

Refuse Arrangements and Management for Multiple Residential Development

Date of Resolution

These guidelines were adopted by Council on the 22 February 2011 and takes effect from the 28 February 2011, in accordance with section 2.3(2) of the Planning Scheme.

Purpose of the Guideline

This document is intended to assist with the interpretation of the Planning Scheme by providing best practice guidelines for refuse storage and collection for Multiple Residential developments.

Council's Implementation Guidelines are intended to apply a standard approach to the interpretation and implementation of the relevant aspects of the Planning Scheme. They offer a degree of certainty and formality to applicants, Council and the community. Where an applicant is proposing a variation to the guidelines the onus is on the applicant to demonstrate the facts and circumstances to support the variation. This guideline does not preclude alternative innovative solutions proposed by the developer or applicant.

Application of the Guideline

This guideline is intended to apply to multiple residential developments (including both permanent and temporary forms of accommodation) or other forms of development e.g. mixed use developments that include multiple residential uses.

1. Pre-lodgement Discussions and Development Assessment

Council manages and services both domestic and recycling waste bins. Irrespective of the size of the development, early consultation / pre-lodgement meetings with Council planners, engineers, and environmental officers regarding refuse storage and collection is encouraged (especially for proposed on-site collection).

The early consultation will identify potential risks to health and safety, mitigate or minimise the potential for human injury or damage to property, and enable modifications to the proposed design prior to costly detailed design stages. Poor design decisions which do not properly address waste management and collection can hamper servicing options and the ongoing management of the operation and amenity of the development.

Note 1.1

It is the responsibility of the applicant to demonstrate that waste collection issues have been satisfactorily addressed in the development application.

2. Minimum Bin Provision for General and Recycle Waste

All unit developments should be serviced for the collection of both general waste and recycle waste.

To determine the minimum number of general and recyclable waste bins required for a unit development refer to **Table 2.1 - Minimum refuse bin provision for general and recycle waste.**

To assist with the bin storage location within the site refer to sections **3. Waste Collection Arrangement** and **4. Bin Storage Location** and the examples and illustrations provided in the associated Figures. The size of the bin storage area should be determined by the number and size of bins required for the unit development. For guidance refer to sections **7. Bin Bay Size** and **8. Refuse Bin Types** for guidance.



Table 2.1 - Minimum bin provision for general and recycle waste

No. of Units	Wheelie Bin 240L	Small Bulk Bin ^A 1100L or 1500L	Large Bulk Bin ^A 3.0m ³	Min. no. of bin storage areas per development
Less than or equal to 6 Units				
General Waste	6 (1 bin per 1 unit)	N/A	N/A	Contained within individual unit entitlement or a common bin storage area ^D
Recyclable Waste	6 (1 bin per 1 unit)	N/A	N/A	
7 – 8 Units				
General Waste	N/A	1 x 1500L or 1x1100L ^B	N/A	1 common bin storage area ^D
Recyclable Waste	3 (1 bin per 2 units)	N/A	N/A	
9 – 16 Units				
General Waste	F	or 2 x 1500L	or 1 x 3m ³	Min. 1 common bin storage area ^{D E}
Recyclable Waste	F	or 2 x 1500L	or 1 x 3m ³	
17 – 23 Units				
General Waste	F	N/A	2 x 3m ³	Min. 1 common bin storage area ^{D E}
Recyclable Waste	F	N/A	2 x 3m ³	
24 Units or more				
General Waste	F	N/A	Min. 2 bins (1 bin per 12 units or part thereof) ^C	Min. 1 common bin storage area ^{D E}
Recyclable Waste	F	N/A	Min. 2 bins (1 bin per 12 units or part thereof) ^C	

^A Small and large bulk bins will be collected on site.

^B 1100L plastic bin should be used where manual handling is required, as the bin is lighter to manoeuvre to/from the refuse storage area and the on-site collection point.

^C Where there is more than 24 units the ratio of bin provision is 1 x large bulk bin for every 12 units or part thereof e.g. 36 units development would require 3 x large bulk bins for each waste type (i.e. general and recyclable) to service the development.

^D A common onsite bin storage area shall contain both general and recycle refuse bins.

^E Where the unit development is unable to provide a common bin storage area of sufficient size to accommodate the minimum bin provision for the development. Council may increase the frequency of the waste collection services to offset the bin capacity deficiency.

^F A unit development may be serviced by individual 240L wheelie bins if the design layout includes an internal road (minimum of 6.0m wide) that accommodates side loading bin collection and forward site exit only (no reversing should be involved). Refer to Section 4.3 and Figure 4.3.1.

N/A = Not applicable.



3. Waste Collection Arrangements

3.1 Standard kerbside refuse collection

All wheelie bins associated with Multiple Residential developments of up to six (6) dwellings are to be placed on the kerbside for collection.

Kerbside waste collection is encouraged to limit the requirement for on-site refuse collection. All collection points should be sited to enable the mechanical pick up of bins with no manual handling. Refer to Figure 3.1.1.

Figure 3.1.1 - Preferred



The refuse bin is hidden behind the boundary fence and letter box, and is located away from the habitable areas of a dwelling but within close proximity to the kerbside.

3.2 On-site refuse collection

It is important to consult with Council's Development Planning Branch regarding on-site refuse collection before finalising a site plan.

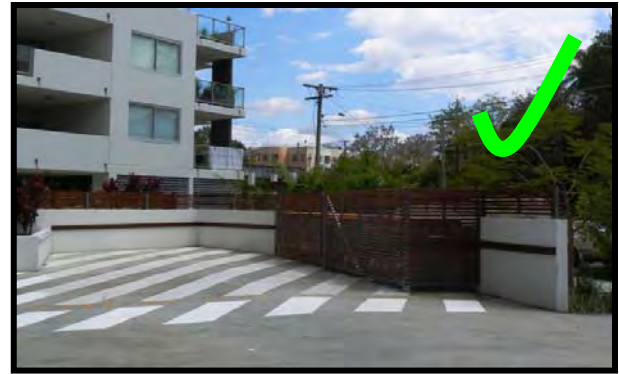
(a) Forward site entry & exit (preferred option)

Reversing of a waste collection vehicle can pose a significant risk to persons and property owing to the lack of vision, the size of the vehicle, the difficulty involved in reversing the large vehicles in confined spaces, and the unpredictable behaviour of people in confined or restricted areas or with limited sight lines.

The refuse storage location and collection areas should allow for safe forward entry to the waste containers, and forward entry and exit to and from the site. This is identified in Figure 3.2.1 and achieved as follows:

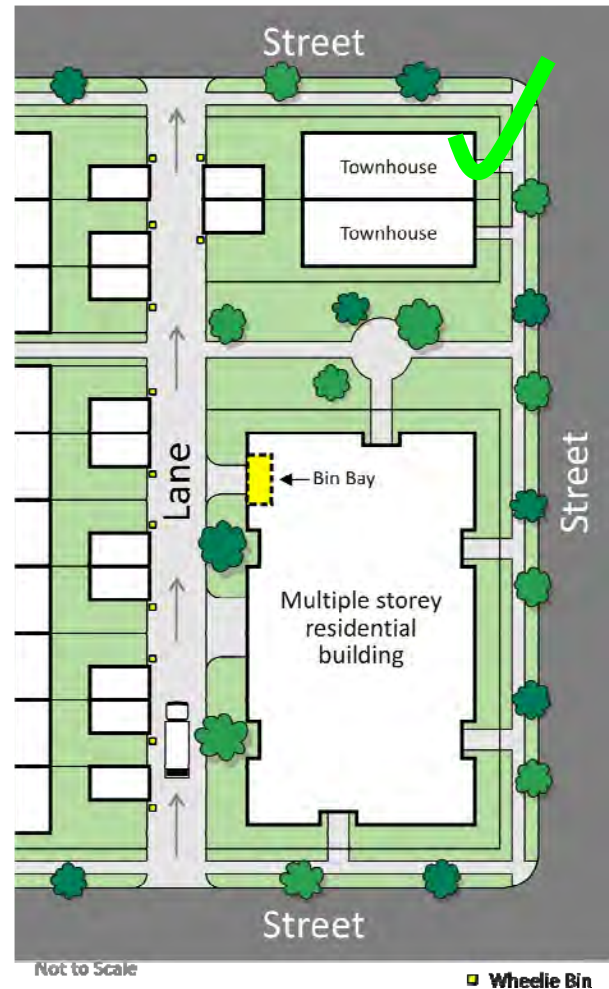
- Sufficient on-site manoeuvring proportions that do not require the vehicle to reverse further than two (2) vehicle lengths; or
- A through route configuration to enable the vehicle to enter and leave the site in a forward gear, refer to Figure 3.2.2.

Figure 3.2.1 - Preferred



The external bin storage area is screened by timber batons and is located near the site frontage where it is easily accessible for waste collection vehicles. The waste collection manoeuvring area is free of obstruction and parked vehicles.

Figure 3.2.2 - Preferred



The refuse bin is serviced by a rear laneway (drive through approach) for the two types of unit development e.g. townhouse and multi-storey residential building.



(b) *Reverse site exit*

Reverse site exit is not encouraged, and should be considered as a *last option* if the proposed development through modification cannot provide forward entry and exit.

Where reverse exiting is proposed the location of the on-site bin bay is important to reduce risk to persons or property. A waste collection vehicle should reverse no more than two (2) vehicle lengths to exit off site. Please refer to section 4. **Bin Storage Location** for further guidance.

4. **Bin Storage Location**

The bin storage area should be suitably located for convenient use. The storage area can be located either:

- within the building e.g. basement; or
- external to the building/s at ground level (but should not be located near habitable areas).

4.1 External bin bay where reverse exit is proposed

Where the bin storage area is a purpose built external bin bay, and where reverse exit is proposed, the following is to be achieved:

(a) *Health and Amenity*

- The bin bay must be adequately screened from the public view, the neighbouring property, and adequately landscaped or integrated with the building design, refer to Figures 4.1.3, 4.1.8, 4.1.9 and 4.1.10; and
- The bin bay should not be located near habitable areas on-site or nearby dwellings for health and amenity issues i.e. odour.

(b) *Location*

- The bin bay is located within 20m from the site frontage, refer to Figure 4.1.1;
- The bin bay is preferably located on the left side of the site frontage to allow efficient and safe manual handling of the bins; and
- Storage and servicing areas are to be designed with consideration given to principles of Crime Prevention Through Environmental Design (CPTED), particularly in order to achieve casual surveillance.

(c) *Accessibility*

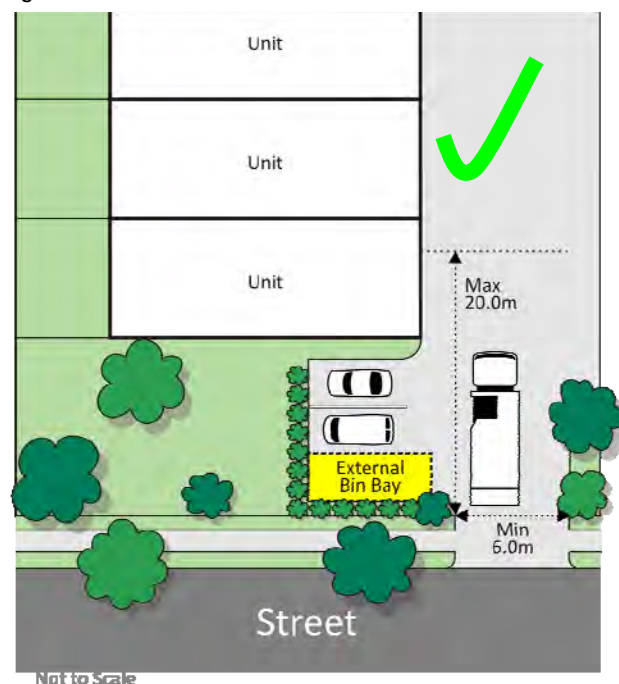
- The driveway must be a minimum width of 6.0m to ensure there is sufficient space to easily move the bins from the enclosure, to the side, front or rear of the waste collection vehicle;

- The bin bay should be level hardstand or at a maximum grade of 1:20 (5%) and accessible from the driveway via one access point;
- If the driveway grade (e.g. 1:6) is greater than the bin bay grade then an access ramp should be provided between the bin bay and the driveway at a grade of 1:20 (5%). The bin bay must not be at a lower level than the driveway; and
- The manoeuvring of refuse collection vehicles can be undertaken in an efficient manner, without unreasonable risk to property or persons.

Note 4.1

The driveway grade and the access ramp must be considered to ensure the bins will not move upon collection, and minimise potential risks to waste collectors and residents.

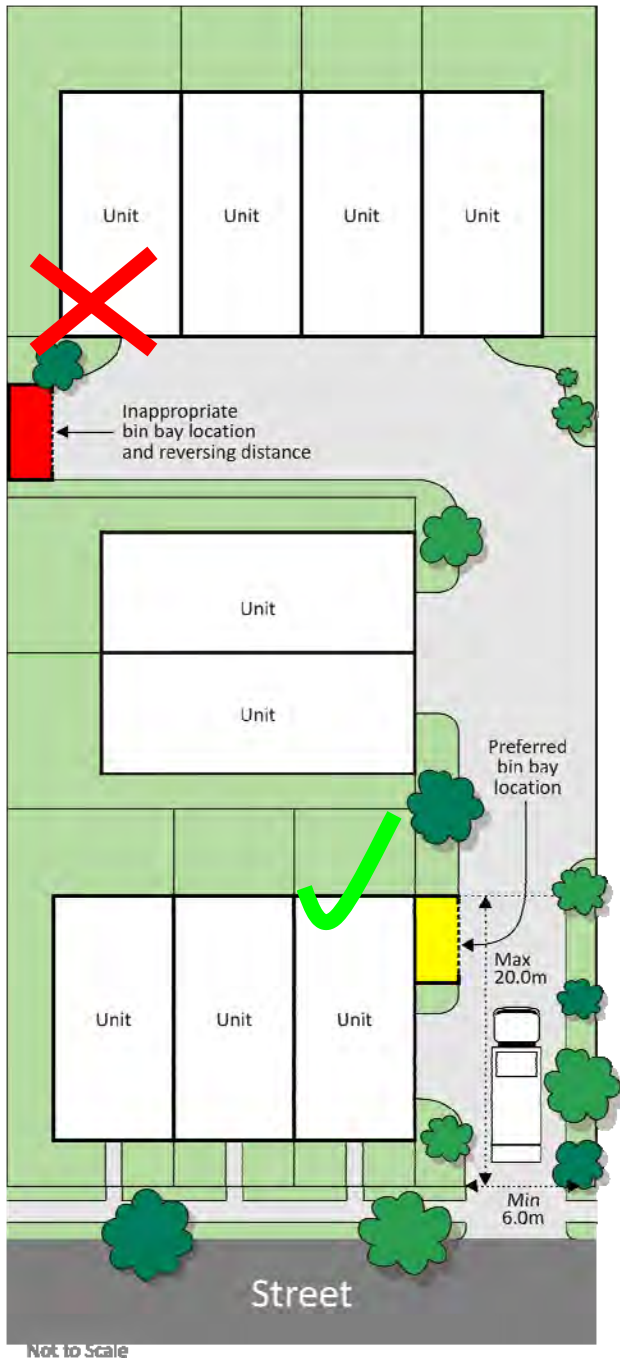
Figure 4.1.1 - Preferred



The external bin bay is located within 20m of the site frontage to reduce the reversing distance to the road. The bin storage area is also located away from habitable areas, adjacent to the internal driveway and is easily accessible.



Figure 4.1.2 – Preferred and Inappropriate illustrations



The above figure identifies both inappropriate and preferred locations for an external bin bay.

The inappropriate arrangement locates the external bin bay at the rear of the development where there is insufficient on-site manoeuvring area for a waste collection vehicle to exit in a forward direction. As such, a reverse exit would be necessary and the reversing distance is inappropriate with a corner turn required.

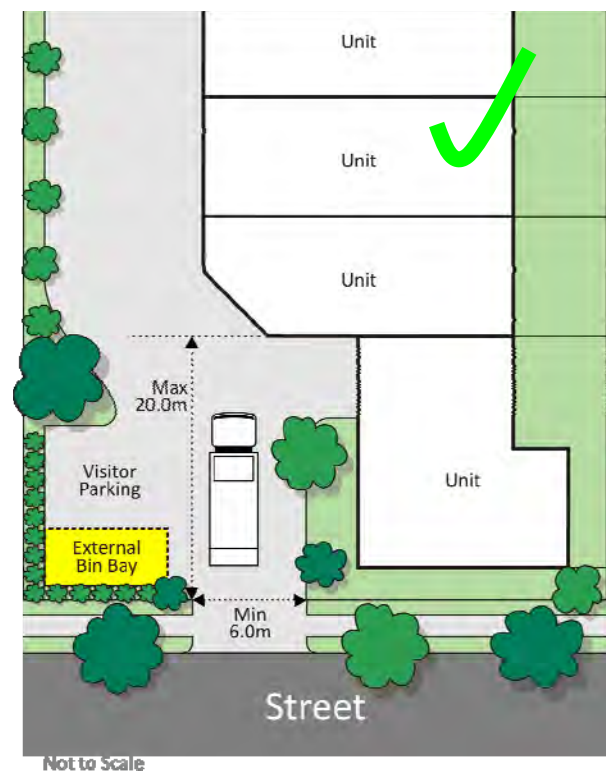
The appropriate arrangement locates the external bin bay within 20m of the site frontage, adjacent to the driveway and sufficiently screened from public view. The reverse exit distance (limited to within 20m of the site frontage) significantly reduces the potential risk to persons and property from a reverse exit.

Figure 4.1.3 - Preferred



The external bin bay is located adjacent to the internal driveway, and within a reasonable distance (i.e. less than 20m) from the site frontage to reduce the waste collection vehicle reverse exiting distance. The abundance of landscaping screens the view of the bins from the street.

Figure 4.1.4 - Preferred



Regardless of the residential unit configuration on the site, where reverse exit is required, the external bin bay is to be located within 20m of the site frontage and clear of obstructions at all times.



The following Figures identify *Preferred* and *Inappropriate* waste collection arrangements and locations, where reverse site exit is proposed for a waste collection vehicle.

Figure 4.1.5 - Preferred



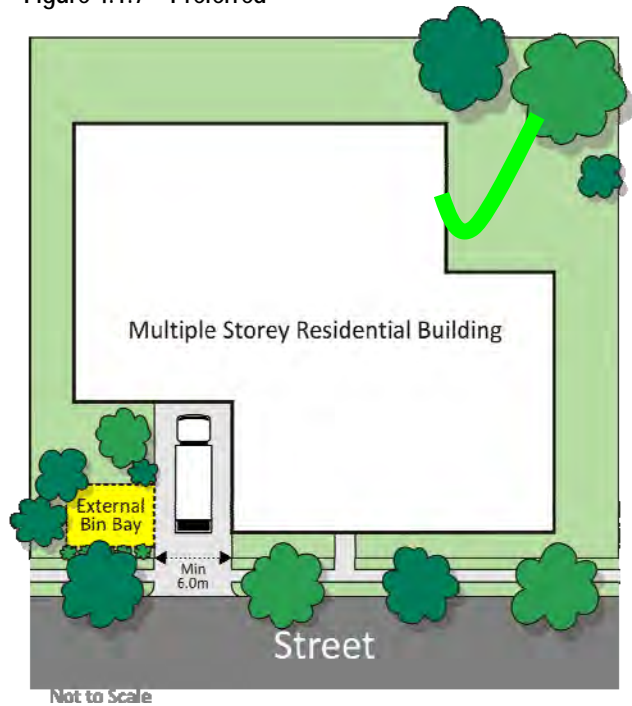
The driveway and enclosure are at the same grade. The grade is relatively flat ensuring the bins will not roll away upon collection.

Figure 4.1.6 - Inappropriate



The bin enclosure is raised and does not sit flush with the driveway, and there are multiple gates to access the bins.

Figure 4.1.7 – Preferred



Where bin storage is not provided in the basement or car park level of a multi-storey residential building, and reverse exit is required, the external bin storage area should be provided within 20m of the site frontage.

Figure 4.1.8 – Preferred



The bulk bins are located in an external bin bay which can be screened with a roller door, is located on a flat grade, adjacent to the driveway and within close proximity to the site frontage.



Figure 4.1.9 – Preferred



The bin storage area is well integrated into the building design and screened from public view.

Figure 4.1.10 - Preferred



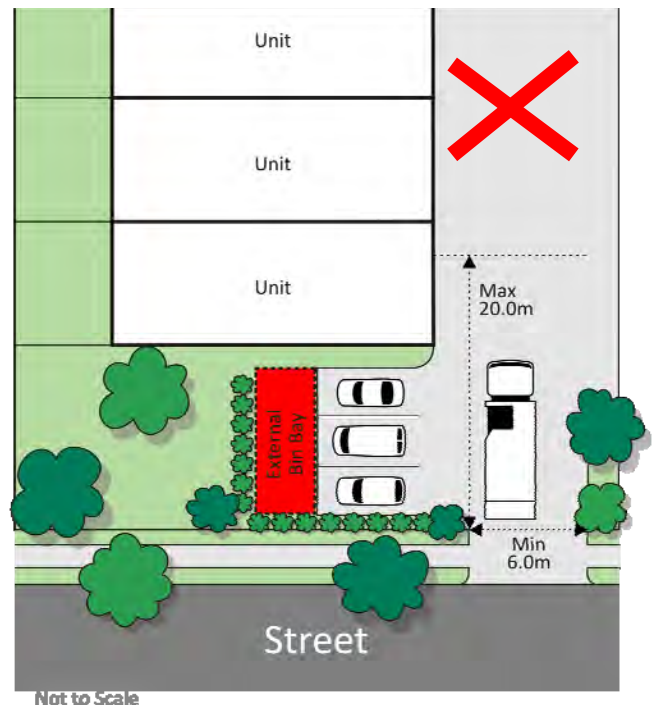
The above example is a multiple residential development with no vehicle access from the front of the property. The bin storage area is accessed from the rear of the property. The bin storage area is within 20m from the road, and is attractively landscaped and hidden from public view.

Figure 4.1.11 – Preferred



The bin storage area is adjacent to the driveway and the car park entrance, and is screened by the white roller door in this example.

Figure 4.1.12 - Inappropriate



An external bin bay should not be located behind visitor car parking spaces, as waste collectors may not be able to access the bins for waste collection.



4.2 External bin bays where forward entry and exit proposed.

The external bin bays for larger scale developments (e.g. 24+ units) are generally located at multiple locations throughout the development site, refer to Figure 4.2.1.

Note 4.2.1

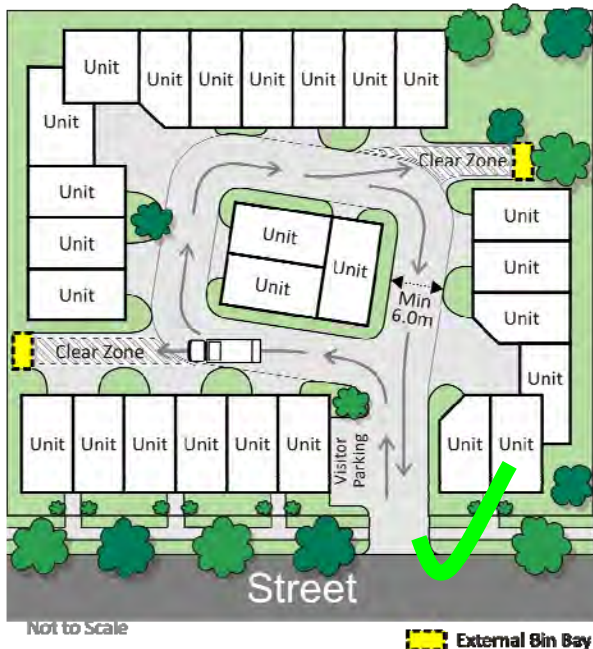
A 3m³ refuse bin is serviced by a front loading waste collection vehicle, and hence the bin enclosures should be appropriately orientated to allow the waste collection vehicle to access the bin in a forward direction, and safely reverse from the storage area, refer to Figure 4.2.2.

Regardless of the scale and intensity of the development, access to the bin bay and the reverse area for the waste collection vehicle should at all times be clear of obstructions and obstacles e.g. not to be used as visitor parking, landscape features, light bollards etc.

The visual appearance of the external bin bays should achieve the following:

- the bin bay should be adequately screened from public view, the neighbouring property, and be adequately landscaped or integrated with the building design; and
- the bin bay should not be located near habitable areas on-site or nearby dwellings for health and amenity reasons i.e. odour.

Figure 4.2.1 - Preferred



Larger scaled developments for example 24+ residential units generally utilise 3m³ bulk bins where the refuse vehicle can access the bulk bins in forward motion. The strategic location of the bulk bins is important and the access area must be free of obstruction at all times.

Figure 4.2.2 - Preferred



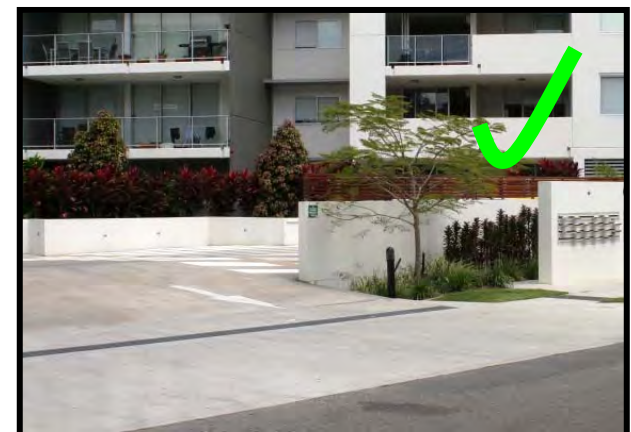
The refuse bins are centrally located and easily accessible from the internal driveway. The 3m³ bulk bin should be immobile (due to its size and weight) and is positioned to allow front lift waste collection vehicles to drive (forward) toward the container for waste collection.

Figure 4.2.3 - Preferred



The wide internal road allows for efficient movement of a waste collection vehicle throughout the development.

Figure 4.2.4 - Preferred



The external bin bay is not visible from the street frontage, and the attractive bin enclosure adds to the visual appeal of the property fencing and landscaping.



Figure 4.2.5 - Preferred



The bin storage area is attractively screened behind the front boundary wall, landscaping and the letter boxes of the residential unit development. The timber baton enclosure of the bins bay also complements the building design.

Figure 4.2.6 - Inappropriate



The refuse bins are blocked by parked vehicles although the area is not designated for vehicle parking. This circumstance results in the inability to easily access the bins by both residents and the waste collectors. The loss of the space has also compromised the manoeuvring area of the waste collection vehicle.

Figure 4.2.7 - Inappropriate



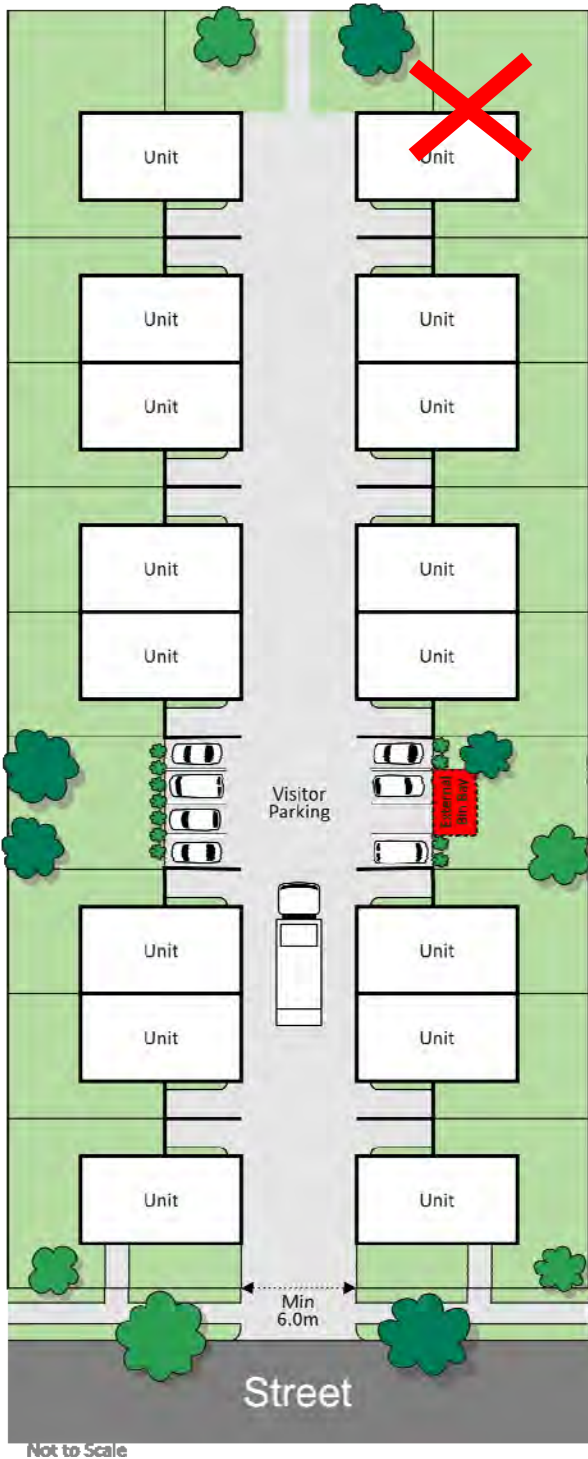
The bins are not stored in the bin enclosure, are located adjacent to windows of habitable rooms, and private vehicles are blocking the access resulting in unsafe vehicle access to the bin enclosure.

Figure 4.2.8 - Inappropriate



The bulk bin is inaccessible to the waste collectors as a vehicle has inappropriately parked in the driveway of the development. This is an unsafe and inconvenient arrangement. Clear ground markings or the use of bollards in the collection pathway should be provided in the development.

Figure 4.2.9 - Inappropriate



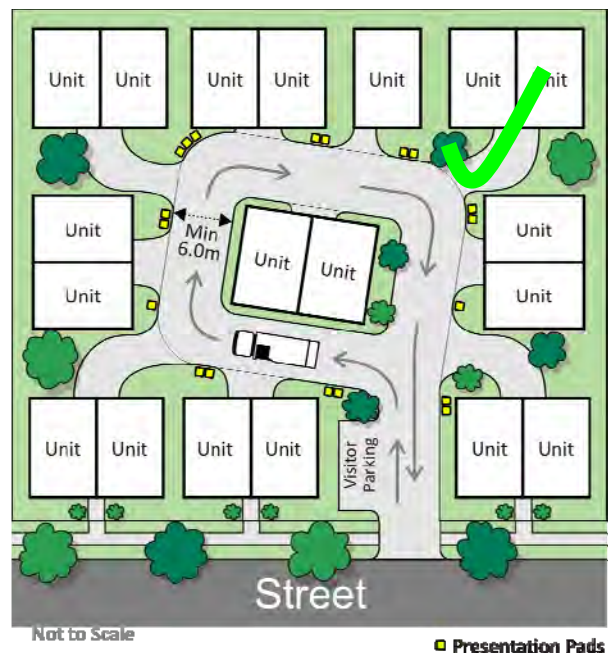
A common design for a multiple residential unit development is to propose the bin storage area within the centre of the site with car parking external to the bin area. This arrangement compromises the manoeuvring area of a waste collection vehicle to exit in a forward direction, and the waste collector's and residents' ability to easily access the bin area. The primary issue is the insufficient on-site manoeuvring area and the need for the waste collection vehicle to reverse an undesirable distance to exit the site, and subsequently increase the potential risk to persons and property associated with the reverse exit.

4.3 Presentation Pad

For a multiple unit development, a number of bin presentation pads can be provided throughout the development if the internal private road contains a minimum width of 6.0m, and the waste collection vehicle can exit the site in a forward direction (no vehicle reversing should be involved). The number of pads and their size can vary depending on the development e.g. each unit may have a presentation pad, or a larger pad may accommodate several bins.

The responsibility of moving the bins to the pad/s for collection will be either the site manager or the unit resident, depending on the arrangement of the body corporate. The presentation pads must be clearly marked on the pavement and can either be located at the front of a dwelling unit, or along an unobstructed stretch of paved area within the development that is accessible to all residents. This arrangement is best suited for the two wheeled mobile garbage bin (wheelie bin) of 240L. Refer to Figure 4.3.1 - 4.3.3 for preferred examples.

Figure 4.3.1 - Preferred



Where a multiple residential development proposes an internal private road, and where the width of the private road is a minimum of 6.0m, this can facilitate kerbside wheelie bin collection within the development. It is noted, this waste collection arrangement does not involve the use of a bulk bin. The presentation pads assist the residents as to where the bins should be located on collection day.



Figure 4.3.2 - Preferred



The presentation pads are clearly ground marked, located within close proximity to the dwelling unit, and are along the internal driveway.

Figure 4.3.3 - Preferred



The presentation pad is ground marked and located along an unobstructed stretch of paved area within the development.

4.4 Presentation Pad – Multi-storey residential building

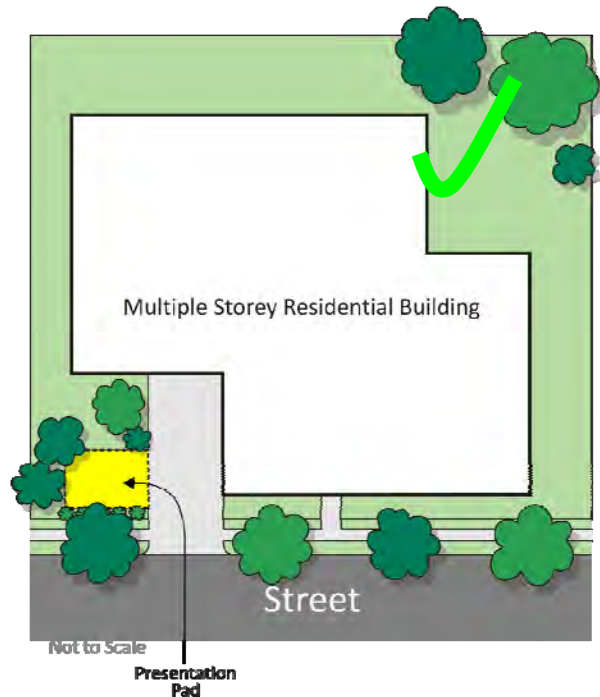
An on-site presentation pad is recommended where a waste collection vehicle cannot access the basement of a multi-storey residential building or the refuse storage area.

The presentation pad acts as an intermediate point between the normal storage area (i.e. basement) and the collection point (kerbside). The body corporate site manager or individual residents are responsible for transferring the refuse bins to the presentation pad before and after collection. The refuse bins will be collected from and returned to the pad by the refuse collectors.

Generally one presentation pad is required for a multi-storey building and should be clearly marked, located on-site adjacent to the driveway and within 20m of the site frontage. The pad should be hardstand and utilise the existing driveway to allow for safe and easy manual handling.

The pad should not be placed on elevated ground or nature strips/footpaths. Presentation pads do not have to be screened like a bin bay, as they are only an intermediate storage point. See Figure 4.4.1.

Figure 4.4.1 – Preferred



The presentation pad is recommended where a waste collection vehicle cannot access the basement of a multi-storey residential building or the common refuse storage area.

5. Height Clearance

Developers and site managers are to ensure that adequate height clearance is provided at all times (including overhead height in basements, balconies etc), to enable safe and convenient waste collection to occur.

Table 5.1 provides the minimum dimensions of Council's waste collection vehicles for front, rear and side loading. These dimensions provide a guide for the overall site plan for the adequate manoeuvring of the waste service vehicles and collection of the bins.



Table 5.1 Minimum dimensions of waste collection vehicles

Vehicle Arrangement	Front Load	Side Load	Rear Load
Length Overall	10.4 m	10.4 m	10.4 m
Length when loading	10.5 m	10.4 m	10.4 m
Travelling overhead clearance required	3.9 m	3.9 m	3.2 m
Loading overhead clearance required	6.1m	3.9 m	3.2 m
Access width required	3.0 m	5.0 m	3.0 m
Turning radius	14.0 m	11.0 m	8.0 m
Gross vehicle mass (t)	22.5 t	22.5 t	15 t

6. Other Waste Servicing Options

For sites that are constrained i.e. limited site frontage width, limited site area and heavy traffic areas, the following best practice outcomes are encouraged and will be assessed on the basis of individual site needs.

- Refrigerated refuse rooms for multi-storey residential buildings;
- Installation of refuse chutes to empty into a bulk bin or compactor for multi-storey residential buildings;
- Interim storage areas on each level of a multi-storey building;
- Increased refuse collection frequency if smaller bulk bins are used;
- Allow different waste collection vehicle sizes to service different development needs; and
- On-site compactors.

7. Bin Bay Size

The size of the bin bays will depend on the type of bins that will service the development. Sufficient room should be provided to manoeuvre the bins within the enclosure and easily move them to and from the enclosure for collection.

As best practice there should be a minimum distance of 0.5m between each bin within the enclosure and the surround of the enclosure.

Please refer to section 8. Refuse Bin Types to assist with determining the appropriate bin bay size.

Note 7.1

It is important to consult with Council's Development Planning Branch to determine the bin types, bin numbers and location appropriate for the development, which will subsequently determine the required size of the on-site refuse storage area or enclosure.

8. Refuse Bin Types

There are different bin types available to service individual development requirements including:

(1) Mobile wheelie bin

The mobile wheelie bin with two wheels are the standard residential waste wheelie bins used for general and recycle waste.



- Bin capacity: 240L.
- Dimensions: 1080mm H x 735mm D x 580mm W.

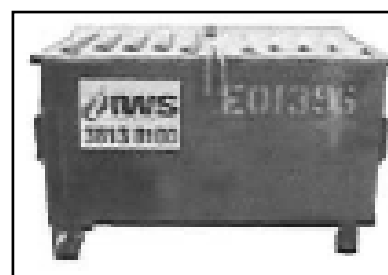
(2) Small bulk bins (dome or flat lid container)

i) 1100L plastic wheelie bulk bin with lockable wheels.



- Bin capacity: 1100L.
- Dimensions: 1470mm H x 1245mm D x 1370mm W.

ii) 1500L steel wheelie bulk bin with lockable wheels.



- Bin capacity: 1500L.
- Dimensions: 1000mm H x 900mm D x 1800mm W.



(3) Large bulk bin

The 3.0m³ bulk bin (with 4 wheels or no wheels) can be used to service larger unit developments, mixed use or multi-storey residential developments.



- Bin capacity: 3.0m³
- Dimensions: 1225mm H x 1505mm D x 1805mm W