

# GUIDELINES FOR PREPARING A WASTE MANAGEMENT PLAN 2017

These guidelines are for planning permit applicants in the City of Melbourne.

This guide will help you prepare a plan to manage the waste and recycling needs of your development. It includes sections for residential developments and commercial developments. Mixed use developments will need to refer to both sections.

Your Waste Management Plan (WMP) must include details of:

1. land use details
2. waste generation
3. waste systems
4. bin quantity, size and colour
5. collection frequency
6. bin storage
7. collection location
8. additional waste requirements
9. scaled waste management drawings
10. collection contractors
11. signage

For more information, contact City of Melbourne  
Telephone: 03 9658 9658

[melbourne.vic.gov.au](http://melbourne.vic.gov.au)



# WASTE GUIDELINES 2017

## Residential Waste Management Plans

Residential planning applications with less than 6 individually rateable apartments or townhouses can use templates prepared by the City of Melbourne. Larger scale developments require a more detailed WMP that is based on these 2017 Waste Guidelines.

Templates are available online at [www.melbourne.vic.gov.au](http://www.melbourne.vic.gov.au) (Search 'WMP') or on request.

**Please note:** you must contact Council on 9658 9658 at least 4 weeks before a new service is required to start.

### What to include:

#### 1. Land use details

The City of Melbourne requires a summary of the proposed land use. This should include:

- land use zoning
- number of floors
- number of residential apartments by size (studio, one, two or three bedrooms)
- size of each commercial/retail outlet.

#### 2. Waste generation

The City of Melbourne's residential waste entitlement per individual dwelling is 120 litres per week of garbage and up to 240 litres per week of recycling.

The garbage and recycling needs of residents in apartments are typically lower than this. The following generation rates will help determine the number and types of bins your development will need.

**Table 1 Weekly residential waste generation rates**

Dwelling size	Garbage	Recycling
Individual dwelling	120L	120L or 240L
3 bedroom apartment or greater	120L	120L
2 bedroom apartment	100L	100L
1 bedroom or studio apartment	80L	80L

#### 3. Waste systems

Details of the entire waste system must be provided. This includes in-apartment source separation systems, chutes, carousels, in chute compaction equipment, transportable compactors, bin lifters and tugs or towing devices.

Developers must ensure that it is as easy to dispose of recyclable materials as it is garbage.

Mid-rise developments (six to 10 storeys) must use a chute or equivalent system on each floor for both garbage and recycling.

High-rise developments (more than 10 storeys) must use twin chute technology with openings on each floor to enable disposal of both garbage and recycling.

Large cardboard, hard waste and charity goods should be taken to drop-off points within the building to reduce likelihood of blockage in chutes.

Termination of chutes into mobile bins is required to have skirting, or other equivalent system, to reduce any materials leaving the bin on impact.

Where chute systems are installed, the City of Melbourne requires bins to have reinforced bases for bin longevity.

Innovative technologies and management of additional waste streams such as organics is encouraged and will be considered on a case by case basis by the City of Melbourne.

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Figure 1: Twin chute drop-off point

## 4. Bin quantity, size and colour

Your WMP must include the number of bins and their sizes. The City of Melbourne prefers to collect larger bins as this decreases the number of bins to be stored/collected, reduces truck movements and the time taken for collection.

The City of Melbourne's standard bin sizes are listed below. The City of Melbourne provides all recycling bins regardless of size; it also provides 120L and 240L garbage bins. Larger size garbage bins must be provided by developers.

When designing drop-off points and bin rooms, standard bin dimensions can be used. However, check with suppliers as dimensions may vary. Space within the storage location must allow for bin rotation and safe service provision.

**Table 2 Standard bin sizes**

Bin	Colour	Size
Garbage	Dark green lid and dark green body	1100L or 660L (provided by developer)
		360L, 240L or 120L
Recycling	Yellow lid and dark green body	1100L, 660L, 360L, 240L or 120L

**Table 3 Standard bin dimensions**

Type (L)	Width (m)	Depth (m)	Height (m)
120	0.5	0.6	1.0
240	0.6	0.8	1.1
360	0.7	0.9	1.1
660	1.4	0.7	1.2
1100	1.4	1.3	1.5



Figure 2: Standard multi-unit residential development bins: 1100L garbage and recycle bins

## Waste compactors

The City of Melbourne collects transportable hook lift compactors. Developments with **250 apartments** or a total stream volume of 25,000 litres of waste and/or 25,000 litres of recycling are required to provide a compactor. Compactors should be designed to hold at least 1 week's **residential** waste or multiple thereof.

**Table 4 Static Compactor sizing chart**

WEEKLY Volume (L/week)	Compactor size	Apartments*
25,000	8m <sup>3</sup>	250
30,000	10m <sup>3</sup>	300
40,000	13m <sup>3</sup>	400
45,000	15m <sup>3</sup>	450
57,000	19m <sup>3</sup>	570
69,000	23m <sup>3</sup>	690

\*Based on average 100L/week/apartment

Compactors must be purchased or leased by the development. All ongoing maintenance and cleaning is the responsibility of the development.

Separate compactors must be used for garbage and recycling. Compactor size can be calculated using the sizing chart shown. Figures are based on a 3:1 compaction ratio. This ratio can be used for both waste and recycling compactors.

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Compactor size can impact compatibility with collection vehicles, especially length of compactor unit. Industry standard hook lift heights are considered to be 1610mm and outer rail to outer rail width at 1060mm. Any compactor with differing measurements will need to be agreed with City of Melbourne.

Commercial waste collected using the same compactor as the residential waste may be considered at the City of Melbourne's discretion.



Figure 3: Hook lift static compactor unit

Please contact the City of Melbourne to discuss compactor requirements to ensure Council collection vehicles can collect the compactor proposed for each development.

## 5. Collection frequency

The City of Melbourne provides residential garbage and recycling bin based collections up to 3 times week depending on the density of the development.

City of Melbourne typically\* collects residential waste at the following frequencies:

- 1 to 55 apartments = 1 collection per week
- 56 - 150 apartments = 2 collections per week
- 151 - 250 apartments = 3 collections per week
- >250 apartments = Compactor collected weekly

\* Collection frequencies are at the City of Melbourne's discretion.

Additional collections are not available from the City of Melbourne. Any additional collections will need to use a private collection contractor at the developments expense.

## 6. Bin storage

Developers must provide a bin room and in the case of high-rise and mixed use developments, multiple rooms may be required. Each waste stream must be separated and clearly labelled. Residential waste needs to be kept separate from commercial waste.

Adequate space must be provided within the bin room to allow for safe manoeuvring bins.

The following details must be provided:

- bin room size (m<sup>2</sup>)
- bin layout
- wash-down area
- ventilation
- vermin prevention
- noise reduction
- stormwater pollution prevention.

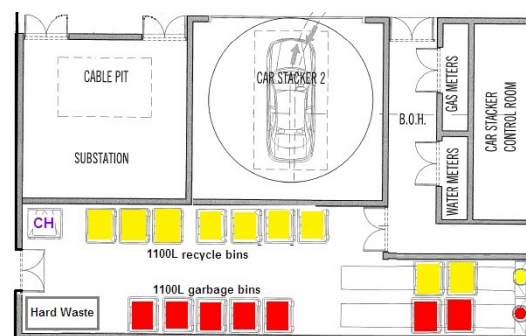


Figure 4: Example of a bin room layout with street access

## 7. Collection location

Garbage and recycling bins must always be stored on-site between collections. It is illegal to store waste and recycling bins permanently in the public space other than in circumstances prescribed by the City of Melbourne. City of Melbourne's Activities Local Law includes specific waste requirements that must be adhered to by all developments.

There are two types of collection locations:

### On-site collections

Bins will not be placed outside property boundary for collection. Bins will be collected via a loading dock or similar suitable collection area within the property boundary.

On-site collection areas must cater for the size of the City of Melbourne's waste collection vehicles.

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Currently, City of Melbourne's waste fleet is primarily medium rigid vehicles (MRV). The truck dimensions are:

- minimum height 4.0 metres
- minimum width 2.6 metres
- minimum length 8.8 metres
- maximum weight loading 24 tonne.

Please contact City of Melbourne to check fleet sizes for your collection location.

On-site collection areas must allow adequate additional space for bin presentation, access and loading.

Compactors have specific vehicular access requirements. The hook lift trucks are generally larger and 5.0m height clearance should be allowed at point of lift. This must be confirmed by the compactor manufacturer. Note that height clearances must ensure any services, sprinklers or light fittings do not encroach on this requirement.

## On-street collections

Bins must be placed at the front, rear or side (corner properties only) of the associated property and be accessible by the City of Melbourne's waste trucks. Bins that are permitted at the kerbside for collection must not obstruct pedestrians, street furniture or bike lanes; must not exceed the property frontage; and must be returned to the property as soon as possible after collection.

Low (<6 storey) and mid-rise (6-10 storey) developments will be required to use larger communal bins for collections. They may use an on-street collection location except if collection frequency is greater than once a week; in which case the collection must occur on-site due to local amenity impacts.

The building manager or equivalent of a multi-unit development is responsible for putting the bins out for collection or providing access for waste collectors to the bin collection point.

If bins are stored in a basement or car park, the building manager is responsible for ensuring the bins are taken to the agreed collection point within the development. For health and safety, the City of Melbourne recommends developers consider additional mechanical assistance such as tugs when transferring bins, especially when long distances,

ramps/gradients and/or large heavy bins are present.

## 8. Additional waste requirements

Developers must consider the storage and disposal of hard waste, green waste, charity goods and any other waste stream generated at the site.

### Hard waste

The City of Melbourne offers a hard waste collection for residents only. Individual households can book one 1m<sup>3</sup> service per annum. Hard waste items from multi-unit developments are not permitted to be placed on the kerb for collection. On-site hard waste storage must be provided as follows:

- High rise 50 - 250 Apartments may book a once monthly 4m<sup>3</sup> collection
- High rise of 250 – 500 Apartments may book up to two monthly 4m<sup>3</sup> collection
- High Rise of > 500 Apartments may book up to two monthly 6m<sup>3</sup> collection

Access for residents to deposit their hard waste into the storage location must be safe. Hard waste should not be placed within the chute termination room for this reason.

A hard waste collection area must be provided for collection contractors that is immediate to the truck collection location. High rise hard waste collections are usually coordinated by the building manager.

### Charity goods

The City of Melbourne recommends all residential multi-unit developments with more than 50 apartments provide space for one charity bin. Charity bins are available in various sizes, however **1 m<sup>2</sup>** is adequate for most developments.

Most charities offer a free service, including bin supply and collection, and will generally collect clothing, used furniture and homewares in good condition. Council does not provide this service.

### Green waste

The City of Melbourne has a green waste collection for residents only. Green waste collections are not



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often required in multi-unit developments. If green waste collections are planned, an adequate space will be required to store the material for collection and access must be provided for collection contractors.

## Food waste

City of Melbourne does not provide separate collections of food waste. Separation of food waste into a separate waste stream is at the discretion of the developer. This can be via a food waste collection by a private waste contractor or an on-site food waste processing system. These systems must be purchased or leased by the development. All ongoing maintenance and cleaning is the responsibility of the development.

Further information on these systems can be provided by City of Melbourne on request.



Figure 5: Residential food waste processing

## 9. Scaled waste management drawings

Developers must provide a set of scaled drawings showing the disposal of waste from the occupant to the final collection point by the collection contractor.

The drawings **must** include:

- generic residential and commercial floor showing garbage and recycling disposal points
- waste infrastructure and storage areas including any chutes, carousels, compactors, bins, bin lifters, hard waste, charity bins and green waste areas.
- Clear diagram of movement of each material from disposal, storage and collection points including any gradient/slope/stairs
- bin presentation location (on-street or on-site) with bin alignment shown for each individual bin showing size and material type
- Swept path diagrams illustrating sufficient access to collection points for all vehicles required to collect from the development.

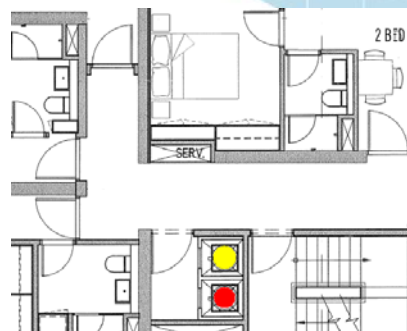


Figure 6: Example of garbage and recycling drop-off points at living levels

## 10. Collection contractors

The Waste Management Plan must nominate whether the City of Melbourne or a private collection contractor (or both) will collect each waste stream.

Private collection contractors are used for commercial and some residential developments to supplement the City of Melbourne's residential collection services.

## 11. Signage

Signs will be required at drop-off points and within the bin area to encourage correct recycling and reduce contamination. The City of Melbourne provides assistance with signage.



Figure 7: Example of garbage and recycling signage

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## Commercial Waste Management Plans

Small commercial planning applications such as individual shops, showrooms or warehouses can use templates prepared by the City of Melbourne. Larger scale developments require a more detailed WMP that is based on these current Waste Guidelines.

Templates are available online at [www.melbourne.vic.gov.au](http://www.melbourne.vic.gov.au) (Search 'WMP') or on request.

### What to include:

#### 1. Land use details

The City of Melbourne requires a summary of the proposed land use. This should include:

- land use zoning
- number of floors
- number of commercial outlets
- types of commercial outlets
- size of commercial outlets (m<sup>2</sup>).

#### 2. Waste generation

A list of common waste generation rates is shown below. A more extensive list is available online at [www.melbourne.vic.gov.au/BuildingandPlanning](http://www.melbourne.vic.gov.au/BuildingandPlanning) (search 'waste generation rates') or on request.

The City of Melbourne recommends commissioning an external consultant to calculate the waste volumes for commercial developments. Waste generation estimates are the responsibility of the developer.

**Table 5 Common commercial waste generation rates\***

Outlet type	Garbage	Recycling
<b>Retail</b>		
Retail (non-food)	50L/100 m <sup>2</sup> floor area/day	50L/100 m <sup>2</sup> floor area/day
Restaurant	660L/100 m <sup>2</sup> floor area/day	200L/100 m <sup>2</sup> floor area/day
Supermarket	660L/100 m <sup>2</sup> floor area/day	240L/100 m <sup>2</sup> floor area/day
Café	300L/100 m <sup>2</sup> floor area/day	200L/100 m <sup>2</sup> floor area/day
Take-away / café (pre-packaged food only)	150L/100 m <sup>2</sup> floor area/day	150L/100 m <sup>2</sup> floor area/day
Licensed club	50L/100 m <sup>2</sup> floor area/day	50L/100 m <sup>2</sup> floor area/day
<b>Other</b>		
Office	10L/100 m <sup>2</sup> floor area/day	10L/100 m <sup>2</sup> floor area/day
Education	1.5L/student/day	0.5L/student/day
Religious/social	50L/100 m <sup>2</sup> floor area/day	10L/100 m <sup>2</sup> floor area/day
Serviced apartment	35L/apartment/week	35L/apartment/week

\*Appropriate case study/empirical data may be used in place of the above STCA

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## 3. Waste systems

Details of the system must be provided, ensuring ease of use for the separation of recyclables and storage and collection of waste. It must be as easy to dispose of each type of recyclable material as it is garbage.

### Bins and skips

The most common form of waste container is wheeled bins because they can be easily moved between commercial outlets and the bin room. All waste streams can be accommodated including garbage, commingled recycling, paper, cardboard, organics, prescribed waste and secure document destruction. Bin lifters can be used to load waste from 120L or 240L bins into larger front-load skips, reducing the number of bins to be collected.

### Compactors

Some developments require specialised or oversized waste storage equipment such as compactors. Compactors can be used for handling medium to large volumes of garbage, paper, cardboard and other recyclables. Specific vehicular access requirements will need to be considered. 5.0m height clearance should be allowed. This must be confirmed by the compactor manufacturer. Furthermore specifications for the collection vehicles must be confirmed with service provider to ensure they are compatible with compactor to be utilised.

### Automation

The automated waste system uses a vacuum to transport waste via a tube network. It has specific design elements which need to be considered if introduced.

Components of the system:

- inlets
- pipe network
- collection station.

Design considerations include system capacity and infrastructure requirements for the pipe system.

### On-site food waste processing

Developments with food businesses such as cafes and restaurants can benefit from an on-site food waste processing system. These systems use a range of technologies, such as anaerobic or aerobic digestion or dehydration to process food waste. Information on the system requirements, potential benefits and costs is available from technology providers. City of Melbourne can provide a list of potential technology providers on request.

### Balers

Balers are commonly used for cardboard. They can reduce the storage space required; however bales require mechanical lifting when collected.

### Glass crushers

Developments which produce a lot of glass waste can benefit by the use of a glass crusher. These machines can reduce the volume of glass by up to 75%, saving valuable space in developments. The majority of machines available are designed to minimise noise pollution. Small bins and specialised collection contractors are required.

## 4. Bin quantity, size and colour

There are numerous large bins available which commercial developments may consider using. Common bin sizes are 240L, 360L, 660L, 1100L (wheeled bins), 1.5, 3.0 and 4.5 cubic metres (front lift skips).

Developers should be aware that bin size will impact the vehicle access requirements.



Figure 9: Common bins for commercial developments: 1100L bins



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## 5. Collection frequency

The City of Melbourne supports the reduction of waste truck movements in our city. Therefore the use of larger more efficient systems is required.

The collection frequency must be specified in the waste management plan. Typically collection frequencies are determined by the type and volume of waste generated on the site. For example, food waste should be collected daily.

## 6. Bin storage room

Developers must provide a bin room. Multiple rooms may be needed in some developments. Bin rooms should be located on the same level as the loading dock. Otherwise, a dedicated goods lift is recommended for transferring bins.

Each waste stream must be separated and clearly labelled. Residential waste should be kept separate from commercial waste.

The following details must be included in the plan:

- bin room size (m<sup>2</sup>)
- bin layout
- wash-down area
- ventilation
- vermin prevention
- noise reduction
- stormwater pollution prevention.

## 7. Collection location

All waste bins must be stored on-site between collections. It is illegal to store waste and recycling bins permanently in the public space other than in circumstances prescribed by the City of Melbourne.

City of Melbourne's Activities Local Law includes specific waste requirements that must be adhered to by all developments.

Developments with more than two waste streams and/or multiple collection days must not put bins outside the property boundary for collection. Collections can be via an on-site loading dock or a bin room that opens directly onto the street where a loading zone exists.

On-site loading docks must cater for the size of service vehicles, space to safely enter and exit the truck, and space for the bins to be presented to the collection vehicle for servicing. Private collection

contractors use a variety of truck sizes for collection. For industry standard vehicles sizes see Table 6.

Swept path diagrams illustrating sufficient access to loading docks must be submitted for all waste collection vehicles.

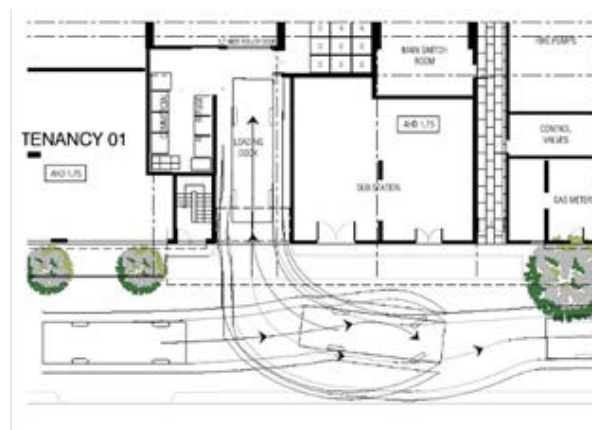


Figure 10: Swept path diagram for a loading dock

Table 6 Industry standard vehicle sizes

Trucks	Height	Width	Length
Small Rigid Vehicle (SRV)	3.5m	2.3m	6.4m
Medium Rigid Vehicle (MRV)	4.5m	2.5m	8.8m
Heavy Rigid Vehicle (HRV)	4.5m	2.5m	12.5m

Basic limiting dimensions of design vehicles taken from AS 2890.2 2002 - Table 2.1.

Small developments with multiple collection days (e.g. individual restaurants) may present their bins at the kerb for collection. Bins must be returned to the property as soon as possible after collection.

Developers should ensure the following when designing **bin rooms**:

- level floors without slope or steps
- located in a convenient position with internal access for each commercial tenement
- sufficient space for each waste stream
- sufficient space for manoeuvring bins within the bin room.

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Developers should ensure the following when designing **collection locations**:

- level ground without slope or steps
- located in a convenient position for collection contractors
- bins must not obstruct pedestrians or street furniture
- adequate on-street loading zones are available for use by waste vehicles.

The contractor may be able to ferry bins to a waiting vehicle but the vehicle must be legally parked while unattended.

## 8. Additional waste requirements

Developers must consider the storage and disposal of hard waste.

The City of Melbourne will not provide hard waste collection for commercial properties or tenants. We recommend consultation with the collection contractor in terms of collection of hard waste.

Hard waste is not permitted on the kerb for collection. On-site storage must be provided by the commercial tenant with access for the collection contractor.

## 9. Scaled waste management drawings

Developers must provide a set of scaled drawings showing the disposal of waste by the staff to the final collection point by the collection contractor.

The drawings must include:

- typical commercial floor showing garbage and recycling drop-off points
- bin rooms including any bins and compactors
- bin presentation location (street or on-site) with bin alignment shown.

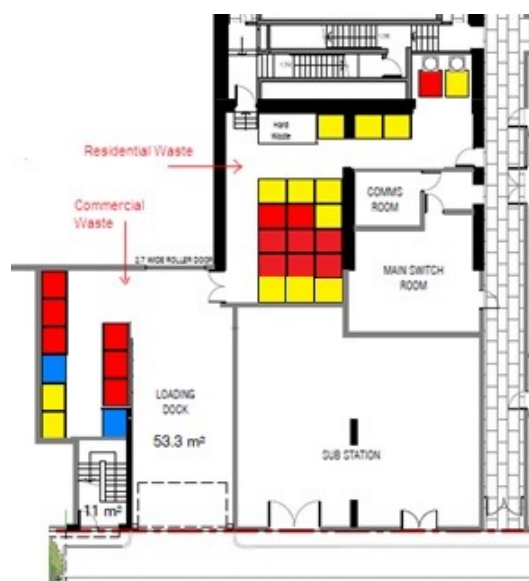


Figure 11: Bin room layout for mixed use

## 10. Collection contractors

The City of Melbourne is not responsible for collecting commercial waste. The City of Melbourne typically only collects waste from commercial rateable properties that generate up to the residential volume per week (120L garbage and 240L recycling) except in some areas of the Central City. Further information about these collections can be found at [www.melbourne.vic.gov.au](http://www.melbourne.vic.gov.au) (Search: central city waste and recycling programs) or on request.

## 11. Signage

Signs will be required within the bin area to encourage correct recycling and reduce contamination. The City of Melbourne provides assistance with recycling signage. Signage may also be provided by the private collection contractor.

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