

# WASTE MANAGEMENT ASSESSMENT REFERRAL

## 1. Proposal

The proposal is for demolition of all existing structures on the site, tree removal, excavation, and site preparation works. Construction of two residential flat buildings of 7-8 storeys with 179 social housing dwellings. Car parking within a two-level basement. A single access from Beauchamp Road providing access to a loading dock at ground level and basement car parking. Associated landscaping and communal open space. Infrastructure servicing.

## 2. Documents Referenced

- CM 25/376543: Appendix U Waste Management Plan
- CM 25/376514: Architectural Plans
- Bayside Council Waste Management and Technical Specification 2022

## 3. Demolition Phase Waste Plan

- The applicant will need to provide a demolition phase waste plan referencing all waste streams along with estimated volumes and include recognised processing facilities.
- The applicant will also need to indicate how the treatment and disposal of any hazardous material will be managed.
- This can be managed via conditions of consent.

## 4. Construction Phase Waste Plan

- The applicant will need to provide a construction phase waste plan referencing all waste streams are referenced with estimated volumes and include recognised processing facilities.
- This can be managed via conditions of consent.

## 5. Ongoing Waste Plan

The applicant's Ongoing Waste Management Plan (OWMP) does not meet Council's requirements as outlined in the Waste Management Technical Specification 2022 (WMTS) The applicant must refer to Section 9 Residential Flat Buildings and address the following issues and then resubmit their OWMP.

### 5.1 Residential Waste Generation and Bin Allocation

The applicant has not accurately estimated general waste, bin footprints or storage requirements.

The Applicant's Current estimate of **120L general waste per dwelling per week** does not meet Council's requirement. Council requires **240L general waste generation per dwelling per week**. The applicant has also no accurately estimated storage and service requirements of the development.

### **Bayside Customer Service Centres**

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The following are the correct generation rates, bin calculations and storage requirements for this development.

### General Waste:

#### Building A

Council's Waste Management Technical Specification (WMTS) requires an estimated general waste generation rate of 240 litres per dwelling per week.

Waste generation calculation:

- 240 L per dwelling per week
- 75 dwellings
- $240 \text{ L} \times 75 = 18,000 \text{ L}$  per week

This is double the applicant's estimate of 9,000 L per week.

With twice-weekly general waste collection, the required bin capacity per service is:

- $18,000 \text{ L} \div 2 \text{ collections} = 9,000 \text{ L}$  per collection

The applicant proposes to use 1,100 L bulk bins, which results in the following requirement:

- $9,000 \text{ L} \div 1,100 \text{ L} = 8.18 \text{ bins}$
- Rounded up:  $9 \times 1,100 \text{ L}$  bins, serviced twice weekly

The applicant's proposal of  $5 \times 1,100 \text{ L}$  bins, as shown in the submitted bin summary, is insufficient to manage the volume of general waste generated on site.

In addition, the applicant must allow for additional 1,100 L bins to remain positioned under the waste chute and on the linear track system on service days, rather than subtracting these bins from the overall storage calculations.

The applicant has nominated a footprint of  $1.83 \text{ m}^2$  per 1,100 L bin. This does not allow for the required buffer for safe access and manoeuvrability. A minimum footprint of  $2.01 \text{ m}^2$  per 1,100 L bin, inclusive of operational clearances must be allowed for. This revised footprint directly impacts the total storage area required.

#### Required Storage Area

- $9 \times 1,100 \text{ L}$  bins
  - $2.01 \text{ m}^2$  per bin
  - Total:  $18.09 \text{ m}^2$
- Linear track area accommodating  $3 \times 1,100 \text{ L}$  bins (remaining in place during servicing)
  - $12.08 \text{ m}^2$

Total required general waste storage area:

$$18.09 \text{ m}^2 + 12.08 \text{ m}^2 = \mathbf{30.17 \text{ m}^2}.$$

The applicant cannot subtract bins located on the linear track from the total bin count or storage area, as suggested in *Table 11 – Waste Handling Infrastructure*. The proposal must provide storage for:

- 9 × 1,100 L general waste bins, plus
- 3 additional 1,100 L bins retained on the linear track during servicing

Accordingly, the applicant is required to increase the nominated waste storage area to accommodate the correct number of bins, the compliant footprint per bin, and the additional operational requirements on collection days.

### Building B

Council's Waste Management Technical Specification (WMTS) requires an estimated general waste generation rate of 240 litres per dwelling per week.

Waste generation calculation:

- 240 L per dwelling per week
- 104 dwellings
- $240 \text{ L} \times 75 = 24,960 \text{ L}$  per week

This is double the applicant's estimate of 12,480 L per week.

With twice-weekly general waste collection, the required bin capacity per service is:

- $24,960 \text{ L} \div 2 \text{ collections} = 12,480 \text{ L}$  per collection

The applicant proposes to use 1,100 L bulk bins, which results in the following requirement:

- $12,480 \text{ L} \div 1,100 \text{ L} = 11.35 \text{ bins}$
- Rounded up: 12 × 1,100 L bins, serviced twice weekly

The applicant's proposal of 6 × 1,100 L bins, as shown in the submitted bin summary, is insufficient to manage the volume of general waste generated on site.

In addition, the applicant must allow for additional 1,100 L bins to remain positioned under the waste chute and on the linear track system on service days, rather than subtracting these bins from the overall storage calculations.

The applicant has nominated a footprint of 1.83 m<sup>2</sup> per 1,100 L bin. This does not allow for the required buffer for safe access and manoeuvrability. A minimum footprint of 2.01 m<sup>2</sup> per 1,100 L bin, inclusive of operational clearances must be allowed for. This revised footprint directly impacts the total storage area required.

### Required Storage Area

- 12 × 1,100 L bins
  - 2.01 m<sup>2</sup> per bin
  - Total: 24.12 m<sup>2</sup>
- Carousel with 4 × 1,00 L bins (remaining in place during servicing)
  - 16.4 m<sup>2</sup>

Total required general waste storage area:  
 $24.12 \text{ m}^2 + 16.4 \text{ m}^2 = \mathbf{40.52 \text{ m}^2}$ .

The applicant cannot subtract bins located on the carousel from the total bin count or storage area, as suggested in *Table 11 – Waste Handling Infrastructure*. The proposal must provide storage for:

- 12 × 1,100 L general waste bins, plus
- 4 additional 1,100 L bins retained on the carousel during servicing

Accordingly, the applicant is required to increase the nominated waste storage area to accommodate the correct number of bins, the compliant footprint per bin, and the additional operational requirements on collection days.

## Recycling:

### Building A

Whilst the applicant's generations rates for recycling are correct, they have not allowed a large enough footprint for the 1,100L bins. The applicant must allow for additional 1,100 L bins to remain positioned under the waste chute and on the linear track system on service days, rather than subtracting these bins from the overall storage calculations.

The applicant has nominated a footprint of 1.83 m<sup>2</sup> per 1,100 L bin. This does not allow for the required buffer for safe access and manoeuvrability. A minimum footprint of 2.01 m<sup>2</sup> per 1,100 L bin, inclusive of operational clearances must be allowed for. This revised footprint directly impacts the total storage area required.

#### Required Storage Area

- 9 × 1,100 L bins
  - 2.01 m<sup>2</sup> per bin
  - Total: 18.09 m<sup>2</sup>
- Linear track area accommodating 3 × 1,100 L bins (remaining in place during servicing)
  - 12.08 m<sup>2</sup>

Total required recycling storage area:

$$18.09 \text{ m}^2 + 12.08 \text{ m}^2 = \mathbf{30.17 \text{ m}^2}.$$

### Building B

Whilst the applicant's generations rates for recycling are correct, they have not allowed a large enough footprint for the 1,100L bins. The applicant must allow for additional 1,100 L bins to remain positioned under the waste chute and on the linear track system on service days, rather than subtracting these bins from the overall storage calculations.

The applicant has nominated a footprint of 1.83 m<sup>2</sup> per 1,100 L bin. This does not allow for the required buffer for safe access and manoeuvrability. A minimum footprint of 2.01 m<sup>2</sup> per 1,100 L bin, inclusive of operational clearances must be allowed for. This revised footprint directly impacts the total storage area required.

#### Required Storage Area

- 12 × 1,100 L bins
  - 2.01 m<sup>2</sup> per bin

- Total: 24.12 m<sup>2</sup>
- Linear track area accommodating 3 × 1,100 L bins (remaining in place during servicing)
  - 12.96 m<sup>2</sup>

Total required recycling storage area:  
 24.12 m<sup>2</sup> + 12.96 m<sup>2</sup> = **37.08 m<sup>2</sup>**.

### FOGO:

The applicant's current estimate of 96 litres of FOGO waste per dwelling per week is considered appropriate for a development of this type. However, the applicant must note and address the following critical requirements:

- Mandated Garden Organics (GO) / FOGO services for local government commence by **2030**, not 2026.
- FOGO bins must be provided on every residential level, located adjacent to waste and/or recycling chutes.
- Council will collect FOGO **once** weekly, not **twice** weekly as assumed by the applicant. This directly affects the number of bins and required storage area.
- Waste bins of any stream must not be stored within the same space as bulky waste, including FOGO bins. FOGO storage must be **physically separated** from bulky waste storage areas.

### Building A

The applicant has nominated a footprint of **0.43 m<sup>2</sup> per 240 L bin**, which does **not** allow for the required buffer for safe access and manoeuvrability. Council requires a minimum footprint of **0.65 m<sup>2</sup> per 240 L bin**, inclusive of operational clearances.

As FOGO collection is **weekly**, additional bins must be allowed for when compared to the applicant's twice-weekly servicing assumption. This revised footprint and servicing frequency directly impact the required storage area.

#### Required FOGO Capacity

- 75 dwellings × 96 L per dwelling per week
- Total FOGO generation: 7,200 L per week

Using 240 L bins:

- $7,200 \text{ L} \div 240 \text{ L} = 30 \times 240 \text{ L FOGO bins}$

#### Required Storage Area

- 30 × 240 L bins
- 0.65 m<sup>2</sup> per bin
- Total required FOGO storage area: **19.50 m<sup>2</sup>**

## Building B

The applicant has again nominated a footprint of **0.43 m<sup>2</sup> per 240 L bin**, which is **non-compliant** with Council's minimum operational requirements.

Council requires a minimum footprint of **0.65 m<sup>2</sup> per 240 L bin**, inclusive of manoeuvring clearances. As with Market Building A, weekly servicing necessitates additional bins beyond the applicant's estimates.

### Required FOGO Capacity

- 104 dwellings × 96 L per dwelling per week
- Total FOGO generation: **9,984 L per week**

Using 240 L bins:

- $9,984 \text{ L} \div 240 \text{ L} = 41.6$  bins, rounded up to
- 42 × 240 L FOGO bins

### Required Storage Area

- 42 × 240 L bins
- 0.65 m<sup>2</sup> per bin
- Total required FOGO storage area: **27.30 m<sup>2</sup>**

Whilst it is technically possible to subtract FOGO generation from general waste capacity, Council strongly recommends that developments future-proof waste infrastructure by allowing full capacity for both general waste and FOGO streams, where practical.

FOGO services in other LGAs have demonstrated high contamination rates during initial rollout periods. To avoid service disruption, Council recommends accommodating both streams independently, particularly during early stages of implementation, where:

- Residents may not immediately engage with the FOGO service and continue placing organics into general waste; or
- FOGO bins become contaminated and are therefore unable to be serviced.

The applicant must also allow for additional 240 L FOGO bins to be placed on each residential level where a waste and/or recycling chute is provided.

It is not practical, as suggested by the applicant, to locate FOGO bins solely within basement areas. Separating FOGO services from residential levels will likely result in poor participation and reduced diversion outcomes.

Accordingly:

- FOGO bins must be located on each residential level adjacent to chutes, and
- Additional bins must be allowed to remain in place on service days, rather than being deducted from total bin numbers or storage calculations.

## 5.2 Bin Storage:

The applicant will need to review their bin storage area to ensure they can house the increased number of bins. As previously outlined.

The applicant will also need to confirm that the bin storage area meets the following requirements, as outlined in section 4.4 of Council's Waste Management Technical Specification:

- Be naturally ventilated or have ventilation systems that meet the relevant Australian Standards;
- Have a hot and cold-water outlet for washing bins located either in or adjacent to the bin room;
- Allow wastewater to discharge to an approved sewer outlet;
- Have adequate lighting controlled by switch or motion devices;
- If a room, be fitted with doors that open from both inside and outside the room, to be wide enough to allow bins to easily and safely pass through, where the doors are selfclosing, well fitted and durable;
- Incorporate locking devices on sites where waste disposal is controlled by a strata corporation and respective caretaker;
- Protect the interior from rain and other inclement weather; Be suitably enclosed, covered and maintained to prevent polluted wastewater runoff from entering the stormwater system;
- Complement the building's design and the surrounding streetscape;
- Have durable and smooth walls and ceilings made of an impermeable material;
- Have coved wall and floor intersections;
- Be located far enough away from residences so there is minimal impact from noise during bin use;
- Not allow access by residents if there are chute discharge points or compactors in the same room as the bin storage area - at a minimum, chute discharge points or compactors should be in an enclosed, secured room or suitably caged with sufficient circulation space for bins to move round them as per the manufacturer's specifications;
- Be easily accessible by people with a disability.

### 5.3 Bin Carting Route:

The applicant must confirm the bin carting room details, as required by Council's WMTS.

The applicant must note the following from the WMTS regarding bin carting routes and confirm these details when they resubmit their OWMP:

- **Bins of up to 360L – no more than 30 m**
- **bins of 360-1100 L capacity - no more than 5 m.**
- bins of more than 1100 L capacity - no more than 3 m

The bin carting routes should be designed to be:

- direct and short as possible.
- without kerbs and steps.
- gradients more than 1:14 **(or 1:30 where 660 or 1100 L bins are used)**.
- a minimum of 2 m wide with a hard, non-slip surface.

### 5.4 Bulky Waste Storage:

The applicant has not provided enough detail in regard to their bulky waste storage. Council's WMTS states that the following storage capacity must be provided for bulky waste storage

- Developments of up to 40 units – 12 meters squared
- For Developments over 40 units – an additional 3 meters squared must be added for every 10 units.

The applicant has inaccurately estimated **20 m<sup>2</sup>** for bulky waste at this development. The applicant must allow for **22.5 m<sup>2</sup>**

The applicant must confirm the bulky waste storage size, the separation of the bulky waste storage area from any bin storage areas, and the following details when they resubmit their OWMP.

The bulky waste storage area must:

- be readily accessible to all residents and located close to the main bin storage room.
- be secure and caged to allow the contents to be visible from the outside (when located in a basement).
- have a minimum doorway width of 2 metres to allow for easy movement of large waste items in and out of the room.
- Have a minimum clearance height of 4 metres.

#### 5.4 Collection Access

Developments of this size require on property collection for both bin services and bulky waste. Kerbside presentation is not permitted for either. The following requirements must be met.

The onsite collection point must be located so it:

- Ensures all allocated bins are collected on-site, not impeding access to any vehicles or pedestrians.
- Has a height clearance of **4.5 meters**, allowing for all ceiling or roof attachments such as vents, signage and piping, for collection vehicles to access and service the site.
- Have a minimum unobstructed **3.5 meters** carriageway width to collection points which includes all attachments such as vents, signage and piping.
- Ensures a vehicle can enter and exit the site in a forward driving direction, and
- Ensures a swept path of **21 meters** and a turning circle of **25 meters** to accommodate the length of collection vehicle to safely manoeuvre within the development.

## 6. Summary

### **Demolition Phase Waste Plan**

- A Demolition Phase Waste Management Plan is required. The plan must:
  - Identify all waste streams generated during demolition.
  - Provide estimated volumes for each waste stream.
  - Nominate recognised processing / disposal facilities.
  - Detail how any hazardous materials will be identified, managed, treated and disposed of.
- This requirement can be addressed via conditions of consent.

### **Construction Phase Waste Plan**

- A Construction Phase Waste Management Plan is required. The plan must:
  - Identify all waste streams generated during construction.
  - Provide estimated volumes for each waste stream.
  - Nominate recognised processing / recycling facilities.
- This requirement can be addressed via conditions of consent.

## Ongoing Waste Management Plan (OWMP)

- The submitted Ongoing Waste Management Plan does not comply with Council's Waste Management Technical Specification 2022 (WMTS).
- The OWMP must be revised with reference to Section 9 – Residential Flat Buildings
- The revised OWMP must address the issues outlined below and be resubmitted.

## General Waste

### Building A

- Council requires **240 L of general waste per dwelling per week** (not 120 L as proposed).
- Waste generation:
  - 75 dwellings × 240 L = **18,000 L per week**
- With twice-weekly collection:
  - 18,000 L ÷ 2 = **9,000 L per collection**
- Using 1,100 L bins:
  - 9,000 L ÷ 1,100 L = 8.18 bins, rounded up to **9 bins**
- The applicant's proposal of 5 × 1,100 L bins is insufficient.
- Additional bins located under chutes and on the linear track during servicing must be included and **cannot** be deducted from total bin numbers.
- Bin footprint:
  - Minimum required footprint: **2.01 m<sup>2</sup> per 1,100 L bin**
  - Applicant's nominated **1.83 m<sup>2</sup> per bin** is insufficient
- Required storage area:
  - 9 × 1,100 L bins = 18.09 m<sup>2</sup>
  - Linear track (3 bins remaining in place on service days) = 12.08 m<sup>2</sup>
  - Total required general waste storage: **30.17 m<sup>2</sup>**

### Building B

- Council requires **240 L of general waste per dwelling per week**.
- Waste generation:
  - 104 dwellings × 240 L = **24,960 L per week**
- With twice-weekly collection:
  - 24,960 L ÷ 2 = **12,480 L per collection**
- Using 1,100 L bins:
  - 12,480 L ÷ 1,100 L = 11.35 bins, rounded up to **12 bins**

- The applicant's proposal of 6 × 1,100 L bins is insufficient.
- Additional bins located under chutes and on carousel during servicing must be included and **cannot** be deducted from total bin numbers.
- Bin footprint:
  - Minimum required footprint: 2.01 m<sup>2</sup> per 1,100 L bin
- Required storage area:
  - 12 × 1,100 L bins = **24.12 m<sup>2</sup>**
  - Bin Carosel and 4 x 1,100L bins = **16.4 m<sup>2</sup>**
  - Total required general waste storage: **40.52 m<sup>2</sup>**

## Recycling

### Building A

- Recycling generation rates are acceptable.
- Minimum required footprint: **2.01 m<sup>2</sup> per 1,100 L bin.**
- Additional bins located under chutes and on the linear track during servicing must be included and **cannot** be deducted from total bin numbers.
- Required storage:
  - 9 × 1,100 L bins = **18.09 m<sup>2</sup>**
  - Linear track (3 bins) = **12.08 m<sup>2</sup>**
  - **Total required recycling storage: 30.17 m<sup>2</sup>**

### Building B

- Recycling generation rates are acceptable.
- Minimum required footprint: **2.01 m<sup>2</sup> per 1,100 L bin.**
- Bins on carousel during servicing must be included.
- Required storage:
  - 12 × 1,100 L bins = **24.12 m<sup>2</sup>**
  - Linear track (3 bins) = **12.96 m<sup>2</sup>**
  - **Total required recycling storage: 37.08 m<sup>2</sup>**

## FOGO (Food Organics / Garden Organics)

### General Requirements

- The applicant's estimate of **96 L per dwelling per week** is acceptable.
- The applicant must note:
  - Mandated FOGO services commence by **2030**, not 2026.

- FOGO collection will be **weekly**, not twice weekly.
- FOGO bins must be provided on every residential level, adjacent to waste/recycling chutes.
- FOGO bins must **not** be stored with bulky waste; storage areas must be separated.
- Council recommends futureproofing by allowing **full capacity for both general waste and FOGO**, rather than offsetting one against the other, due to:
  - High contamination rates during early rollout stages.
  - Risk of service interruptions where residents do not engage with FOGO.

#### Building A

- FOGO generation:
  - 75 dwellings × 96 L = **7,200 L per week**
- Using 240 L bins:
  - 30 × 240 L bins required
- Minimum bin footprint:
  - 0.65 m<sup>2</sup> per 240 L bin
- Required storage:
  - 19.50 m<sup>2</sup>

#### Building B

- FOGO generation:
  - 104 dwellings × 96 L = **9,984 L per week**
- Using 240 L bins:
  - 42 × 240 L bins required
- Minimum bin footprint:
  - 0.65 m<sup>2</sup> per 240 L bin
- Required storage:
  - **27.30 m<sup>2</sup>**

#### **Bin Storage Rooms**

- Bin storage areas must be reviewed to ensure they can accommodate the increased number of bins identified above.
- Bin rooms must comply with **Section 4.4 of Council's WMTS**, including:
  - Ventilation (natural or mechanical to Australian Standards).

- Hot and cold water outlets for bin washing.
- Sewer-connected wastewater drainage.
- Adequate lighting.
- Doors operable from both sides and wide enough for bins.
- Secure access where strata-controlled.
- Weather protection and pollution control.
- Durable, impermeable finishes with coved junctions.
- Appropriate separation from residences to minimise noise.
- Restricted resident access where chute discharge points or compactors are present.
- Accessibility for people with a disability.

### **Bin Carting Routes**

- Carting distances must comply with WMTS limits:
  - Up to 360 L bins: **maximum 30 m**
  - 360–1,100 L bins: **maximum 5 m**
  - Over 1,100 L bins: **maximum 3 m**
- Routes must be:
  - Direct and unobstructed.
  - Free of steps and kerbs.
  - No steeper than 1:14 (or 1:30 for 660 L and 1,100 L bins).
  - At least 2 m wide, hard-surfaced and non-slip.

### **Bulky Waste Storage**

- Bulky waste storage has been under-estimated.
- This development requires **22.5 m<sup>2</sup>** of bulky waste storage.
- The applicant must confirm:
  - The correct storage area.
  - Physical separation from all bin storage areas.
- Bulky waste storage must:
  - Be accessible to residents and close to bin rooms.
  - Be secure and caged (where located in basements).
  - Have a minimum 2 m wide doorway.
  - Have a minimum 4 m clearance height.

## **Collection Access**

- The development requires on-site collection for both bin services and bulky waste. Kerbside collection is not permitted.
- The collection area must:
  - Allow all bins to be serviced without obstructing vehicles or pedestrians.
  - Provide 4.5 m vertical clearance.
  - Provide a minimum 3.5 m unobstructed carriageway width.
  - Allow vehicles to enter and exit in a forward direction.
  - Provide a 21 m swept path and 25 m turning circle for collection vehicles.