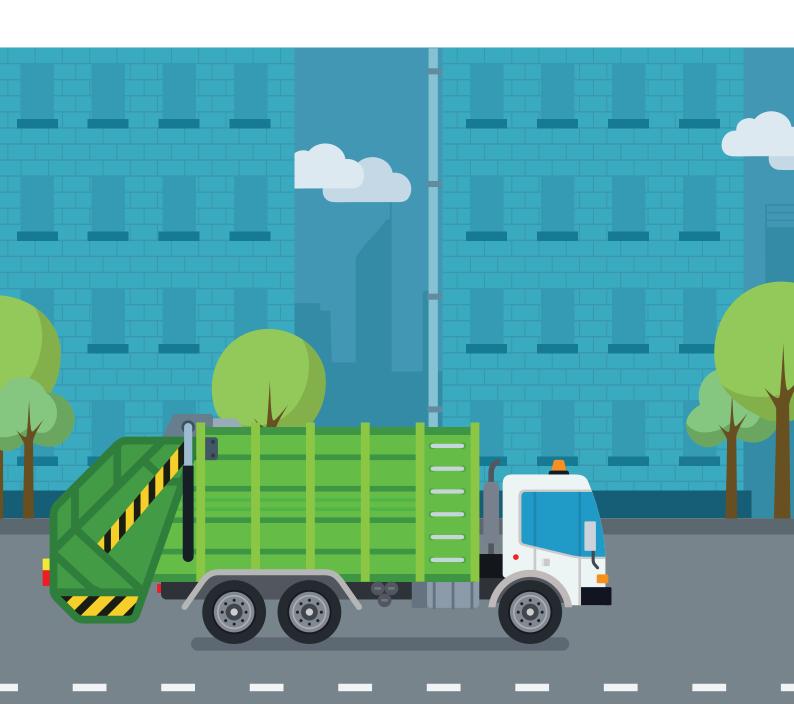




Waste Guidelines for All Developments



Waste Guidelines for All Developments

This document outlines the required waste management for developments within the City of Perth (City) to inform and assist designers and developers of residential and commercial properties.

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:
- Minimise the impact of waste services and facilities on the streetscape and surrounds, in relation to both the footpath/public realm and the frontage of the development
- Ensure waste services and facilities do not have a negative impact on the amenity of a locality particularly in terms of noise and odour;
- · Maximise safety for both waste collection staff and the public, and
- · Minimise traffic and footpath obstruction.

The City encourages designers to be innovative in developing the most efficient and sustainable waste management system to meet these objectives.

Waste management should be considered in the early stages of the development design process. An indication of the intended waste management facilities should be submitted with a major development application and a Waste Management Plan (WMP) will be required to be lodged for approval prior to the submission of an application for the required building permits.

Applicants are encouraged to discuss their waste management system and servicing with the City early in the design process. This can be initiated by calling **94613333** or emailing wac.inbox@cityofperth.wa.gov.au.

Your WMP should include details of the following:

- Waste generation rates
- Internal collection method
- Bin quantities/waste stream/collection frequency
- Bin storage, including bin room size (m2)
- Waste presentation location
- Bin management

All WMPs must demonstrate (through figures and explanations) how the applicant will achieve the outcomes of these guidelines.

Drawings/Figures to be included:

- Generic residential & commercial floor, showing convenient and practical waste and recycling collection.
- · Bin Room/s to demonstrate functionality and adequate size. Details should include:
 - Bin room/s area including dimensions and units
 - Access to bin room, including access widths
 - Opening width
 - Any chutes/compaction equipment etc. with all associated details and specifications where proposed
 - Bin arrangement; distinguishing waste stream
 - Drop off areas (eg. Bulk waste)
 - Tap and sewer points
- · Waste presentation point (hardstand or bin room) with bin arrangement and waste collection vehicle location shown. Details should include:
 - Access to bin room, including access widths
 - Operating space at the rear of the vehicle
- · Where waste collection vehicles are intended to collect from within the property, a plan of the access and a swept path analysis should be provided.
- Please see examples included on page 7.

Supporting information to assist in developing the WMP and understanding the waste and recycling requirements for each development are included in this document. These are:

- Mobile Garbage Bin Dimensions
- Waste And Recycling Generation Rates -Residential
- Waste And Recycling Generation Rates Commercial
- Waste Collection Vehicles Dimensions
- Example of bin room layout with ROW Access

Definitions:

Landfill Waste usually includes non-recyclable materials, such as non-recyclable plastic packaging, paper packaging contaminated with food waste and organic materials, such as garden trimmings and food waste. Batteries, hazardous waste (chemicals, paints, cleaning products, medicines or flammable liquids) should not be included in the landfill waste stream.

Comingled Recycling consists of an assortment of recyclable materials. Materials collected for recycling may vary due to market demand. Currently in the City, recyclables include glass (bottles and jars), hard plastics (bottles and containers), aluminium, steel, paper and cardboard. Comingled recycling may include paper and cardboard but often, in commercial buildings, paper and cardboard are collected separately.

Waste Presentation Point is the location/s in which the bins containing waste and recycling from the development are presented for collection.

Waste Generation Rates

- The predicted waste and recycling generation rates for the development should be based on the waste generation rates below.
- 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 land uses are not known, the City encourages the use of higher generation rates to ensure the development has adequate storage capacity.
- The number of bins required for landfill waste and recycling streams should be clearly identified, as well as the proposed collection frequency. To check the collection day/s and frequency for the locality of the development, contact the City's Waste and Cleansing Unit.
- Please note: WMPs must include the entire building (including current vacant areas and separate tenancies).

Waste and recycling generation rates

Residential

Group and multiple dwellings (i.e. units, townhouses and apartments)

DESCRIPTION	LANDFILL WASTE GENERATION	COMINGLED RECYCLING GENERATION
1 Bedroom Dwelling	80lt per week	40lt per week
2 Bedroom Dwelling	160lt per week	80lt per week
3 Bedroom Dwelling	240lt per week	120lt per week

Commercial

LANDFILL WASTE GENERATION	COMINGLED RECYCLING GENERATION
40lt / bed / week	20lt / bed / week
35lt / apartment / week	35lt / apartment / week
Slt / bed /day SOlt / 100m² bar area / day 667lt / 100m² / dining area / day	llt / bed /day 50lt / 100m² bar and dining area / day
50lt / 100m ² bar area / day 667lt / 100m ² / dining area / day	50lt / 100m² bar and dining area / day
200lt / 100m² / day	100lt / 100m ² / day
10lt / 100m² floor area / day	10lt / 100m² floor area / day
50lt / 100m ² floor space / day	25lt / 100m² floor space / day 50lt / 100m² floor space / day
60lt / 100m² floor area / day	Discretionary
660lt / 100m² floor area / day	240lt / 100m² floor area / day
40lt / 100m² floor space / day	10lt / 100m² floor space / day
667lt / 100m² floor area / day	133lt / 100m² floor area / day
80lt / 100m² floor area / day	Discretionary
300lt / 100 m ² floor area / day	200lt / 100 m² floor area / day
	GENERATION 40lt / bed / week 35lt / apartment / week 5lt / bed /day 50lt / 100m² bar area / day 667lt / 100m² / dining area / day 50lt / 100m² floor area / day 10lt / 100m² floor area / day 50lt / 100m² floor area / day 60lt / 100m² floor area / day 660lt / 100m² floor area / day 660lt / 100m² floor area / day 40lt / 100m² floor area / day 667lt / 100m² floor area / day 40lt / 100m² floor area / day 30lt / 100m² floor area / day

City of Perth's Waste and Recycling **Collection Services**

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

Residenital

Single unit dwellings (eg. houses and terraces)

- Landfill waste in 1 x 120lt or 240lt mobile garbage bin (MGB) collected once per week;
- Comingled recycling in 1 x 120lt or 240lt mobile garbage bin (MGB) collected once per week;
- Garden waste in 1 x 120lt or 240lt mobile garbage bin (MGB) collected once per fortnight;
- · Verge collection for bulky items and garden waste collected twice per annum.

Multi-unit dwellings (eg. Apartments and units)

- · Landfill waste in 240lt or 660lt MGB:
- · Co-mingled recycling in 240lt, 660lt or 1100lt MGB collected once per week;
- Garden waste in 240lt or 660lt mobile garbage bin (MGB) collected once per fortnight
- · Verge collection for bulky items and garden waste collected twice per annum.

The City's landfill and comingled recycling frequency of collections vary depending on the density of the development.

Typically, comingled recycling is collected once a week and landfill waste at the following frequencies:

- <30 apartments = 1 collection per week</p>
- >30 apartments = 2 collections per week
- >70 apartments = 3 collections per week

Commercial

- Landfill waste in 240lt, 660lt or 1100lt MGB.
- Glass recycling in 240lt MGB.
- Co-mingled recycling in 240lt, 660lt or 1100lt
- Paper/cardboard recycling in 240lt, 660lt or 1100lt MGB
- Food organic waste in 120lt MGB Garden waste in 240lt and 660lt MGB

Please note: where private contractor services are to be used, bin sizes should be clearly indicated with the collection frequency not exceeding daily.

Internal Waste Collection

- · The bin room/s for storage of waste and recycling should be located in a position that is convenient for both users and collection staff, but not fronting the street.
- Waste and recycling streams should be separated at source and clearly labelled in appropriate receptacles.
- In large developments, dedicated areas for temporary waste storage, waste chutes or other solutions should be considered to ensure waste collection and storage is more efficient.
- Where a waste chute system is planned, the City encourages a dual chute system for both general/landfill waste and recycling.
- All bin rooms and bin chute areas should allow universal access, including circulation space.

Waste Storage

- · Waste and recycling bins should be stored at all times within the boundaries of the property, but not fronting the street.
- Sufficient space should be provided for bins and associated equipment in dedicated bin room/s to manage all waste and recyclables likely to be generated on the premises between collections.

- Bin room/s should be able to hold a minimum of 24hrs worth of waste generation. Contingency plans should be in place if there is a delay in waste collection.
- The design of the bin room/s should be functional, to allow all bins to be easily moved and washed/cleaned. All personnel access ways should be minimum width of 800mm wide. All bins should have a min 50mm clearance on all sides (between bins, against walls etc).
- The bin room must be large enough for the bins to sit next to each other, not behind each other as residents/tenants may not take responsibility for rotating bins.
- The City encourages the use of larger bin sizes (660L and 1100L) where practical to ensure efficient storage and collection of waste and recycling streams.
- Mains water supply with floor graded to sewer plumbed drainage outlet/s should be installed in all bin rooms to allow for the washing of all room surfaces and for the cleaning of bins as required.
- Waste or recycling bin room/s should have a minimum 1100mm in width opening to allow easy removal and return of all bin sizes. Openings (eg. doors) should be self-closing, but able to be locked open.
- All bins rooms should comply with the relevant local health laws. These include, but are not limited to, smooth and impervious bin room walls over 1.5m and adequate ventilation. Refer to: https://www.perth.wa.gov.au/council/ reports-and-important-documents/local-laws

Mobile garbage bin dimensions

	120 Litre MGB	240 Litre MGB	660 Litre MGB	1100 Litre MGB
Height	930mm	1060mm	1200mm	1390mm
Depth	545mm	730mm	770mm	1090mm
Width	480mm	550mm	1360mm	1360mm

Bin Collection

- The City's order of preference for vehicle access to the development, depending on availability, is:
 - Right of Way (ROW)
 - 2. Secondary street
 - 3. Primary street
- Where a ROW adjoins a site, developments should utilise ROW access for waste collection, if it is available and designated accessible by the City.
- The recommended maximum travel distance between the last bin (furthest) at the waste presentation point and the waste collection vehicle, for all bin sizes and waste type, is 10
- The waste presentation point should be located within the property boundaries, but not fronting the street. The location should not obstruct the public domain, and should maximise safety and minimise traffic congestion. The City's preference for collection is:
 - 1. Internal collection, where the waste collection vehicle can enter and exit the development in a forward direction, with limited reversing (max 3 point turn), parking in a designated location within the property boundaries. This could be facilitated by the inclusion of a turntable. Please see vehicle dimensions for required adequate vehicle clearance.
 - 2. Bin room collection, where the bin room/s is located within 10 metres of the property boundary. The waste vehicle would stop in an appropriate location outside the property boundaries (eg. ROW) and bins would be collected directly from the bin room.
 - 3. Hardstand collection, where internal access or bin room access cannot be achieved, bins should be presented on a hardstand area (of appropriate size), within the property boundaries. The hardstand area should be of appropriate size to easily move the bins to the waste vehicle and within 10 metres of the waste collection vehicle location.

- For multi-unit residential and multi-storey commercial developments, it is preferable for the waste presentation point to be inside the development, for example in an underground car park, as this reduces the noise impact on surrounding residents.
- Swept Path Analysis should include a minimum buffer of 300mm.
- Both the driver and passenger should be able to safely alight and board the vehicle before and after collection, allowing both doors to fully open.
- To allow safe operating conditions at the rear loading waste vehicle, there should be practical and convenient access for both the driver and passenger to access the rear of the vehicle (minimum 800mm), with a 3m operating space at the rear of the vehicle.
- Where the waste collection vehicle is required to stop on the street it should be a minimum of 10m from any intersection.
- The path for wheeling bins between the waste presentation point and the waste collection vehicle should be a flat surface ($\leq 1:20$, no steps or dock levellers), free of obstacles and a safe distance from parking bays and vehicle ramps.
- Access way/ramp width, ramp grade, change of grade and turning circles should comply with Australian Standard AS 2890.2:2002 Parking Facilities: Off Street Commercial Vehicle Facilities.
- For all properties that have a lockable waste presentation point, waste collectors must have independent access via the use of a pin code, key or remote device. For properties serviced by the City one key or remote may be required for each waste stream.

Waste collection vehicles dimensions

The City waste collection vehicles are rear end loading. The following dimensions are for the typical collection vehicle and are provided for guidance only. Designers should allow for the largest possible waste collection vehicle.

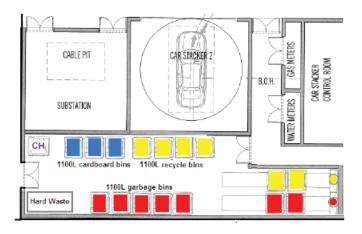
Nominal Dimensions for Rear Loading Waste Collection Vehicle				
Overall Length	8.0m			
Overall Width (including mirrors)	2.6m			
Overall Height	2.8m			
Operational Height	3.0m			
Gross Vehicle Mass	15.0 tonnes			

Further details of the City's waste collection fleet are available upon request.

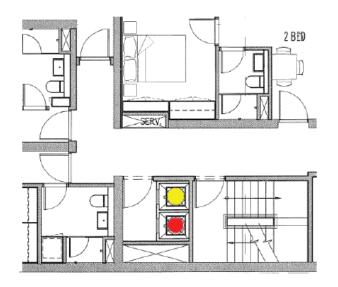
Bin Management

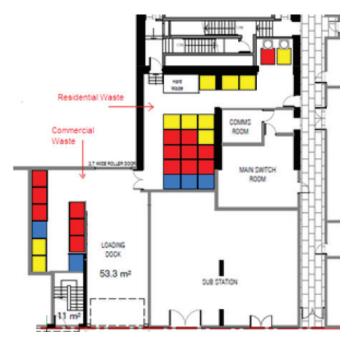
- Responsibility for ensuring compliance with the WMP should be allocated to a person of appropriate authority (e.g. a property manager, strata manager, caretaker)
- Responsibility for:
 - cleaning of bin room/s and facilities;
 - transfer of bins within the property and to the waste presentation point (if required); should be determined when designing the system and clearly stated in the WMP.
- In larger developments, residents should not be responsible for the presentation of bins for collection, as there is usually no individual ownership of bins. In this type of development a caretaker or equivalent should be responsible for bin management.
- If a bin hardstand area is to be used, once the bins have been emptied it is the responsibility of the caretaker or equivalent to take the bins back to the bin room as soon as possible.

Example of bin room layout with ROW access



Example of landfill and recycling drop off points at living levels





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