

WASTE MANAGEMENT PLAN



Project:

**Multi-Unit Residential
Development**

Client:

DevelopWise

Project Address:

**256-258 Charles Street, North
Perth**

Date:

July 2025

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1 EXECUTIVE SUMMARY

DevelopWise is applying to the City of Vincent (the “City”) to develop a property at 256-258 Charles Street, North Perth. The development consists of 29 residential apartments.

As part of the Development Approval process, the proponent is required to submit a Waste Management Plan (WMP) for the development to the City. DevelopWise employed the services of waste specialists to investigate the City’s requirements in this regard and to develop this WMP.

Based on the City’s guidelines and feedback, and utilising the City’s collection services for all streams, the following methodology will be implemented for the solid waste servicing at 256-258 Charles Street, North Perth.

Residential

For the residential material:

- Use of 240 litre bins for garbage;
- Use of 360 litre bins for recycling;
- Use of 240 litre bins for FOGO material;
- Compaction of the garbage material;
- Weekly servicing of the garbage material;
- Weekly servicing of the FOGO material; and
- Fortnightly servicing of the recycling material.

These initiatives will result in the following requirements for receptacles;

- Garbage – Four 240 litre bins serviced weekly;
- FOGO - Four 240 litre bins serviced weekly; and
- Recycling – Six 360 litre bins serviced fortnightly.

This will necessitate that sufficient room is provided in the residential bin store for a minimum of fourteen bins and a waste compactor.

Review

The above-mentioned waste servicing arrangements will be reviewed as a matter of course on an ongoing basis to ensure that the most efficient arrangements to manage the garbage, FOGO and recycling material generated by all aspects of the facility are in place and are maintained.

DEFINITIONS

240: A 240-litre receptacle used by domestic residences and commercial premises within a local government municipality to deposit FOGO, garbage and recycling materials for emptying by the local government or a collection contractor.

360: A 360-litre receptacle used by domestic residences and commercial premises within a local government municipality to deposit recycling materials for emptying by the local government or a collection contractor.

FOGO (service): Food Organics and Garden Organics - a local government collection service for food and garden organic material.

Garbage (Waste): Any recyclable and non-recyclable discarded solid, semi-solid, liquid or contained gaseous materials not accepted by the local government's FOGO and recycling collection services.

Recycling: Any material accepted by a local government's recycling collection service or materials recovery facility.

Waste Minimisation: A process to minimise the amount of waste requiring disposal via hierarchical activities such as behaviour and product modification, waste avoidance, reduction, reuse and recycling.

Total Waste Stream: The combined garbage, recyclables and FOGO.

2 INTRODUCTION

2.1 The Development

DevelopWise is applying to the City of Vincent (the “City”) to develop a property at 256-258 Charles Street, North Perth. The development consists of 29 residential apartments.

As part of the Development Approval process, the proponent is required to submit a Waste Management Plan (WMP) for the development to the City. DevelopWise employed the services of waste specialists to investigate the City’s requirements in this regard and to develop this WMP.

Figure 1: Location Plan



Source: PlanWA 2024

Table 1: Apartment Types

Residential Apartments	Number
1-Bed	15
2-Bed	12
3-Bed	2
Total Units	29

A site plan of the development is included on the following page.

Figure 2: Site Plan/Ground Floor

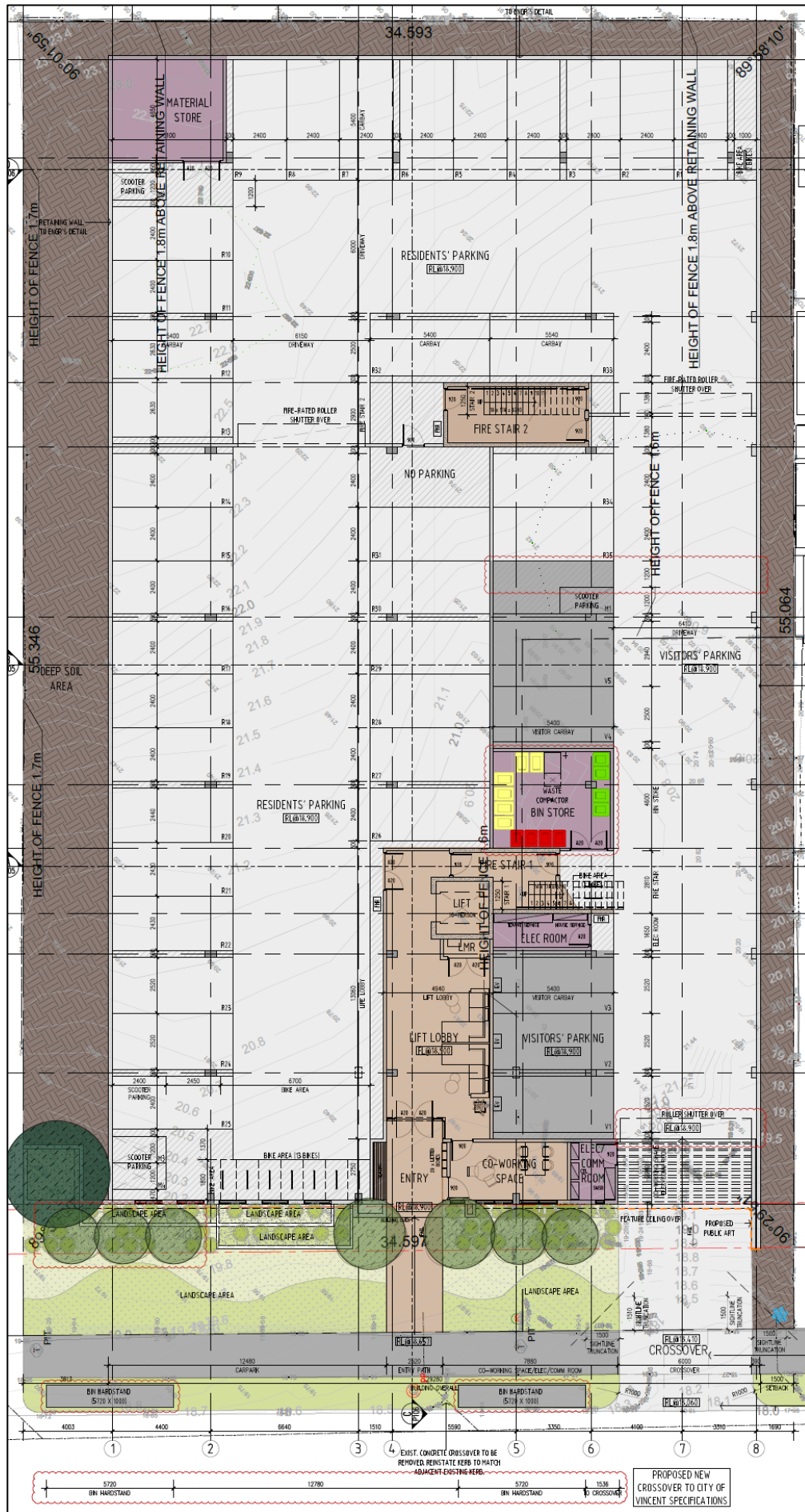


Figure 3: Level 1 and Levels 2/3 Floor Plans



2.2 Onsite Waste Management

The following provisions have been made for the disposal of FOGO, garbage and recycling materials on the site:

- **Bin Store**
 - Residents will be required to separate their waste into three material streams, namely garbage, FOGO (food organics and garden organics) and recycling, and take the material to the bin store located on the Ground Floor of the building (adjacent to Fire Stair 1).
 - Residents can then place their separated garbage, recycling and FOGO into bins provided for those materials by the Owner/Building Management.
 - This store will have a washdown facility for bin cleaning.
- **Hardwaste/Bulky Items**
 - Residents' own store areas include an area of approximately 0.9m² for the temporary storage of bulky items before removal or collection.
 - Residents will be required to organise their own immediate disposal of large or bulky items not suitable for disposal to the bins in the bin store. With the approval of the Building Management, there is area available in the Material Store at the rear of the carpark for occasional storage of residents' larger items awaiting collection/disposal.
 - Temporary placement of a small mobile skip bin (e.g. 1.1m³ – 4.5 m³) may be possible on the front landscaped area behind the front boundary or for internal placement and external driveway servicing for the occasional disposal of bulkier items or waste from renovations or fit outs etc.

- **Waste Collection**

- The proponent intends to use the City's kerbside side-arm collection services for the garbage, FOGO and recycling material.
- The waste collection will occur from the kerb on Charles Street and a weekly garbage service is sought.
- The collection vehicles are already providing kerbside collection services to properties along the length of Charles Street including the properties immediately adjacent to the development.
- It is noted that FOGO bins are only serviced by the City's side-arm collection vehicles and as such, those bins have to be presented to the kerb for servicing.

3 LOCAL GOVERNMENT WASTE MANAGEMENT REQUIREMENTS

3.1 Waste Management Guidelines

The waste generation criteria have been sourced from the City's *Waste Guidelines for New Developments* (revised 2023 version).

3.2 Waste Generation

The City requirements for the management of waste for this development are as follows:

- FOGO bins can only be serviced at the kerbside;
- Residential FOGO, garbage and recycling receptacles are to be provided in sufficient numbers to cater for the waste generation requirements detailed in the following tables; and
- Garbage bins can be serviced up to twice-weekly instead of fortnightly, with the City's approval.

Based on the City's Guidelines, the following table demonstrates the estimated weekly generated volumes of FOGO and the fortnightly generation of garbage and recycling for the development.

Table 2: Residential Waste Generation Rates (with FOGO servicing)

Apartments		Garbage/unit/fortnight	FOGO/unit/week	Recycling/unit/fortnight
	No.	m ³	m ³	m ³
1-Bed	15	0.08	0.02	0.04
2-Bed	12	0.12	0.04	0.08
3-Bed	2	0.16	0.06	0.18
Total Units	29			

3.3 Bin Storage Requirements

The City's requirements for bin storage are:

- Adequate storage capacity to house all bins on the site.
- Sufficient area within the Bin Store to manoeuvre the bins to ensure that residents have access at all times to partly to fully empty bins for all streams.
- A permanent water supply and drainage to sewer with washdown facilities within the Bin Store.
- Out of sight and well screened from public areas.
- Design is to be consistent with the development.
- Be easily accessible to allow for the removal of the receptacles.

3.4 Bin Presentation

- Residential bins are to be presented for servicing by Owner/Building Management staff and returned to the stores by those staff as soon as is practicable after they have been serviced.
- Bins are to be accessible so there is unobstructed access for the collection vehicle at the time of servicing.

3.5 Waste Capacity

Based on the above requirements, the estimated volumes of FOGO, garbage and recycling material generated by the proposed development are detailed in the following table. Note that the garbage and recycling volumes are fortnightly estimates to match the frequency of the City's usual servicing of those residential bins.

Table 3: Estimated Material Volumes (with FOGO servicing)

Apartments		Garbage	FOGO	Recycling	Garbage/fortnight	FOGO/week	Recycling/fortnight
	No.	m ³ /unit/fortnight	m ³ /unit/week	m ³ /unit/fortnight	m ³	m ³	m ³
2-Bed	15	0.08	0.02	0.04	1.2	0.3	0.6
3-Bed	12	0.12	0.04	0.08	1.44	0.48	0.96
4-Bed	2	0.16	0.06	0.18	0.32	0.12	0.36
Total	29				2.96	0.9	1.92

3.6 Number of Bins

Based on the estimated volumes of materials, the number of receptacles required to cater for the development are detailed in the following table. Note that;

- The FOGO cubic metre figure represents the weekly volume;
- The garbage cubic metre figure is the fortnightly volume;
- The recycling cubic metre figure is the fortnightly volume; and
- The bin figures have been rounded up.

Table 4: Required Bin Capacity (with FOGO)

Residential	Garbage/ fortnight	FOGO/week	Recycling/fortnight
Generation (m ³)	2.96	0.9	1.92
Receptacles			
No. of 240 litre receptacles	12.3	3.8	n/a
No. of 360 litre receptacles	n/a	n/a	5.30
TOTAL BINS	13 x 240 litre	4 x 240 litre	6 x 360 litre

3.7 Reducing Bin Numbers

As can be seen from the above, the number of bins required for the development is problematic from a storage, aesthetic and servicing perspective. Because the preferred bin servicing methodology is via kerbside presentation, ways of reducing the numbers of bins presented on any one collection day had to be considered so that the least possible disruption to the traffic on Charles Street occurs.

To this end, the following methodologies are to be adopted:

- Compaction – 2:1 compaction of the garbage bins will reduce the number of the garbage bins by half. The site will have a 240-litre compactor installed in the bin store and the waste staff or nominated waste person will be trained in its use. This will bring the fortnightly number of bins down to seven.
- Increased servicing – In addition to compaction and subject to approval by the City, the garbage bins could be collected up to two times per week. Weekly servicing would reduce the number of the compacted garbage bins to only four bins per week.

3.8 Summary

Based on the above, and utilising the City's collection services for all streams, the following methodology will be implemented for the solid waste servicing at 256-258 Charles Street, North Perth.

For the residential material:

- Use of 240 litre bins for garbage, 240 litre bins for FOGO material and 360 litre bins for recycling;
- Compaction of the garbage bins at 2:1;
- Weekly servicing of the garbage material;
- Weekly servicing of the FOGO material; and
- Fortnightly servicing of the recycling material.

These initiatives will result in the following requirements for receptacles;

- Garbage – Four 240 litre bins serviced weekly;
- FOGO - Four 240 litre bins serviced weekly; and
- Recycling – Six 240 litre bins serviced fortnightly.

This will necessitate that sufficient room is provided in the residential bin store for fourteen bins.

Review

The above-mentioned waste servicing arrangements are indicative only and will be reviewed as a matter of course on an ongoing basis to ensure that the most efficient arrangements to manage the garbage, FOGO and recycling material generated by all aspects of the facility are adopted.

4 BIN STORAGE AND MANAGEMENT

4.1 Bin Compound/Store

The bin store is located on the ground floor of the development, immediately adjacent to Stair 1. It is accessible from the carpark area and the lift lobby.

The location of the bin store is depicted in Figure 4.

4.2 Bin Store Specifications

The bin store has been designed to meet the City's specifications and;

- Sufficient provision has been made to accommodate all receptacles and the bin compactor;
- Construction of solid walls will be brick, concrete, corrugated compressed fibre cement sheet or other suitable impervious material;
- A tap connected to an adequate supply of water and a floor waste connected to the public sewer is to be installed in the bin store;
- The floor of the bin store is to be smooth, impervious and graded to drain to the washdown floor waste; and
- The design of the store will allow for easy and safe access for the removal of all receptacles.

An example of the type of compactor likely to be used is included as an attachment to this document. Local servicing is available for this unit.

4.3 Amenity

The bin store has been designed so that it;

- is well ventilated to prevent escape of smells;
- can be kept thoroughly clean and disinfected;
- will limit any unwanted noise from the compaction of the garbage bins; and
- is consistent with the overall aesthetics of the development.

4.4 Bin Management

Owner/Building Management staff or their nominated personnel/contractors will coordinate the management of waste throughout the facility and as such, will be aware of the expectations regarding use of the bins and stores.

Those personnel will be responsible for ensuring that the residential bins and the bin store are monitored daily and cleaned as required. They will also be required to monitor the usage of the bins, compact the garbage bins as required, and ensure residents are leaving the store clean and placing the correct materials in the right bins.

4.5 Bin Presentation and Servicing

Servicing of bins will be as per the following arrangements:

Presentation

- On, or on the evening prior to collection day, bins will be taken from the bin store and material store by Owner/Building Management personnel and presented to two bin pads at the kerbside (see Figure 5).
- Bins will be placed such that they are away from any obstruction (e.g. tree, sign etc) and spaced sufficiently to allow room for the operation of the bin lifter.
- To limit the amount of time spent by the servicing vehicle in one spot, the bins will be separated onto two collection pads located across the two-block equivalent frontage.

Servicing

- The bins will be serviced by the City's residential side-arm services from the Charles Street road reserve and, as soon as practicable after collection has occurred, the bins will be returned to the store by Owner/Building Management personnel.

It should be noted that:

- The City's collection service can only service 240 litre FOGO bins from the kerbside;
- The City's residential side-arm collection vehicle already services properties along Charles Street including the properties on both sides of this development;
- The City's collection vehicles are large and highly visible and fitted with flashing lights. This length of Charles Street is straight and has two lanes in each direction allowing sufficient time for approaching vehicles to observe the collection vehicle and avoid it if desired;
- Based on approximately 10-11 seconds per "lift" (lift cycle time and movement to next adjacent bin), the timing for servicing each of the streams from the two locations for this development would be;
 - Two lots of two FOGO bins once per week - ~22 seconds per 2-bin stop;
 - Two lots of two garbage bins once per week - ~22 seconds per 2-bin stop; and
 - Two lots of three recycling bins once per fortnight - ~33 seconds per 3-bin stop.

It is noted that the collection vehicles already service residential premises from the kerb along the length of Charles Street and the street is also serviced by bus stops, with one 50 metres before the site. It is assumed that servicing will generally occur in the mornings (using highly visible vehicles), that traffic will be travelling more slowly because of higher congestion during this time and buses will also be stopping regularly along the same stretch of road. Therefore, with increased servicing, compaction of the garbage and splitting the collection points into two stops across the front of the site, it is considered that slightly longer stops (similar in length to a bus picking up passengers) will have minimal additional impact on following traffic.

4.6 Signage

Best practice facility bin management and material separation signage will be installed to the bin store area.

Figure 4: Bin Storage

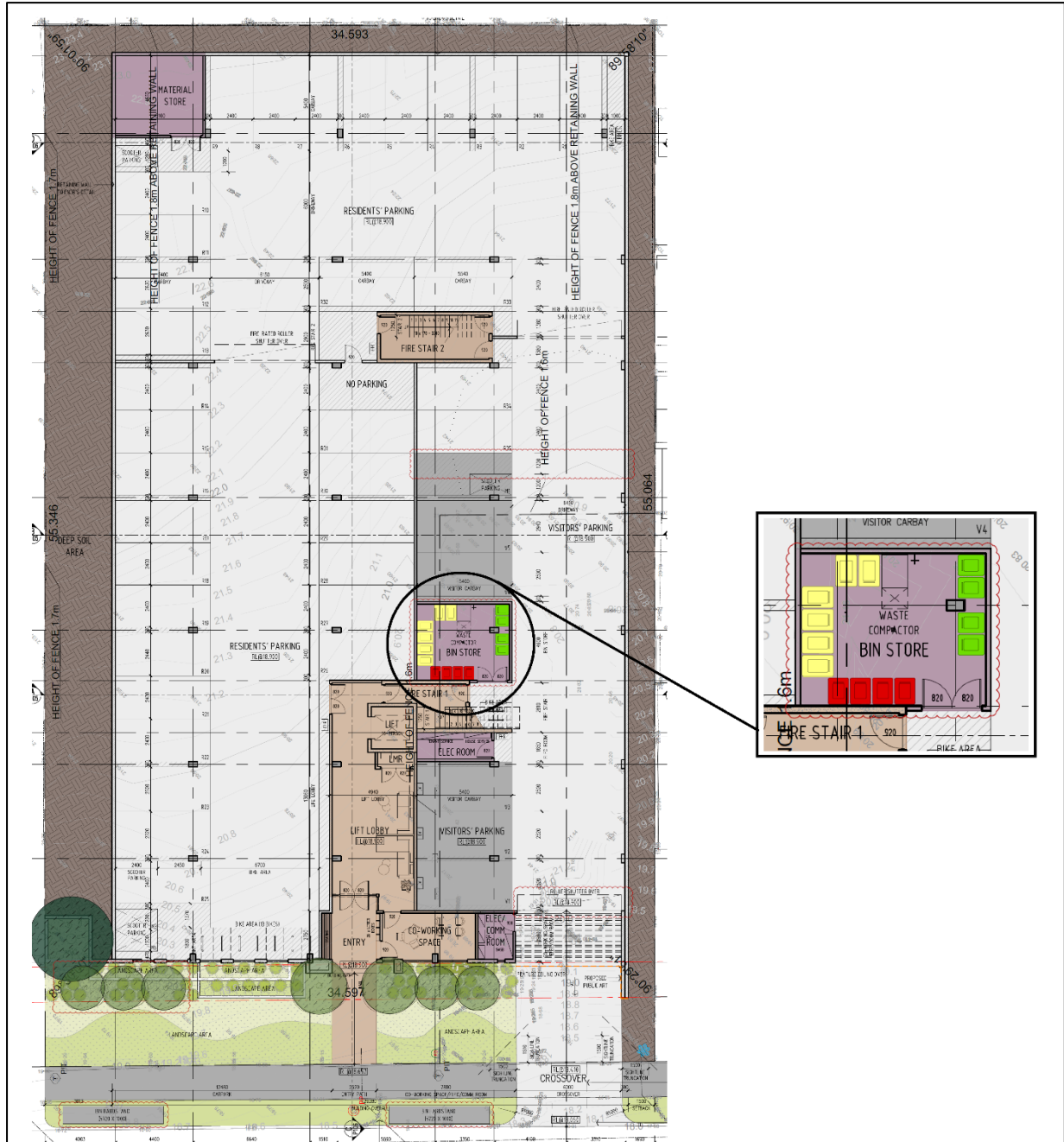
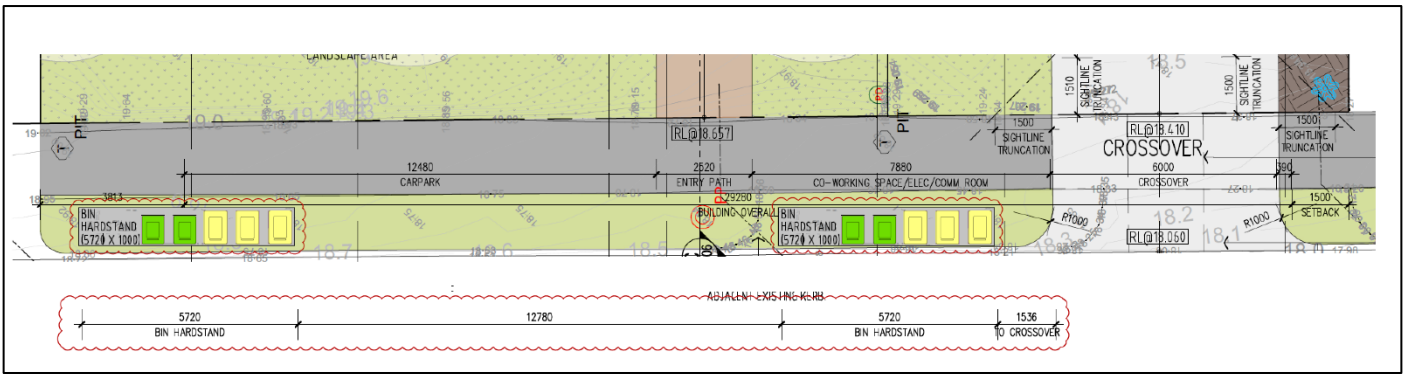


Figure 5: Bin Presentation (showing maximum bin presentation – recycling and FOGO)



5 WASTE MANAGEMENT RESPONSIBILITIES

5.1 Building Owners/Management

The building owners and their Building Management have responsibility for ensuring that the residential waste management activities for this development are appropriately conducted in accordance (at a minimum) with this Waste Management Plan, to ensure that they and the residents meet their waste management responsibilities.

The Owner/Building Management must allocate responsibility for all waste management activities to a Grounds person, Building Caretaker or Cleaner (Waste Person). This position will be responsible on behalf of the Owner/Building Management for the management of waste throughout the complex and they will be trained in all facets of the role.

Residents' and tenants' agreements or arrangements should include an undertaking by those parties to observe the requirements and responsibilities in this document.

5.2 Waste Person

At a minimum, the waste personnel will undertake the following bin servicing and waste management functions;

- Regular inspection of all bins;
- Regular cleaning of the bins and bin store;
- Ensuring residents have access to part or fully empty bins;
- Ensuring presentation of all bins on collection days; and
- Returning the bins as soon as practicable to the bin store after they have been emptied.

In addition, the waste education of incoming residents will be a priority for these staff.

5.3 Residents

All residents would be instructed via the Owner/Building Management of the various waste requirements. This would include direction on the use of the bin facilities and expectations of the managing body with regards to any recycling or waste diversion.

In the absence of any other individual arrangement with the Building Management and their waste personnel, residents (and their contractors) would be responsible for the immediate removal and disposal off-site of any waste unsuitable for placement in the bins. This would include large bulky waste and electronic items and waste from any building maintenance activities.

It is suggested that the Owner/Building Management entity include specific resident responsibilities for management and separation of the waste streams in the lease or rental arrangements.

6 REFERENCES

1. City of Vincent: *Waste Guidelines for New Developments* (revised 2023)

ATTACHMENT 1 – COMPACTOR EXAMPLE

ORWAK FLEX 4240

Smart in-bin compaction solution

ORWAK FLEX 4240 is an in-bin waste compactor for standard two-wheeled 240 L bins.

IDEAL FOR GENERAL WASTE

The 4240 is perfect for the hotel and restaurant sector, where general waste needs to be disposed of in waste bins. The in-bin compactor provides impressive volume reduction, contributing to valuable space-saving and a more profitable waste management.

SAFE AND USER-FRIENDLY

Model 4240 is user-friendly! The multi-chamber version is a convenient top-loading installation, while the single-chamber version has an easy wheel-in, wheel-out operation.

Safety and quality are our hallmarks and the compactor provides maximum personal safety both for the operator and those in the immediate vicinity. A bin indicator assures that the machine can only start, when the bin is in the right position.



Designed to fit the standard 240 Liter bins in the market.

- User-friendly
- Safety switches on the hatch and the front door/apron

ORWAK FLEX 4240 IS OPTIMIZED FOR:

SEMI-DRY WASTE

- General waste

Best suited for dry or semi-dry waste destined for landfill or incineration

SMART DESIGN

The 4240 is a robust and stable machine that, thanks to its compact design, occupies little floor space. A good finish and easy access make cleaning quick and simple.

EASILY EXTENDABLE

The compactor is easily extended with additional chambers. The front door on the single-chamber unit is then replaced by an apron for effortless movement of the press head from one chamber to the next.



The single-chamber unit with swing door

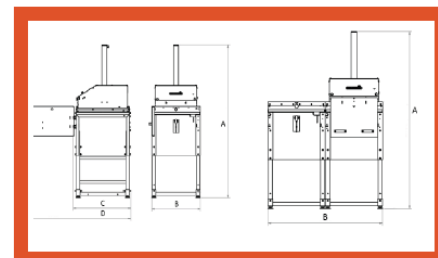


The multiple-chamber unit equipped with an apron with two handles

DIMENSIONS & SPECIFICATIONS

DIMENSIONS				
A	B	C	D	TRANSPORT HEIGHT
Single: 2275 mm	Single: 750 mm	Single: 920 mm	Single: 1515 mm	Single: 2100 mm
Double: 2275 mm	Double: 1475 mm	Double: 990 mm		Double: 2100 mm

MACHINE WEIGHT		
TOTAL WEIGHT	PRESS UNIT	SINGLE STAND
Single: 220 kg	Single: 120 kg	Single: 100 kg
Double: 320 kg		



TECHNICAL SPECIFICATIONS					
BIN SIZE	CYCLE TIME	PRESS FORCE	NOISE LEVEL	PROTECTION CLASS	OPERATING POWER
240 L	29 secs	1.5 ton, 15 kN	62.3 db (A)	IP 55	Single Phase 230 V, 50 Hz, 10 A

We reserve the right to make changes to specifications without prior notice. Bale/bag/bin weights are dependent upon material type.

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