return the empty bins once serviced. Collection staff's access to the waste room is to be arranged with the facility manager.

For the medical waste streams stored within the tenancies' spaces, the tenant must organise their own collections and co-ordinate collection times with the building manager. The waste collection contractors will park in the loading bay or other location on site that does not impede traffic. The waste collection staff will then traverse to the appropriate tenancy where the tenant will provide access to the appropriate bins. The waste collection staff will then remove the waste items from site and replace with empty bins.

6.5 OTHER COMMERCIAL AND RETAIL WASTE MANAGEMENT CONSIDERATIONS

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

6.5.1 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.

6.5.2 PRINTING & PHOTOCOPYING ROOMS

It is recommended that rooms designed for printing or photocopying be provided with an area for the interim storage of paper receptacles, as well as separate receptacles for used toner and/or printer cartridges for recycling. The cleaners or nominated staff are responsible for monitoring these receptacles and ensuring that items are collected and recycled by an appropriate contractor.

6.5.3 LIQUID WASTE

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

6.5.4 PROBLEM WASTE

The building manager is responsible for making arrangements for the disposal and recycling of problem waste streams with an appropriate contractor. Problem wastes cannot be placed in 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

7.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 6: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Management of site (SCCH)	• 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.
Multi-Unit Buildings Managers/ Caretakers	• Co-ordinate general waste and recycling collections • Clean and transport bins as required. • 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.
Multi-Unit Buildings Residents	• Dispose of all general waste and recycling in the allocated bins provided. • Ensure adequate separation of general waste and recycling; and • Comply with the provisions of Council and the OWMP.
Individual Houses Residents	• Dispose of all general waste and recycling in the allocated MGBs provided; • Ensure adequate separation of general waste and recycling; • Clean and transport bins as required; • Compliance with the provisions of Council and the OWMP; • Clean and transport bins as required; • Organising bulky goods collection when required; • Investigating and ensuring prompt clean-up of illegally dumped waste materials; • Preventing storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins);
Retail/Commercial Tenants	• 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.

Roles	Responsibilities
Medical Tenancies	• Manage the back of house storage of generated waste and recycling during daily operation. • Correctly separate waste and recycling streams; bag general waste and ensure recyclables are not bagged. • Appropriate manage medical waste including ensuring correct storage and arranging collection with an appropriate contractor.
Childcare Staff	• Manage the back of house storage of generated waste and recycling during daily operation. • Correctly separate waste and recycling streams; bag general waste and ensure recyclables are not bagged. • Flatten cardboard within the recycling bin. • If required, arrange for storage of used and unused cooking oil in a bunded area, • Ensure the suitable storage for chemicals, pesticides and cleaning products waste back of house.
Waste Collection Contractor	• 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	• Remove all garden organics generated during gardening maintenance activities for recycling at an offsite location.
Developer	• Purchase all equipment required to implement this OWMP prior to the occupation of the building to be provided to the Strata or Body Corporate.

8.0 SOURCE SEPARATION

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

Table 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	General waste should be bagged before placing in designated general 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. Cardboard should be flattened before placing in the designated recycling bin.
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.
Secure Documents	Secure documents are printed paper materials that contain sensitive information.	Recycling Facility	Secure documents are placed in allocated secure document bins. Private contractor removes bins from site.
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 own e-waste.
Bulky Waste Items	Items that are to too large to place into general rubbish collection. This includes disused and/or broken furniture, mattresses, white goods, etc.	Resource Recovery Centre or Landfill	Residents liaise with building manager to store in Bulky Goods Room. Building manager arranges with Council for removal. Commercial tenants are responsible for removal of their bulky items.
Other	Other recyclable items that require special recovery may include ink cartridges, batteries, chemical waste, fluorescent tubes, etc.	Resource Recovery Facility	Building manager arranges collection by appropriate recycling services when required.

9.0 EDUCATION

Educational material encouraging correct separation of general waste and recycling must be provided to each resident and commercial/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. 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 (refer to Council guidance);
- Residents' obligations to health and safety as well as building management; and
- How to prevent cross contamination among waste streams.

9.1 SIGNAGE

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

- Clear and correctly labelled 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 signage should conform to the relevant Australian Standards.

10.0 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

11.0 BIN WASHING

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

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

12.0 BIN MOVING PATHS

Residents in the individual houses will be responsible for the transportation of bins to a temporary kerbside spot for collection, returning them to their property once emptied to resume use.

For the multi-unit buildings, the building manager/ caretaker 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.

If the bins are intended to be moved up a vehicle ramp or if 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.

13.0 WASTE ROOMS

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

Table 8: Waste Room Areas - Multi-Unit Buildings – Areas A, B, F, J, K, M & N

Level	Waste Room Type	Equipment	Estimated Area Required (m^2)	Actual Area Provided (m^2)
Basement	Area A **Residential** Communal Bin Room	**General Waste**: 1 x 240L bins **Recycling**: 1 x 240L bins	3	6.6
Basement	Area A **Commercial/Retail** Bin Room	**General Waste**: 4 x 240L bins **Recycling**: 3 x 240L bins	6	11.2
GF	Area B **Residential** Communal Bin Room	**General Waste**: 3 x 240L bins **Recycling**: 2 x 240L bins	5	5
GF	Area F **Residential** Communal Bin Room	**General Waste**: 7 x 240L bins **Recycling**: 7 x 240L bins	11	11
GF	Area F **Residential Bulky** Waste Room		10	10
Under croft	Area J **Residential** Communal Bin Room	**General Waste**: 14 x 240L bins **Recycling**: 14 x 240L bins	20	20
Under croft	Area J **Residential Bulky** Waste Room		10	10
Basement	Area K **Residential** Communal Bin Room	**General Waste**: 14 x 240L bins **Recycling**: 14 x 240L bins	20	21.8
Basement	Area K **Commercial/Retail** Bin Room	**General Waste**: 7 x 240L bins **Recycling**:6 x 240L bins	12	14.6
Basement	Area K **Medical** Bin Room	Bins to be determined by the medical waste tenants	TBC	TBC
Basement	Area K **Residential Bulky** Waste Room		10	12
GF	Area L **Commercial/Retail** Bin Room	**General Waste**: 1 x 240L bins **Recycling**: 1 x 240L bins	2	2
Under croft	Area M – Core M1 **Residential** Communal Bin Room	**General Waste**: 8 x 240L bins **Recycling**: 8 x 240L bins	14	16.9
Under croft	Area M – Core M2 **Residential** Communal Bin Room	**General Waste**: 8 x 240L bins **Recycling**: 8 x 240L bins	14	21.5
Under croft	Area M **Residential Bulky** Waste Room		10	12
Under croft	Area N **Residential** Communal Bin Room	**General Waste**: 14 x 240L bins **Recycling**: 14 x 240L bins	20	21.7
Under croft	Area N **Residential Bulky** Waste Room		10	10.6

Table 9: Waste Room Areas - Individual Houses – Areas C, D, E, G & H

Level	Waste Room Type	Equipment	Estimated Area Required (m^2)
GF	Single Family House Bin Storage Area (per individual house)	**General Waste**: 1 x 120L bin **Recycling**: 1 x 240L bin	2
GF	Duplex (Area C) Bin Storage Area (per individual house)	**General Waste**: 2 x 120L bins **Recycling**: 1 x 240L bin	2
GF	3 Bed + Studio Bin Storage Area (per individual house)	**General Waste**: 2 x 120L bins **Recycling**: 1 x 240L bin	2

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

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

The following table provides further waste room requirements.

Table 10: Waste Room Requirements

Waste Room Type	Waste Room Requirements
Communal Bin Room	• 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	• 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	• 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.
Medical Bin Room	If a medical waste room is provided with a development, the medical waste room should strive for best practice waste room storage as outlined in Waste Management Association of Australia, Biohazardous Waste Industry Group's *Manual for the Management of Biohazardous Waste*, 6th edition 2010, which is as follows • Storage area base is an impervious surface surround by a bund appropriate to contain any spill • All loading/unloading takes place within the bunded area in such a manner to ensure any spills are appropriately managed • The base and walls of bunded areas are free of gaps or cracks • Where vehicular access to the bunded area is required, bunds are constructed to prevent them from being damage by vehicles • Signage is posted with the biohazard symbol and other labelling appropriate to the types of waste stored in that area • The bunded area drains to a sump or sewer to collect spills and wash water. If any refrigerator facilities are provided, they shall be contained within a secure area.

14.0 CONSTRUCTION REQUIRMENTS

Waste room construction must comply with the minimum standards as outlined in the *Shoalhaven Development Control Plan 2014,* 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.

14.1 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.

15.0 USEFUL CONTACTS

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

LOCAL COUNCIL

Shoalhaven Customer Service	Ph: (02) 4429 5377	E: council@shoalhaven.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@wastecleart.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

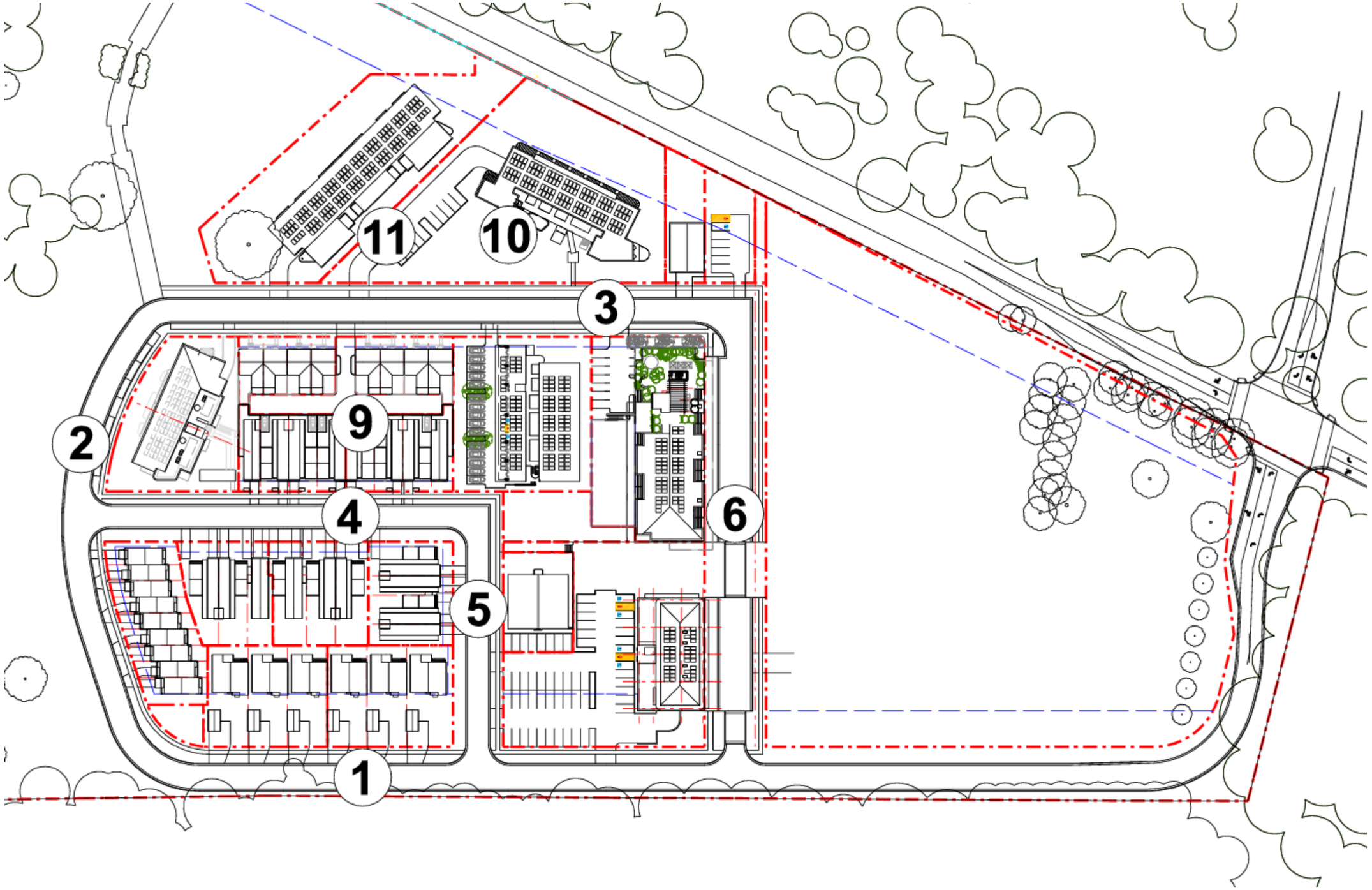
Elephants Foot Equipment	Ph: 1300 435 374	E: equipment@elephantsfoot.com.au
SULO	Ph: 1300 364 388	E: sulosales@pactgroup.com

CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

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

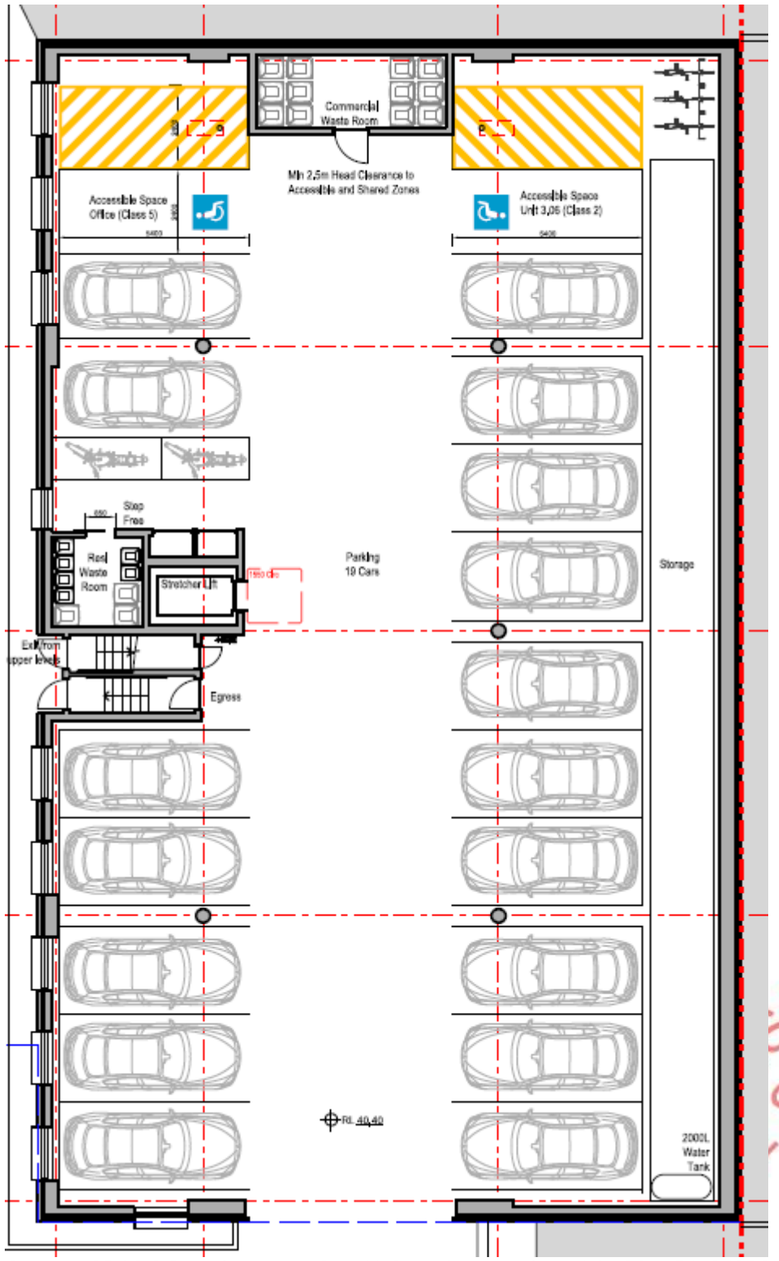
APPENDIX A: ARCHITECTURAL PLANS

APPENDIX: A.1 OVERALL SITE PLAN



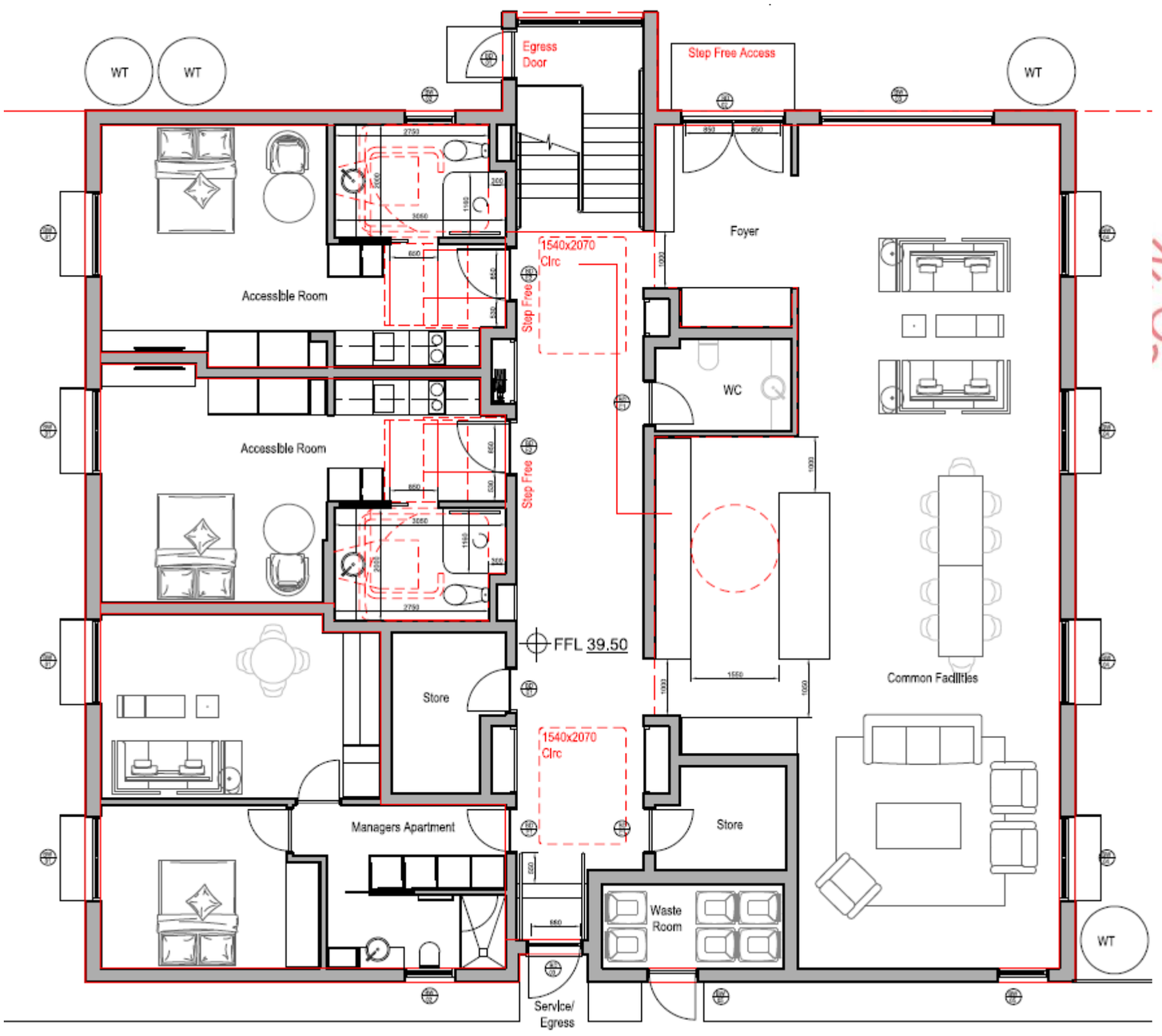
Source: SPARC Development, MP400, Rev C, 21/10/2024 – Master Plan Concept – SSDA, Road Typology Key Plan

APPENDIX: A.2 BUILDING A LEVEL 00(UNDERCROFT)



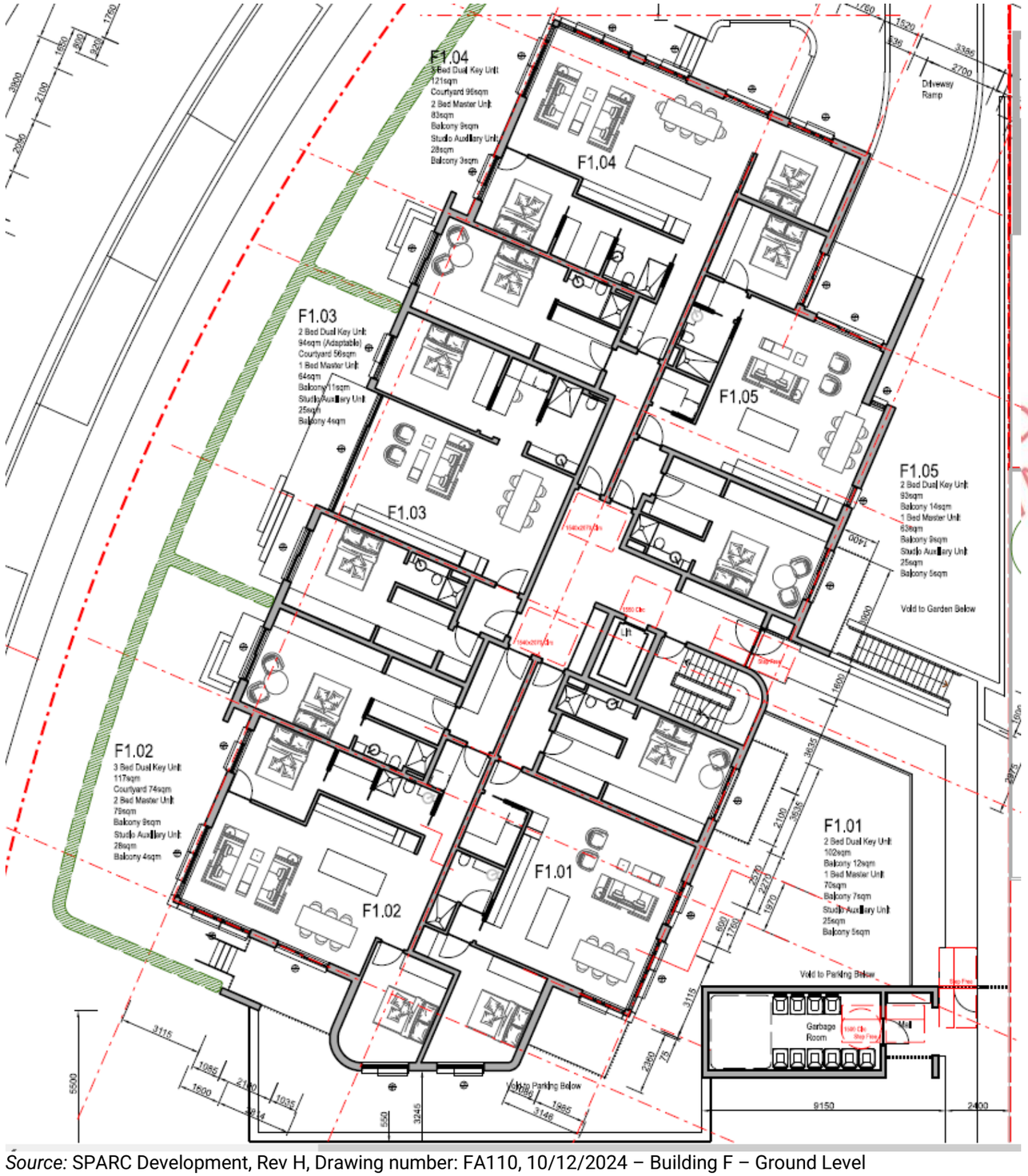
Source: SPARC Development, Rev H, Drawing number: AA100, 15/12/2024 – Building A – Level 00 (Undercroft)

APPENDIX: A.1 BUILDING B LEVEL 00(UNDERCROFT)



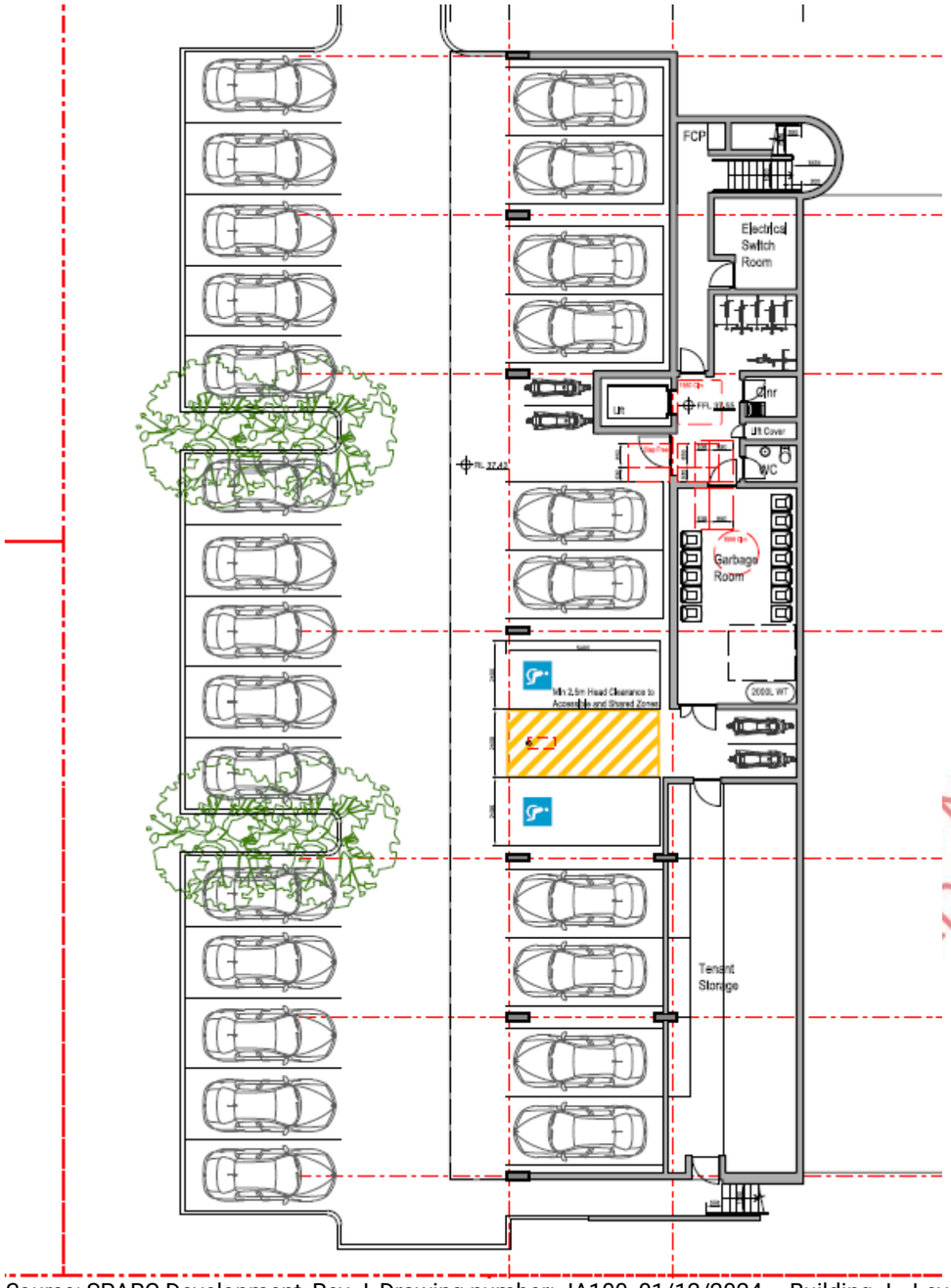
Source: SPARC Development, Rev G, Drawing number: BA140, 15/12/2024 – Boarding house Site B – Ground Floor Plan

APPENDIX: A.2 BUILDING F GROUND FLOOR



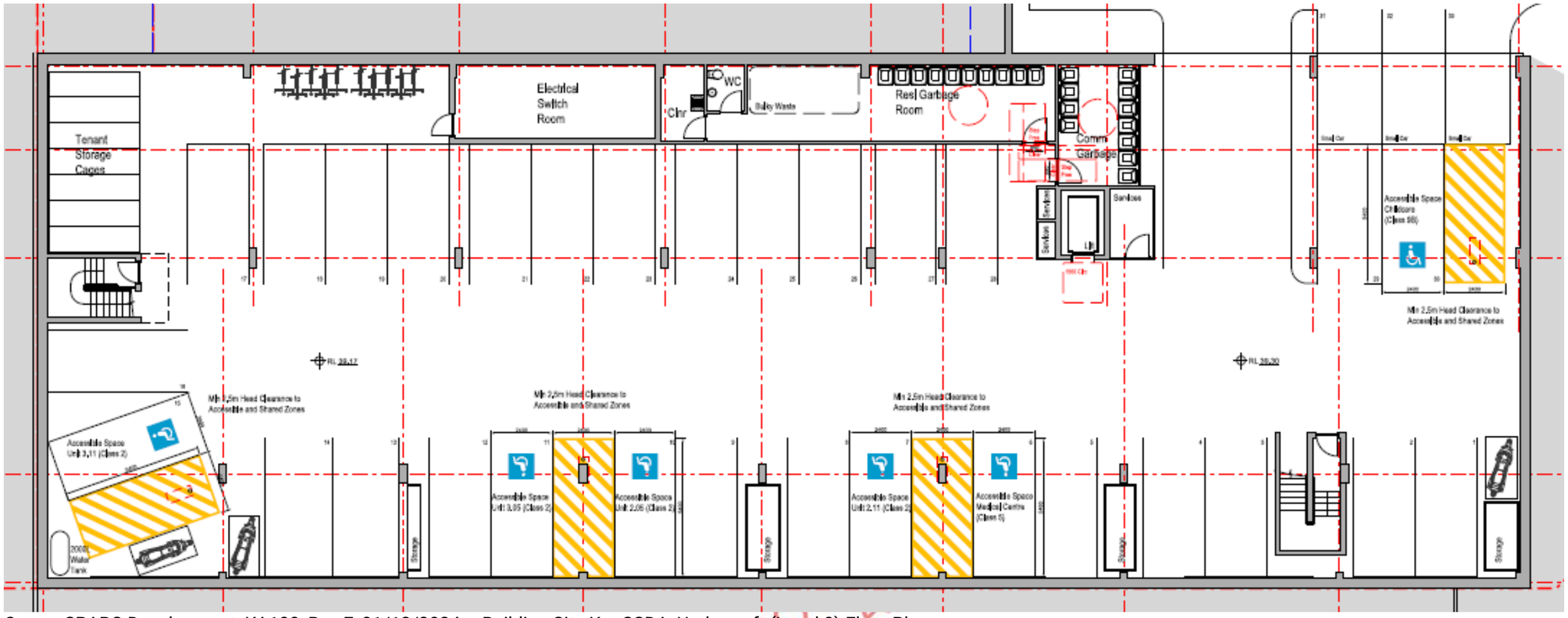
Source: SPARC Development, Rev H, Drawing number: FA110, 10/12/2024 – Building F – Ground Level

APPENDIX: A.3 BUILDING J LEVEL 0 (UNDERCROFT)



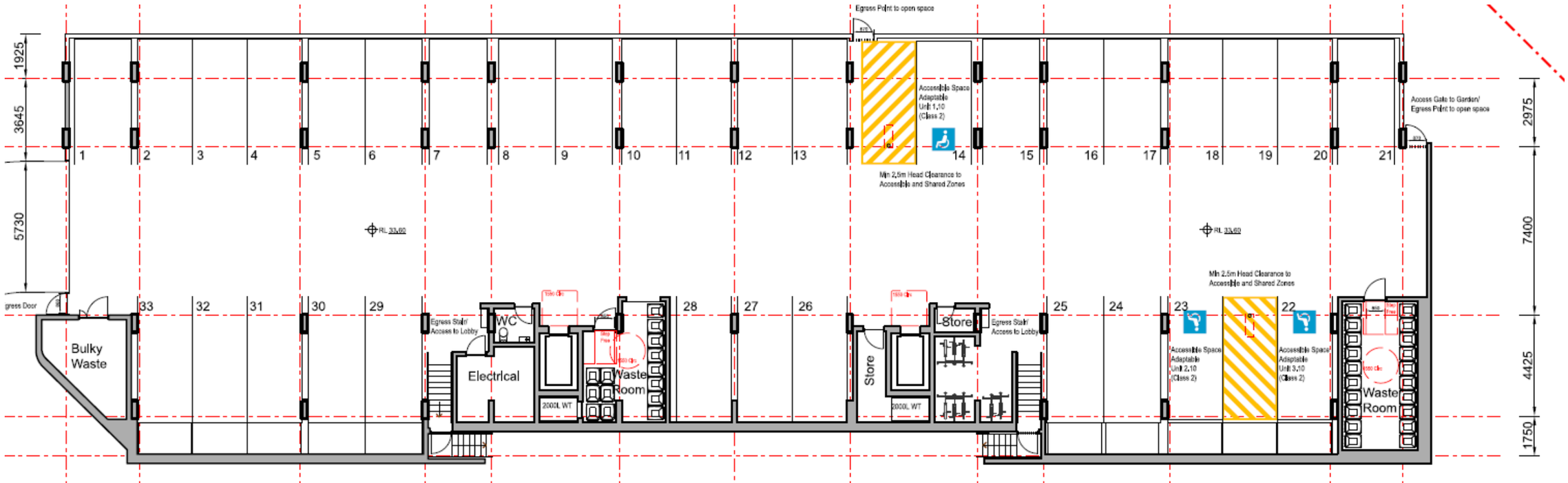
Source: SPARC Development, Rev J, Drawing number: JA100, 01/12/2024 – Building J– Level 00 (Undercroft)

APPENDIX: A.4 MULTI-UNIT BUILDING FLOOR PLAN EXAMPLE – AREA K



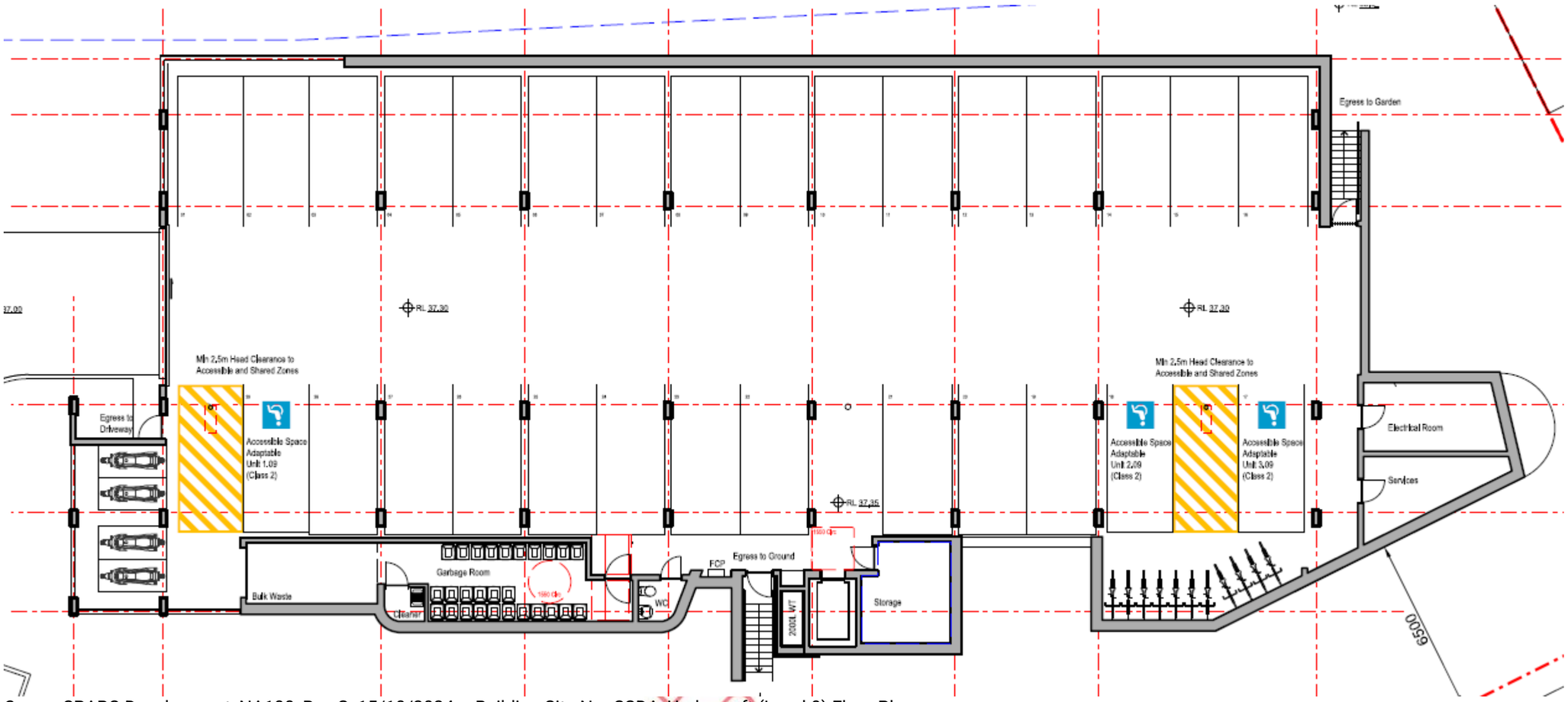
Source SPARC Development, KA100, Rev F, 01/12/2024 – Building Site K – SSDA, Undercroft (Level 0) Floor Plan

APPENDIX: A.5 BUILDING M LEVEL 0 (UNDERCROFT)



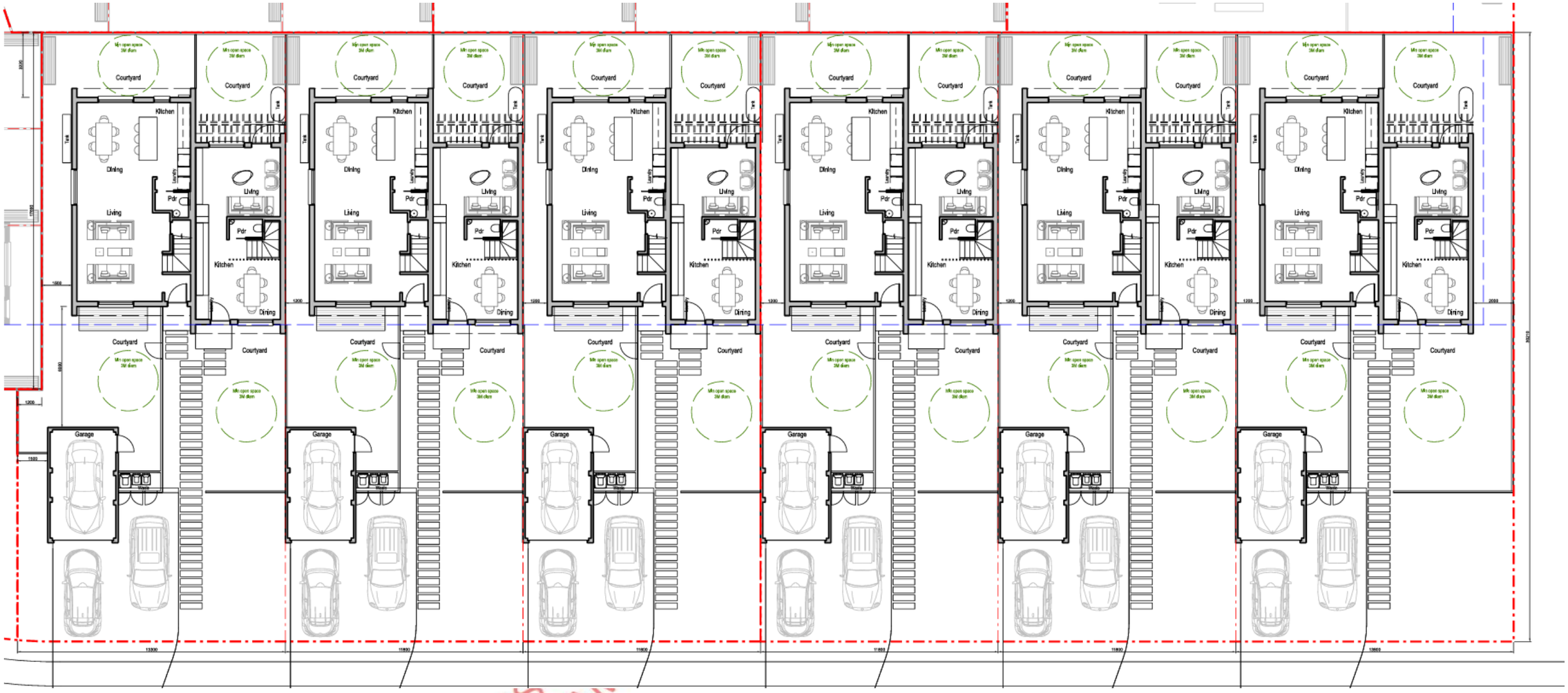
Source SPARC Development, MA100, Rev G, 15/12/2024 – Building Site M – SSDA, Undercroft (Level 0) Floor Plan

APPENDIX: A.6 BUILDING N LEVEL 0 (UNDERCROFT)



Source SPARC Development, NA100, Rev G, 15/10/2024 – Building Site N – SSDA, Undercroft (Level 0) Floor Plan

APPENDIX: A.7 INDIVIDUAL HOUSING FLOOR PLAN EXAMPLE – AREA C



Source SPARC Development, CA110, Rev F, 08/09/2024 – Housing Site C – Proposed SSDA, Level 1 (Ground) Floor Plan:

APPENDIX B: PRIMARY WASTE MANAGEMENT PROVISIONS

APPENDIX: B.1 TYPICAL BIN SPECIFICATIONS

Mobile bins

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

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

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

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

Wheelie bin

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

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

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

Dome or flat lid container

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

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

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

APPENDIX: B.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: B.3 EXAMPLE COLLECTION VEHICLE INFORMATION

Appendix C - Waste Collection Vehicle Information

Typical Waste Collection Vehicle Information

Waste vehicles come in a variety of sizes depending on the type of service being provided. The table below provides a range of typical dimensions and information that may assist with early planning for your project.

Note:
Truck dimensions and technologies can change, and you should contact Council's Waste Services on 02 4429 3111 to confirm this information is current.

Typical waste collection vehicle dimensions

Typical Dimensions and other information						
Vehicle Type	Overall Length	Overall Width	Height (travel)	Height (in operation)	Weight (incl. payload)	Turning Circle
Kerbside collection side lift (Mobile Garbage Bin's to 240 litres)	9.8m	2.5m	3.8m	4.2m	22.5t	25m
Commercial rear lift (Mobile Garbage Bin's to 1,100 litres)	8.0m	2.5m	3.4m	3.4m	22.5t	25m
Commercial front lift (bulk containers to 4.5m^3)	11.0m	2.5m	4.2m	8.5m	27.5t	25m
Commercial roll-on, roll-off (bulk skips to 31m^3)	9.2m	2.5m	4.3m	5.6m	27.5t	25m

Source: Shoalhaven City Council – Waste Minimisation and Management Guidelines

APPENDIX: B.4 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: B.5 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 though 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: B.6 EXAMPLE BIN TRAILERS

SITECRAFT
MATERIALS HANDLING EQUIPMENT

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

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: B.7 EXAMPLE BIN TOWING ATTACHMENTS

Logistec

UNIVERSAL BIN TOWING ATTACHMENTS

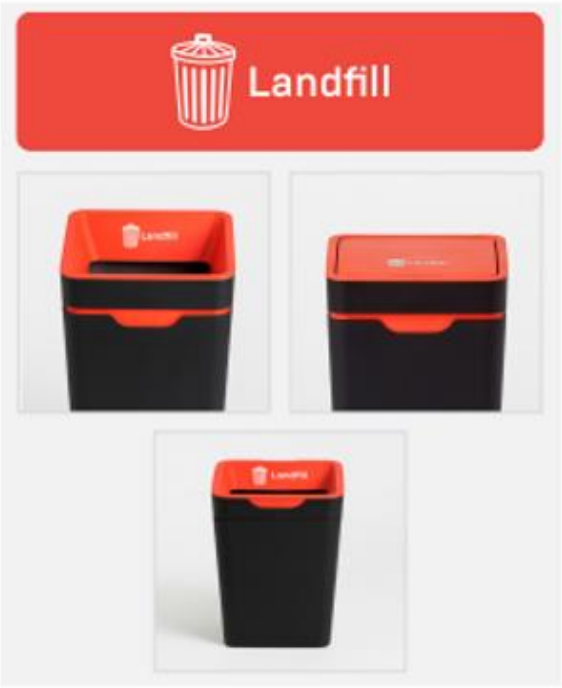
SUITE 660LT / 1100LT WHEELIE BINS

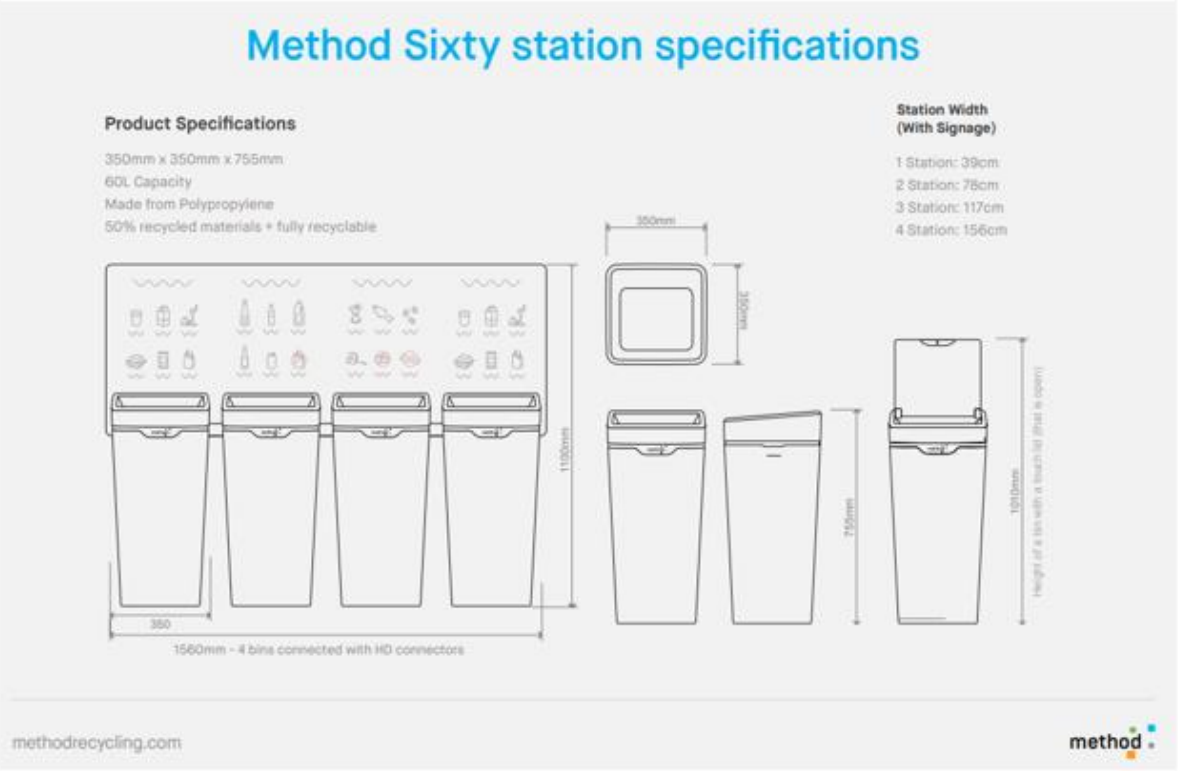
PARTS & FEATURES
Front Only - Part Number: 78811672
• Suit Sulo & Otto 600lt / 1100lt MGBs
• Spring loaded draw bar folds up
• No drilling of holes in the bin required
• Solidly fixed to the base of the bin using the castor mounting bolts
• Passivated zinc finish for long life
• Correct Rear Fixed or 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: B.8 EXAMPLE SOURCE SEPARATION RECEPTACLES





Source: Method Recycling - www.methodrecycling.com

APPENDIX C: ADDITIONAL MEDICAL WASTE INFORMATION

APPENDIX: C.1 MEDICAL WASTE STREAMS AND MANAGEMENT

The following are the various medical waste streams and their storage guidelines as detailed in NSW Health's *Clinical and Related Waste Management for Health Services* 2017.

Medical Waste Stream	Medical Waste Stream Description and Management	Container Example
Sharps Waste	Any clinical object capable of inflicting a penetrating injury which may or may not be contaminated with blood and or body substance. This includes needles, ampoules and any other sharp objects or instruments designed to perform penetrating procedures Sharps container should be located adjacent to the work area where sharps are used. When the sharps residue container is filled to the black line, the container should be sealed and labelled.	
Pharmaceutical Waste	Pharmaceutical waste refers to any waste pharmaceuticals or other chemical substances specified as regulated goods in the Poisons and Therapeutic Goods Act 2008. Includes any substance specified in a Schedule of the Poisons List under the Act, as well as any therapeutic good which is unscheduled. It also includes expired or discarded pharmaceuticals, filters or other material contaminated by pharmaceutical products. Pharmaceutical waste bins must be lockable	
Cytotoxic Waste	Material contaminated with residues or preparations containing materials toxic or otherwise harmful to cells. This includes any residual cytotoxic drug or laboratory chemical and any discarded material or clinical waste associated with the preparation or administration or excretion of cytotoxic drugs May include Genetically Modified Organisms (GMOs) or tissues containing GMOs If Cytotoxic waste generated it must be placed within an approved purple cytotoxic bag or container. When this container is full, it is to be placed in a locked purple cytotoxic waste wheelie bin. Once the larger wheelie bin is full, its collection should be organized.	

Clinical Waste	Clinical waste with the potential to cause injury, infection or offence: • Unrecognisable human tissue (excluding hair, teeth, nails and anatomical waste) • Bulk blood or other body fluids (or body substances) • Material and equipment visibly stained by blood or body fluids (includes incontinence pads and disposable nappies that come from an infectious patient) • Lab specimens, cultures or other waste from lab investigations • Waste from medical or veterinary research • Genetically Modified Organisms (GMOs) For incineration or autoclaving and shredding. Autoclave tape and bag indicators must be used to show autoclaving has been completed. Fluid may be able to be discharged into sewer depending on Liquid Trade Agreement between the health service and water utility All clinical waste once treated by a process acceptable to NSW Health may be reclassified in accordance with the Waste Classification	 
Radioactive	Waste material, including sharps and clinical waste contaminated with a radioisotope which arises from the medical or research use of radionuclides, e.g. during nuclear medicine, radioimmunoassay and bacteriological procedures, and may be in solid, liquid or gaseous form, and which emits a level of radiation above the level set by regulatory authorities Radioactive material to be stored onsite in appropriate storage area until it decays to below the thresholds of a “radioactive substance” as defined under the Radiation Control Act and Regulation. Handling and storage to comply with a Radiation Management Plan in accordance with the Code of Practice for Radiation Protection in the Medical Applications of Ionizing Radiation (ARPANSA 2008)	
Anatomical Waste	Identifiable human body parts such as limbs, organs, placenta and recognisable or large pathological specimens resulting from investigation or treatment of a patient It does not include deceased bodies