



**CITY OF VINCENT**

# **Waste Guidelines for New Developments**

**City of Vincent**

**May 2020**

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# 1 Terms and Definitions

| Term  | Description/Definition   |
|---|--|
| <b>Bin</b>  | Mobile Garbage Bin or Mobile Recycling Bin used to store general waste, comingled recyclables or FOGO for collection.  |
| <b>Bin Store</b>  | A waste storage facility used to store bins between collections. This may be also a bin room or compound.  |
| <b>Bulk Waste Verge Collection Service (Bulk Waste)</b> | Collections of household appliances, furniture and other oversized items which should not be disposed of in the bins.  |
| <b>Caretaker</b>  | Person(s) or party appointed by the managing agent to be responsible for the management of waste at the development. A caretaker may be a resident of the development or a third party.  |
| <b>City of Vincent</b>                                  | (the) City   |
| <b>Collection Point</b>                                 | The point where general waste, comingled recycling and FOGO are loaded onto collection vehicles.   |
| <b>Comingled Recycling</b>                              | Also refers to recycling. Material that is collected separately from general waste for the purpose of recycling. This may include paper, cardboard, glass, plastic, aluminium and steel containers.  |
| <b>Food Organic Garden Organic (FOGO)</b>               | Organic wastes such as food waste and green waste from the garden.   |
| <b>General Waste</b>                                    | Also referred to as garbage, rubbish, household waste or landfill waste. General waste is the remaining waste after other materials have been separated for comingled recycling and FOGO collection.<br>General waste is collected in red lidded bin if a FOGO service is in use, or a green lidded mobile garbage bin.<br>Hazardous and bulky waste should not be included in the general waste stream. |
| <b>Hazardous waste</b>                                  | Includes batteries, chemicals, paint, cleaning products, medicines and flammable liquids.  |
| <b>Multi-Unit Dwelling (MUD)</b>                        | In this guide, the term is used to refer to residential development of more than one dwelling. This ranges from dual occupancies and attached dwellings to high-rise residential flat buildings.   |
| <b>Mobile Garbage Bin (MGB)</b>                         | Receptacle used to temporarily store general waste and FOGO that is generated at a property.   |
| <b>Mobile Recycling Bin (MRB)</b>                       | Receptacle used to temporarily store comingled recycling that is generated at a property.  |
| <b>Onsite Collection</b>                                | When the collection vehicle enters the property and services the development within the property boundary from a designated loading area.  |
| <b>Presentation point</b>                               | Location/s in which the MGBs are presented for collection.   |
| <b>WALGA</b>  | Western Australia Local Government Association – Multiple Dwelling Waste Management Plan Guidelines  |
| <b>Waste generation rate</b>                            | These are average general waste, comingled recycling and FOGO generation volumes associated with developments.   |
| <b>Waste Management Plan (WMP)</b>                      | Document that defines how waste will be managed for a proposed development.  |

## 2 Waste Guidelines for New Developments

This guide is a tool to assist architects, designers, developers and other professionals to incorporate waste management into new developments within the City. The aim of this document is to ensure that economical waste collection services can be provided to all ratepayers and efficient ongoing management of waste and recycling services are considered in all new developments.

These guidelines outline the requirements of a Waste Management Plan for all new residential, commercial and mixed use developments. The following sections will detail development application requirements with regard to solid waste management including generation, storage and removal of general waste and recycling.

## 3 Objectives

The objectives of these guidelines are to:

- Ensure the long term waste management needs of each development are met in an efficient and sustainable manner and provides for waste minimisation in a manner that protects the environment;
- Minimise the impacts of waste storage and collection facilities on the streetscape, public realm, building entries and the amenity of residents;
- Maximise safety for waste collection staff, residents and the public;
- Minimise traffic and footpath obstruction; and
- Minimise impacts on the visual or other amenity of the building or neighbourhood.

The City encourages designers to be innovative in developing the most efficient and sustainable waste management system to meet these objectives and encourages early consultation with the City regarding waste management requirements. This can be initiated by calling City on 9273 6000 or emailing [mail@vincent.wa.gov.au](mailto:mail@vincent.wa.gov.au).

In most cases a WMP shall be submitted as part of the following categories of Development Application:

- Residential
  - 2 or more multiple dwellings;
  - 2 or more grouped dwellings;
  - 2 or more aged or dependant persons dwellings/beds;
- Accommodation uses (as determined by the City);
- All proposals where there is insufficient lot, road or verge frontage for collection vehicle access (as determined by the City);
- Mixed Use Developments; and
- Commercial, Industrial and Other Non-Residential Development, as determined by the City.

Waste management must be considered at the design stage of a development. This will ensure that sufficient waste capacity has been catered for, enough space has been provided to store waste prior to collections, recycling of waste has been considered, sufficient space allocated to allow for

collection, clearance for a waste collection vehicle has been considered and vermin, pests and odours have been minimised.

## 4 City's Residential Waste Services

The City provides the following services to all rateable properties as a part of its statutory requirements under the Waste Avoidance the Resource Recovery Act 2007 and the Health Act 1911.

The City currently provides the following standard residential waste and recycling collection services:

- Rubbish (general waste) in 1 x 240L or 1 x 140L MGB collected once per week;
- Comingled recycling in 1 x 240L or 1 x 360L MGB collected once per fortnight;
- Verge collection for bulky items once per annum and bulky green waste collected twice per annum; and
- Paid On-demand Mattress and White Goods collection service for residential dwellings.

The City intends to introduce a FOGO collection service from October 2021, therefore all new developments (including buildings with commercial occupants) are required to accommodate collection of FOGO as well as general waste and recycling. The FOGO service will primarily utilise 140L lime green lidded bins, collected once per week due to manual handling risks associated with heavy food bins. The City may consider 240L lime green lidded bins where a property has substantial gardens.

Residential group and multiple dwellings (i.e. units, townhouses and apartments) are provided a service, based on the waste generation rates in **Appendix A**.

The City's collection services operate Monday to Friday only for residential properties. The City does not collect waste from residential properties on Saturdays and Sundays.

The City currently offers a standard weekly waste collection and fortnightly recycling collection service to residential properties. Depending on the density of the development, the City may provide residential waste collections up to 2 times per week by application, subject to approval by the City.

*Note: Increased collection frequency approval is at the City's discretion and will incur additional charges.*

The City's internal Waste Team and Waste Contractors operates the following collection vehicles:

- Side Loader Collection Vehicle
- Rear Loader Collection Vehicle

The City may collect MGBs onsite under special arrangements, subject to approval by the City. *Note: Preference will always be to collect from the verge, unless this presents a safety risk/concern. Onsite collection approval is at the City's discretion and a waiver form needs to be signed by the Developer to fulfil the City's waste collection agreement. Additional fees may apply for onsite collection.*

## 5 Commercial collection services

Commercial properties are not required to utilise the City's waste services and can seek private commercial waste collection arrangements. Commercial developments are required to adhere to the residential waste management requirements.

The following commercial waste and recycling services are currently provided by the City:

- General waste in 240L MGB; and
- Recycling in 240L or 360L MRBs.

Waste and recycling generation rates are to be calculated using the waste generation rates in **Appendix A**.

Commercial bin stores are required to service the maximum number of bins that may be required at the property and cater for potential future uses/occupancy.

The City's collection services operate Monday to Friday for commercial properties. The City does not collect waste from commercial properties on Saturdays and Sundays.

The City currently offers a standard weekly waste collection aligned with the residential schedule.

The WMP must nominate if the City or a private collection contractor will service the development.

Please note that the City's Commercial Waste Service is currently under review. At 17 March 2020 Ordinary Council meeting, Council gave in-principle support of the business case to discontinue the commercial waste service from June 2021.

## 6 Waste Management Plan

WMPs require the following details to be provided:

- Summary of the development;
- Anticipated waste generation;
- Bin size and quantity;
- Bin Access and Storage;
- Waste system (internal collection methods and equipment);
- Collection method and frequency; and
- Waste service provider.

All WMPs must provide explanation (including appropriate drawings/figures) on how the applicant/s will achieve the outcomes of these guidelines. The checklist in **Appendix B** should be used as a guide to ensure the City's core waste management practices have been considered and incorporated in to the design of the development and addressed in the WMP.

The development will be undertaken and operate in conformity with the WMP, as approved by the City. Details of how the WMP will continue to be applied in perpetuity across the life of a development

and the process for changing a WMP and the City's involvement in such, are to be included in the WMP (*e.g. reference in the strata management statement*).

## 6.1 Summary of the Development

The summary of the development must contain the following information:

- Location of the development;
- Number of floors;
- Number of dwellings units by size (one, two or three bedrooms);
- Size of each commercial unit; and
- Details of the intended use of the development.

## 6.2 Anticipated Waste Generation

Anticipated waste generation for general waste, comingled recycling and FOGO must be calculated using the figures in **Appendix A**. A summary of the anticipated waste generation calculation and estimated quantity of bins required should be included in the WMP.

The intended land uses, floor areas, apartment sizes etc. should be indicated, to clearly show how the waste generation of the development was calculated, with any assumptions explained.

Where specific commercial tenancy uses are not known, the City requires the use of restaurant generation rates in **Appendix A** to ensure the development has adequate storage capacity.

The number of bins required for general waste, comingled recycling and FOGO should be clearly identified.

## 6.3 Bin Size and Quantity

Details of the size and quantity of the bins to be used must be provided. **Appendix C** contains details of the bin sizes that the City use. Other size bins may be used in commercial developments, subject to the City's approval, and details of these bins must be provided with the WMP.

## 6.4 Bin Access and Storage

Design details of the bin store must be included in the WMP covering the requirements outlined in **Section 7.2**. This includes:

- How waste is transported from the source to the bin store;
- Bin store size;
- Bin store layout;
- Wash-down area;
- Ventilation;
- Vermin prevention;
- Noise reduction; and
- Stormwater ingress prevention.



## 6.5 Waste System

Details of waste systems must be provided including waste chute systems, compactors, and any other waste management equipment or devices to be used.

A description of internal source separation systems, bulk waste storage and educational/equipment signage must also be included.

The WMP must provide a description of how waste will be transferred internally by residents to the bin store.

In developments that have four or more stories the City encourages:

- Room be provided for interim storage of general waste, comingled recycling, and FOGO on each floor in an interim storage area, with a caretaker that takes all materials from the interim storage area to a communal bin store; and
- The use of separate chutes for general waste, comingled recyclables and FOGO in conjunction with an interim storage area on each floor for residents to place oversized items such as cardboard boxes that should not be put into the chute system.

The WMP is to include chute specifications and details for mitigating glass breakage at the termination of the chute as well as ongoing cleaning and maintenance of the chute system.

The WMP must establish and delegate responsibility for the tasks required for ongoing monitoring and maintenance of waste management services and equipment.

## 6.6 Collection Method and Frequency

WMPs must contain details on collection method to be used. This should include the following information:

- Collection vehicle to be utilised i.e. *City (Residential or Commercial) or Private Waste Contractor (Commercial)*;
- Movement of collection vehicle;
- Bin presentation point;
- Collection location;
- Transfer of waste to the collection vehicle; and
- Frequency of collection.

## 6.7 Waste Service Provider

The WMP must nominate if the City or a private waste contractor will service the development. For all residential collections, the City is the required waste service provider.

## 6.8 Drawings/Figures

To assist in the assessment process WMPs should provide drawings/figures to support the above information, including:

- Generic floor level showing the interim storage area with adequate area for all residents to easily access;
- Bin store/s including configuration of the required quantity of bins and waste equipment within the store to demonstrate functionality and adequate size to comply with the City Local Health Law. Drawings should include bin store floor area (m<sup>2</sup>), bin sizes and configuration, chute/compaction equipment size and layout, and bin wash taps and sewer points;
- Bulk waste store;
- Ramp gradients;
- Bin presentation point, with the maximum required quantity of bins to be presented to be shown; and
- Swept path analysis of the waste collection vehicle (onsite servicing).

## 7 Requirements for Waste Management

This section outlines the City's requirements for all developments in relation to bins, waste storage and bin collections. The following requirements should be incorporated into the development designs and described in the WMP.

### 7.1 Bins

- 7.1.1 All general waste, recycling and FOGO material generated within a development is required to be stored in appropriate bins, as determined by the City.
- 7.1.2 Specialty waste other than general waste, comingled recyclables and FOGO must be stored in appropriate bins, as approved by the City. This can include, but is not limited to used cooking oil, medical waste and hazardous substances.
- 7.1.3 The number of bins provided must be sufficient to store the anticipated waste generation as derived from **Appendix A**.
- 7.1.4 Commercial bin stores are required to be able to service the maximum number of bins that may be required at the development to cater for potential future changes uses/occupancy.

### 7.2 Waste Storage

- 7.2.1 All developments shall be provided with a waste storage facility for the storage of general waste, recycling and FOGO in appropriate bins.
- 7.2.2 Developments with shared bins must include an easily accessible communal bin store within the development, to the satisfaction of the City.
- 7.2.3 In the case of mixed-use developments separate residential and commercial bin stores are required.
- 7.2.4 Where a waste storage facility cannot be incorporated into the development an enclosure with walls of not less than 1.8 metres in height and access point with self-closing gate of not less than 1000mm, must be located behind the front building setback.

- 7.2.5 All bin stores shall have a floor area of no less than 5m<sup>2</sup>. Use of roller doors are acceptable if space is an issue.
- 7.2.6 All waste storage facilities must be sized to be capable of containing a minimum of 2 weeks' worth of general waste and recycling and one week of FOGO regardless of any reduction in bin quantity or waste volume estimates from compaction or increased collection frequencies.
- 7.2.7 Equal access is to be provided to all bins (i.e.: no stacking of rows of bins). Each bin must have a minimum 50mm spacing around all sides, including between walls, other bins and aisles. Additional information is included in **Appendix C**.
- 7.2.8 All bin stores to have an aisle width of not less than 1000mm for easy manoeuvring of bins, refer **Appendix E** for example bin store.
- 7.2.9 All bin stores to have an access point of not less than 1000mm for easy manoeuvring of bins, refer **Appendix E** for example bin store.
- 7.2.10 Sufficient space must be provided to store general waste, comingled recycling material and FOGO in separate bins.
- 7.2.11 The storage location of bins must be located behind the front building setback.
- 7.2.12 Bins must not be visible from the property boundary except when presented for collection.
- 7.2.13 Bins must be stored in locations that are reasonably secured from theft and vandalism.
- 7.2.14 Bin stores shall have 100mm concrete floors (in accordance with AS2870) grading to an industrial floor waste (including a charged 'water-trap' connected to sewer or an approved septic system), with a hose cock to enable bins and/or the bin store to be washed out.
- 7.2.15 All waste storage facilities must be undercover and be designed to not permit storm water to enter into the drain.
- 7.2.16 All waste storage facilities must have enough space to facilitate the cleaning of bins inside the bin store.
- 7.2.17 Walls and floors of bin stores must be constructed of a material which facilitates the cleaning of the bin store.
- 7.2.18 Bin stores must be fitted with self-closing doors.
- 7.2.19 Enclosed bin stores must be ventilated to a suitable standard as approved by the City.
- 7.2.20 Where mechanical ventilation is used, the outlet for vented air must be in a location which will not adversely impact residents.
- 7.2.21 Bin stores shall be provided with artificial lighting, sensor or switch controlled both internal/external to the room or area. All lighting in open areas is to comply with AS4282-1997 (Control of Obtrusive Outdoor Lighting).

- 7.2.22 Vermin must be excluded from the bin store.
- 7.2.23 Sufficient space must be provided to allow the easy passage of bins in and out of bin stores or compounds.
- 7.2.24 Council approved signage shall be used in all communal waste storage facilities to inform users of the appropriate bins for disposing of waste and guidance for the separation of general waste, comingled recyclables and FOGOs.
- 7.2.25 General waste may be compacted to a maximum compaction ratio of 2:1. Comingled recycling material must not be compacted, unless it is clean cardboard in a separate collection to comingled recycling material.
- 7.2.26 The distance between the last bin in the bin store and the presentation point should be ideally no greater than 10m.

### **7.3 Waste Collection**

- 7.3.1 Bins must be presented to the verge on the specified collection day for collection.
- 7.3.2 Bins placed on the verge for collection must not be placed on a neighbouring verge.
- 7.3.3 Bins should be stored behind the property boundary line, within 24 hours of collection.
- 7.3.4 Bins placed for collection on the verge must not obstruct pedestrians, street furniture or bike lanes. Bins must be placed at least 1m from cars, street signs or power poles and 1m away from trees, not under the tree canopy. A discussion with the City's Waste Team regarding bin placement under tree canopies is required if there is no other option for bin positioning.
- 7.3.5 Bins are to be lined up neatly and in a single row along the verge and have no less than 0.5m spacing between each bin.
- 7.3.6 Where more than 5 x 240L bins are to be presented to the verge, an area must be paved to accommodate the bins on the verge and allow passage to and from the storage area.
- 7.3.7 Surfaces of all bin travel paths must be designed to allow easy transportation of the bins. Travel paths should be level and with smooth non-slip surfaces and be finished in a way which reduces the noise of the bins as they are manoeuvred.
- 7.3.8 The travel path between the bin store and the collection point is to be kept free of obstacles and steps.
- 7.3.9 Gradients of bin travel paths must not exceed 1:14 for two wheeled bins and 1:30 for four wheeled bins.

### **7.4 Onsite collection (if required)**

- 7.4.1 The City's preferred collection point is the verge, however where space is limited or this creates a safety risk/concern, onsite collection may be required, as determined by the City.

Additional charges may apply.

- 7.4.2 Where onsite collections are required, sufficient clearance for the collection vehicles must be catered for. Clearances for collection vehicles are outlined in **Appendix D**.
- 7.4.3 Where onsite collections occur, roadways and infrastructure traversed by the collection vehicle must be constructed to accommodate a 30 tonne Gross Vehicle Mass.
- 7.4.4 Waste which is likely to become putrid such as FOGO must be collected at a frequency which reduces the likelihood of this material causing offence. Alternatively the City may approve at its discretion, storage of this waste in a way which reduces this likelihood, such as refrigerated storage rooms.
- 7.4.5 Where private collections are employed the collections must comply with all local, state and federal laws and regulations.

## **7.5 Bulk Waste**

- 7.5.1 All developments are to provide a bulk waste store to allow temporary storage of bulky items while awaiting disposal such as cardboard boxes, mattresses, appliances and other oversized household waste or material which should not be disposed of within the bin system or down a chute system.
- 7.5.2 A bulk waste store is an important safeguard against residents illegally dumping bulky waste on the footpath or within common areas of the building.
- 7.5.3 The bulk waste store should be readily accessible to all residents.
- 7.5.4 Areas for bulky waste can be next to or within the main residential communal bin store.
- 7.5.5 The bulk waste store should be located at ground level (screened from the street) or in a basement and can be incorporated with the waste storage facility.
- 7.5.6 Be secure, and caged if required, to allow the contents to be visible from the outside.
- 7.5.7 Have a minimum doorway width of 1500mm to allow for easy movement of large waste items.
- 7.5.8 A minimum area of 4m<sup>2</sup> is to be provided, or 0.5m<sup>2</sup> per dwelling, whichever is greater. The 0.5m<sup>2</sup> area may be reduced if all units have their own equivalent sized store, at the discretion of the City.

The City offers one bulk waste verge collection to residents each year and on demand mattress and white goods collections at a cost. There are safety and amenity implications of large numbers of multiple dwellings discarding materials within the road reserve at one time, therefore it is encouraged that this waste is accumulated within the bulk waste store and for the Strata Company to arrange on-site collection with the City, or private service providers, as required throughout the year. The bulk waste verge collection service is under-review (March 2020).

# Appendix A: Waste Generation Rates

**Table 7-1: Three Bin System Residential waste and recycling generation rates / storage requirement**

| Waste Stream  | Dwelling Size | Waste Generation Rate/<br>Storage Requirement<br><12 dwellings | Waste Generation Rate/<br>Storage Requirement<br>>12 dwellings |  |
|---|---------------|--|--|--|
| General Waste (on FOGO system)  | 1 bedroom     | 60L/fortnight  | 80L/fortnight  |  |
|   | 2 bedroom     | 100L/fortnight   | 120L/fortnight   |  |
|   | 3+ bedroom    | 140L/fortnight   | 160L/fortnight   |  |
| Comingled recycling   | 1 bedroom     | 80L/fortnight  | 40L/fortnight  |  |
|   | 2 bedroom     | 120L/fortnight   | 80L/fortnight  |  |
|   | 3+ bedroom    | 240L/fortnight   | 180L/fortnight   |  |
| FOGO<br><br>*Note: City's standard smaller bin is <b>140 litre</b> capacity | 1 bedroom     | 40L/week*  | 20L/week   |  |
|   | 2 bedroom     | 80L/week*  | 40L/week   |  |
|   | 3+ bedroom    | 140L/week*   | 60L/week   |  |

**Example A: Sizing of a communal storage area used for general waste, commingled recycling and FOGO bins that service 8 units.**

Future development with 8 units containing the below bedroom mix would be calculated as follows:

- 2 x 1 bedroom units,
- 4 x 2 bedroom units; and
- 2 x 3 bedroom units.

**General waste – Fortnightly collection**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/fortnight | L/fortnight |
|-----------------|-----------------|---|-------------|
| 1 bedroom units | 2               | 60  | 120         |
| 2 bedroom units | 4               | 100   | 400         |
| 3 bedroom units | 2               | 140   | 280         |
| <b>Total</b>    |                 |   | <b>800*</b> |

**\*800L equivalent to 4 x 240L MGBs serviced fortnightly – or 2 x 240L MGBs weekly collection (subject to City approval) please note that increased frequency might result in additional costs**

**Comingled Recycling – Fortnightly collection**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/fortnight | L/fortnight  |
|-----------------|-----------------|---|--------------|
| 1 bedroom units | 2               | 80  | 160          |
| 2 bedroom units | 4               | 120   | 480          |
| 3 bedroom units | 2               | 240   | 480          |
| <b>Total</b>    |                 |   | <b>1120*</b> |

**\*1120L equivalent to 4 x 360L MRBs fortnightly – or 2 x 360L MRB weekly collection (subject to City approval) please note that increased frequency might result in additional costs**

**FOGO – Weekly collections**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/week | L/week      |
|-----------------|-----------------|--|-------------|
| 1 bedroom units | 2               | 40   | 80          |
| 2 bedroom units | 4               | 80   | 320         |
| 3 bedroom units | 2               | 140  | 280         |
| <b>Total</b>    |                 |  | <b>680*</b> |

**\*680L equivalent to 5 x 140L MGBs collected weekly – or 2 x 240L MGB weekly collection (subject to City approval based on likely garden organics generation onsite)**

**Example B: Sizing of a communal storage area used for general waste, commingled recycling and FOGO bins that service 55 units.**

Future development with 55 units containing the below bedroom mix would be calculated as follows:

- 19 x 1 bedroom units,
- 24 x 2 bedroom units; and
- 12 x 3 bedroom units.

**General waste – Fortnightly collection**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/fortnight | L/fortnight   |
|-----------------|-----------------|---|---------------|
| 1 bedroom units | 19              | 80  | 1,520         |
| 2 bedroom units | 24              | 120   | 2,880         |
| 3 bedroom units | 12              | 160   | 1,920         |
| <b>Total</b>    |                 |   | <b>6,320*</b> |

**\*6320L equivalent to 27 x 240L MGBs serviced fortnightly – or 14 x 240L MGBs weekly collection (subject to City approval) please note that increased frequency might result in additional costs**

**Comingled Recycle – Fortnightly collection**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/fortnight | L/fortnight   |
|-----------------|-----------------|---|---------------|
| 1 bedroom units | 19              | 40  | 760           |
| 2 bedroom units | 24              | 80  | 1,920         |
| 3 bedroom units | 12              | 180   | 2,160         |
| <b>Total</b>    |                 |   | <b>4,840*</b> |

**\*4840L equivalent to 14 x 360L MRBs fortnightly – or 7 x 360 MRB weekly collection (subject to City approval) please note that increased frequency might result in additional costs**

**FOGO – Weekly collections**

| Bedroom Mix     | Number of Units | Generation rate/storage requirement – L/week | L/week       |
|-----------------|-----------------|--|--------------|
| 1 bedroom units | 19              | 20   | 380          |
| 2 bedroom units | 24              | 40   | 960          |
| 3 bedroom units | 12              | 60   | 720          |
| <b>Total</b>    |                 |  | <b>2060*</b> |

**\*2060L equivalent to 15 x 140L MGBs collected weekly – or 9 x 240L MGB weekly collection (subject to City approval based on likely garden organics generation onsite)**



**Table 7-2: Commercial waste and recycling generation rates / storage requirement**

| Use Type   | General Waste | Comingled Recyclables | FOGO | Metric   |
|--|---------------|-----------------------|------|--|
| <b>Food and Beverage Premises</b>  |               |                       |      |  |
| Butcher / seafood shop front only (retailer - shop front)                        | 120           | 240                   | 80   | L/100m <sup>2</sup> /day                                   |
| Butcher / Seafood (wholesaler or with onsite preparation of products/processing) | 150           | 360                   | 240  | L/100m <sup>2</sup> /day                                   |
| Delicatessen   | 50            | 50                    | 50   | L/100m <sup>2</sup> /day                                   |
| Fruit and Vegetable Retailer (Greengrocer)                                       | 150           | 360                   | 360  | L/100m <sup>2</sup> /day                                   |
| Restaurant   | 500           | 300                   | 120  | L/100m <sup>2</sup> /day                                   |
| Supermarket  | 500           | 240                   | 200  | L/100m <sup>2</sup> /day                                   |
| Café   | 300           | 200                   | 120  | L/100m <sup>2</sup> /day                                   |
| Fast Food Outlet - Chain   | 360           | 360                   | 120  | L/100m <sup>2</sup> /day                                   |
| Takeaway   | 100           | 150                   | 35   | L/100m <sup>2</sup> /day                                   |
| Convenience Store  | 240           | 240                   | 40   | L/100m <sup>2</sup> /day                                   |
| Tavern/Small Bar   | 400           | 300                   | 60   | L/100m <sup>2</sup> /day                                   |
| Hotel or Motel - bar Areas   | 50            | 50                    |      | L/100m <sup>2</sup> bar area/day                           |
| Hotel or Motel - Combined bar and dining areas                                   | 300           | 200                   | 120  | L/100m <sup>2</sup> dining area/day                        |
| Licenced Entertainment Premises or Community Club (bar floor only)               | 50            | 80                    |      | L/100m <sup>2</sup> bar floor area/day                     |
| Licenced Entertainment Premises or Community Club (combined bar and dining area) | 300           | 200                   | 120  | L/100m <sup>2</sup> combined bar and dining floor area/day |
| <b>Retail</b>  |               |                       |      |  |
| Retail (non-food sales) <100m <sup>2</sup> floor area                            | 50            | 25                    |      | L/100m <sup>2</sup> /day                                   |
| Retail (non-food sales) >100m <sup>2</sup> floor area                            | 50            | 50                    |      | L/100m <sup>2</sup> /day                                   |

| Use Type   | General Waste | Comingled Recyclables | FOGO | Metric                    |
|--|---------------|-----------------------|------|---------------------------|
| Showrooms  | 20            | 20                    | 20   | L/100m <sup>2</sup> /day  |
| Hairdresser (beauty salons)  | 35            | 30                    | 10   | L/100m <sup>2</sup> /day  |
| <b>Commercial</b>  |               |                       |      |                           |
| Serviced Apartment, Backpacker or Boarding Houses (for accommodation only, kitchens, catering areas, common areas in a development require separate waste generation assessment) | 30            | 20                    | 10   | L/bedroom/week            |
| Offices and Medical/Consulting Rooms including dentist/veterinary  | 15            | 15                    | 5    | L/100m <sup>2</sup> /day  |
| Hotel or Motel Accommodation (for accommodation only other areas within the hotel/motel require separate waste generation assessment)  | 30            | 20                    | 10   | L/bedroom/week            |
| Licenced Club  | 50            | 80                    |      | L/100m <sup>2</sup> /day  |
| Education/Training (teaching space)  | 5             | 5                     |      | L/100m <sup>2</sup> /day  |
| Childcare  | 240           | 240                   | 120  | L/100m <sup>2</sup> /week |
| Function Room  | 200           | 200                   | 80   | L/100m <sup>2</sup> /day  |
| Gym  | 10            | 10                    |      | L/100m <sup>2</sup> /day  |
| Retirement Village   | 60            | 60                    | 20   | L/apartment/week          |
| Independent Living   | 80            | 80                    | 30   | L/apartment/week          |
| Community or sports centre, Place of Worship, Recreation (private)   | 50            | 50                    |      | L/100m <sup>2</sup> /day  |

Note: Waste generation calculations are based on operational days. Some use types ie: Function Room may only be used a couple of days a week, therefore waste generation calculations would be based on 2 days of operation.

## Appendix B: WMP Checklist

The checklist below should be used to show that the City's core waste management practices have been considered and incorporated into the design of the development. The WMP should include a brief description of the below considerations.

|  |  |
|--|--|
| <p><b>Summary of the Development</b></p> <p>A summary of the development including the following information:</p> <ul style="list-style-type: none"> <li>• Location of the Development</li> <li>• Number of floors</li> <li>• Number of dwellings units by size (one, two or three bedrooms)</li> <li>• Size of each commercial unit</li> <li>• Details of the intended use of the development</li> </ul>  |  |
| <p><b>Waste Generation</b></p> <p>Waste generation calculations for general waste, comingled recycling and FOGO included (must be calculated using the figures in <b>Appendix A</b>)</p>   |  |
| <p>Details of the size and quantity of the bins to be used provided, refer <b>Appendix C</b></p>   |  |
| <p><b>Bin Store</b></p> <p>Design details of the bin store included, such as drawings including sizes of bins, aisle and access point widths and wash down facilities (refer 7.2):</p> <ul style="list-style-type: none"> <li>• Bin store size</li> <li>• Bin store layout</li> <li>• Storage and management of Alternative Wastes (e.g. cooking oil, medical waste, bulky waste and hazardous substances)</li> <li>• Wash-down area/tap &amp; drain</li> <li>• Ventilation</li> <li>• Vermin prevention</li> <li>• Noise reduction</li> <li>• Stormwater ingress prevention</li> </ul>  |  |
| <p>Is there sufficient space within the property boundary to store two full weeks' worth of general waste and comingled recycling and one week of FOGO material likely to be generated at the development?</p>   |  |
| <p>Is future service flexibility incorporated in the design?</p>   |  |
| <p>How waste is transported from the source to the bin store?</p>  |  |
| <p><b>Collection Method and Frequency</b></p> <p>Waste Management Plans must contain details on proposed collection method to be used in servicing the development, including:</p> <ul style="list-style-type: none"> <li>• City/Private</li> <li>• Collection vehicle to be utilised</li> <li>• Movement of collection vehicle include Swept path analysis (if required)</li> <li>• Collection location (onsite/verge)</li> <li>• Transfer of waste to the collection vehicle</li> <li>• Frequency of collection</li> </ul> <p>Has the bin travel route between the bin store and bin collection point been designed to minimise occupational health and safety risks to those transferring the bins?</p> |  |

|  |  |
|--|--|
| <b>Waste System</b><br>Details of any waste management equipment or devices to be used. <ul style="list-style-type: none"> <li>• Chutes</li> <li>• Compactor</li> <li>• Bin Lifter</li> <li>• Other</li> </ul> |  |
| <b>Waste Service Provider</b><br>Provide explanations why the applicant seeks to engage a private collection contractor to service the development rather than the City waste services.                        |  |
| <b>Education</b><br>Has clear signage been included to provide instructions on how use the waste system?   |  |
| <b>Ongoing management</b><br>Does the WMP delegate responsibility for ongoing monitoring and maintenance of waste management services and equipment?   |  |

## Appendix C: Bin Dimensions

The information presented in below table is the typical dimensions of common bin sizes that the City utilise.

For other bin sizes please refer to the manufacturer's/private waste contractors specifications and include these in the WMP. Other bin sizes must have a minimum 50mm spacing around all sides of the bins, including between walls, other bins and aisles.

MGBs with capacities up to 1700L must comply with the Australian Standard for mobile waste containers, AS 4123.

**Table 7-3: COV general waste and recycling bin dimensions (WALGA, 2014)**

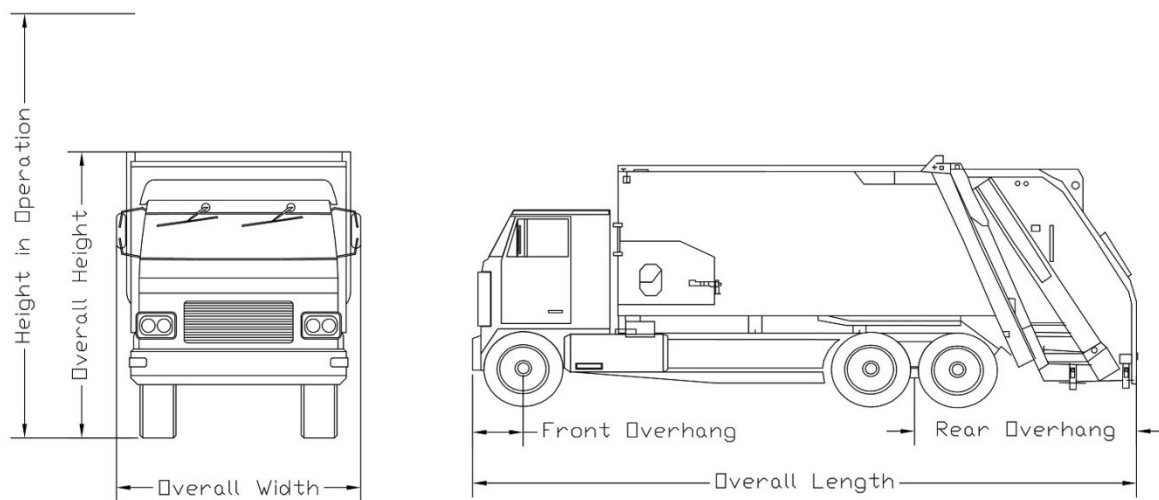
| Bin Capacity | 140L | 240L | 360L |
|--------------|------|------|------|
| Height (mm)  | 1065 | 1080 | 1100 |
| Depth (mm)   | 540  | 735  | 885  |
| Width (mm)   | 500  | 580  | 600  |

## Appendix D: Collection Vehicles

Waste collection vehicles may be side loading, rear-end loading, front-end loading or crane trucks. The size of vehicle varies according to the collection service. Developers should consult with the City regarding the type of vehicle to be used.

For onsite collections (if required) the development must be designed to allow the required clearances for the rear lift vehicle dimensions in the below table. An additional 2m clearance is to be allowed at the rear of the truck to allow for operation of the bin lifting mechanism.

Swept path diagrams should be provided to demonstrate compliance.



### Vehicle Dimensions

Figure 7-1: Vehicle Dimensions

| Parameter           | Clearance of Vehicle (m) | Required Clearance (m) |
|---------------------|--------------------------|------------------------|
| Overall length      | 10.2                     | 10.5*                  |
| Overall width       | 2.8                      | 3.0                    |
| Overall height      | 2.9                      | 3.5                    |
| Height in operation | 3.4                      | 4.0                    |
| Turning radius      | 19.6                     | -                      |

*\*with an addition 2m clearance behind the collection vehicle to allow for operation of bin lifting mechanism.*

## Appendix E: Sample Bin Store Layouts

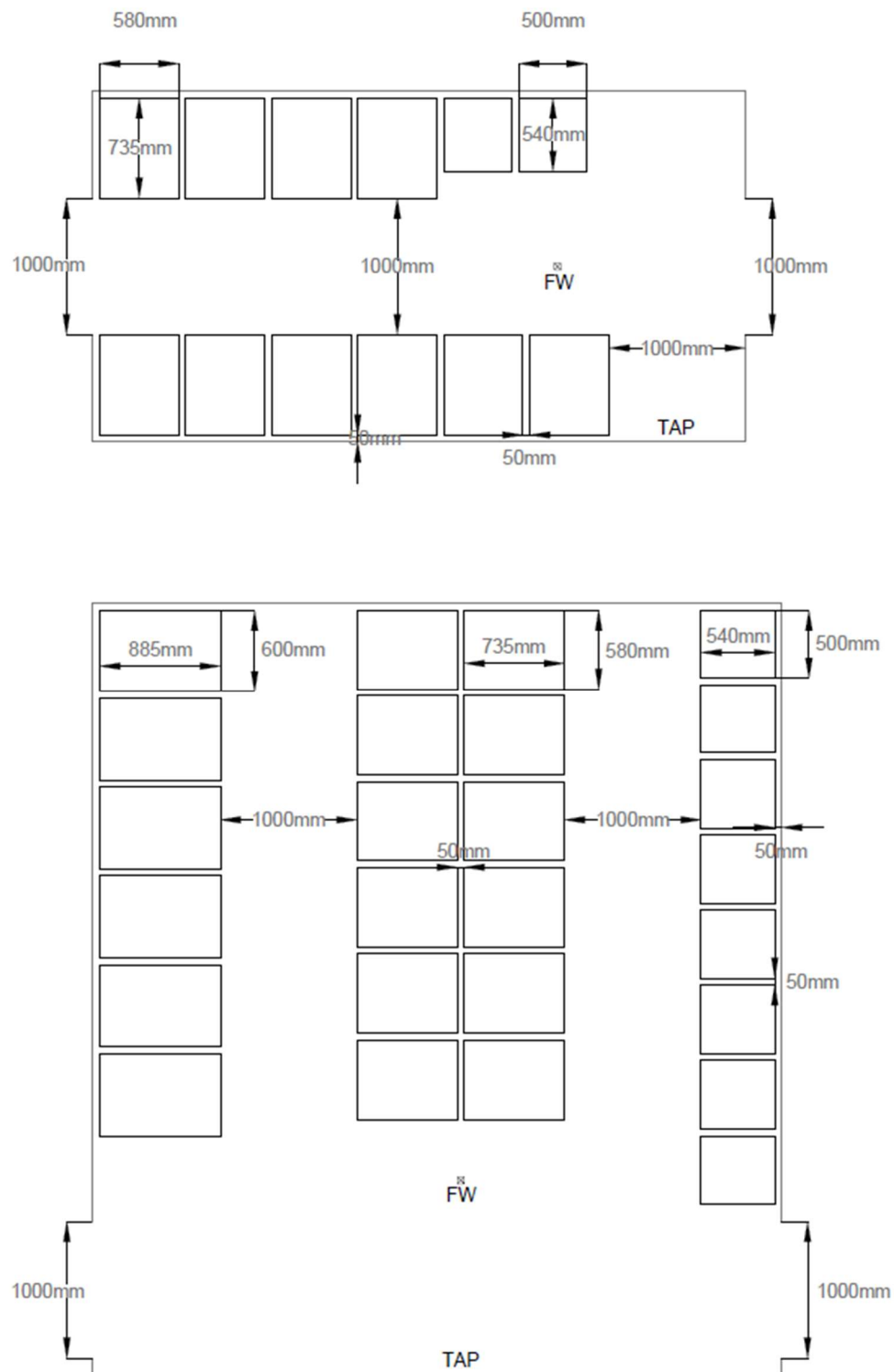


Figure 7-2: Example Bin Stores

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**Prepared by Talis Consultants for City of Vincent**