

RESIDENTIAL SUBDIVISIONS WASTE MANAGEMENT GUIDELINES

BACKGROUND

Council is responsible for the collection and disposal of domestic waste within the Penrith Local Government Area (LGA).

Waste management practices of all proposed developments need to consider resident and public amenity and safety at all stages of the waste management process, including storage, transfer and collection.

1. INTRODUCTION: DESIGN PRINCIPLES

1.1 WASTE MANAGEMENT CONSIDERATIONS

It is essential that new residential subdivisions be designed so that they can be serviced by Council's standard waste service upon occupancy of the development. In assessing Development Applications (DAs) for residential subdivision, it is important to consider how the waste management needs of the subdivision will be serviced by Council once the lots are developed and occupied by residents.

Providing functional subdivision layouts is essential for Council to be able to safely and adequately service new developments and ensure future residents can access Council's standard waste service. Subdivisions providing smaller lot sizes and reduced lot widths can impact on the operation of Council's waste collection service and present on-going challenges for Council's waste collectors.

To ensure new developments are able to access Council's waste service in an efficient and effective manner the following must be taken into consideration in the assessment of DAs:

- Site planning, lot layout and road design is responsive to Council's servicing requirements and provides safe and adequate **bin presentation areas**; and
- Site planning of the development ensures residential and other users (such as Council's waste collection staff) amenity and safety at all stages of the waste management process.

1.2 UNDERSTANDING COUNCIL'S WASTE SERVICE

New developments are required to provide future residents with access to residual, recycling and organics waste services. These dwellings will be serviced by Council's kerbside collection. This will require future residents to wheel **mobile garbage bins** to a **bin presentation area** for **kerbside collection**.

To allow safe and efficient waste collection, the design of the proposed subdivisions will need to consider waste management requirements to ensure future dwellings can be integrated with Council's standard waste service. This

includes consideration of road widths to enable Council's current waste collection vehicles to manoeuvre and access all bins presented.

2. WASTE GENERATION RATES

2.1 BIN ALLOCATION

Council's standard bin allocations for Low Density Developments comprises of the following:

- 1x 140L mobile garbage bin for Residual Waste
- 1x 240L mobile garbage bin for Recycling Waste
- 1x 240L mobile garbage bin for Organics Waste

Bin Size and Type	Height (mm)	Length (mm)	Width (mm)
240L	1100	740	600
140L	915	615	505

Table 1: Standard Bin Size and Dimensions



Figure 1: Image of a typical 240L & 140L organics, recycling and residual bins

3. ROAD WIDTH

3.1 DESIGNING FOR COUNCIL'S WASTE COLLECTION

To provide a safe and efficient waste collection service to all subdivisions, the following road dimensions will need to be implemented. The dimensions allow Council's standard waste collection fleet (section 5.1) and emergency service vehicles to access and service residential dwellings within subdivisions.

The required dimensions are illustrated in Figure 2 on the next page:

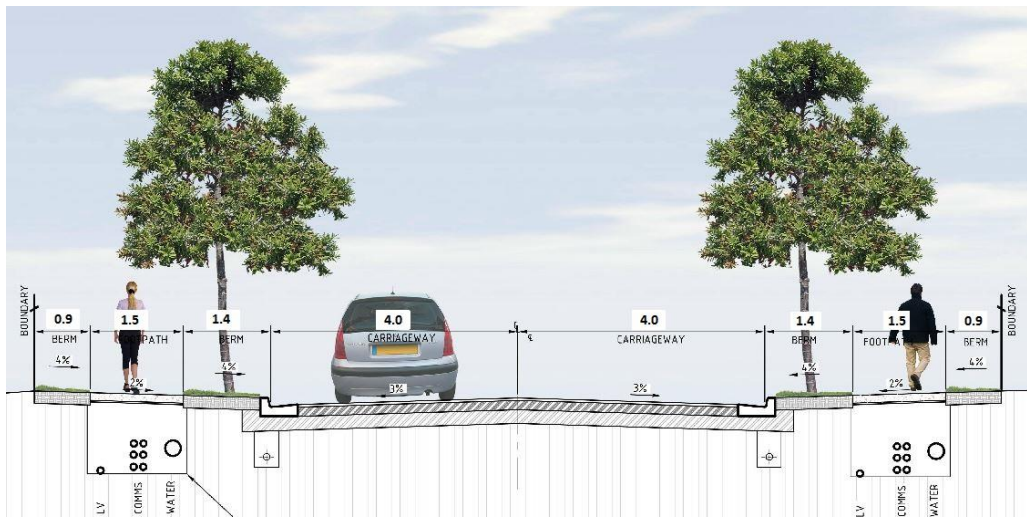


Figure 2: Road design specifications to allow service by Council's 12.5m Heavy Rigid Waste Collection Vehicle

4. WASTE INFRASTRUCTURE AND SERVICE PROVISIONS

4.1 DETACHED SERVICED DWELLINGS

4.1.1 Waste Collection Vehicle Access

Submitted plans to accommodate the following provisions:

- Swept path models are required to be submitted illustrating how Council's 12.5m heavy rigid waste collection vehicle will perform a safe and efficient waste collection service. A minimum 0.5m unobstructed clearance zone is required from all external obstructions during the collection manoeuvres.
 - Heavy rigid vehicle specifications are outlined in section 5.1
 - Clearance zones required for collection are outlined in section 5.2
 - The model is to display on-street parking on both sides of the road to represent a 'business as usual' model
- Minimum carriageway of 4m is required to permit an unobstructed kerb to kerb width of 8m (section 3.1). This will permit access for Emergency and Council's waste collection vehicles

4.1.2 Waste Collection Vehicle Turning Provisions

Submitted plans to accommodate the following provisions:

- Staged developments are to provide temporary turning facilities where the full length of the road will not be completed as a part of the initial staged proposal. The size of the temporary turning facilities to be large enough to accommodate Council's 12.5m heavy rigid waste collection vehicle (section 5.1), with a minimum diameter of 20m. All temporary turning facilities to be removed when the final stage of the development is completed.
- Cul-de-sacs within subdivisions are not permitted. Only in circumstances where all other means to provide turning facilities are deemed unviable by Council, a cul-de-sac may be proposed for

consideration.

- Proposed cul-de-sacs are to accommodate Council's 12.5m heavy rigid collection vehicle (section 5.1).
- A minimum diameter of 20m is required.
- For battle-axe lots the width of the access handle must be of sufficient size to permit kerbside presentation of 2x 240L bins in accordance with section 4.1.3
- All roads to provide through access to permit access/servicing by Council's 12.5m heavy rigid waste collection vehicle

4.1.3 Bin Presentation

Submitted plans to accommodate the following provisions:

- All lots to provide unobstructed bin presentation areas large enough to accommodate 2x 240L bins. The minimum dimensions required are 2m wide by 1m deep. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.
- Lots incorporating 'Fonzie Flats' are to provide bin presentation areas large enough to accommodate 4x 240L bins. The minimum dimensions required are 4m wide by 1m deep. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.

4.2 REAR ACCESS LANEWAY SERVICED DEVELOPMENTS

For subdivisions that incorporate rear access laneways for the servicing of waste collection, the following specifications are required to be accommodated:

4.2.1 Bin Presentation

- All lots to provide unobstructed bin presentation areas large enough to accommodate 2x 240L bins. The minimum dimensions required are 2m wide by 1m deep. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.
- Lots incorporating 'Fonzie Flats' are to provide bin presentation areas large enough to accommodate 4x 240L bins. The minimum dimensions required are 4m wide by 1m deep. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.

4.2.2 Laneway Design

- Laneways to a minimum width of 7m (kerb to kerb) to permit a safe and efficient waste collection service for Council's 12.5 heavy rigid waste collection vehicle.
- Swept path models to be provided illustrating 0.5m unobstructed clearances throughout all collection manoeuvres proposed
 - Council's vehicle specifications are outlined in section 5.1 & 5.2
 - Model to display on-street parking to represent a 'business as usual' model

- The length of the laneways to be designed to ensure Councils collection contractors can maintain appropriate sight distances throughout all collection manoeuvres
- Council's waste collection vehicle to maintain unobstructed overhead height clearances in accordance with section 5.2
- 'No stopping signage' to be illustrated on the 'Traffic and Signage Plans' submitted to Council to permit unobstructed clearances for Council's waste collection vehicle

4.2.3 Waste Collection Vehicle Specifications

To permit a safe and efficient waste collection service, turning provisions for Council's heavy rigid waste collection vehicles are to be provided in accordance with section 4.1.2.

4.3 TERRACE STYLE SERVICED DEVELOPMENTS

For terraced styled developments with the implementation of zero lot site setbacks, the following specifications are required to be accommodated:

4.3.1 On-site infrastructure access

- Each terrace dwelling to allow the movement of Council's 3x 240L bins (Organics, Recycling and Residual) from the backyard (private open space) to the site of presentation without the need for the bins to pass through the residential dwelling.
 - Permanent bin storage in front and/or within the dwelling is not permitted
 - A concept terraced styled development to permit bin movements is outlined in section 4.3.4

4.3.2 Bin Presentation

Submitted plans to accommodate the following provisions:

- All lots to provide unobstructed bin presentation areas large enough to accommodate 2x 240L bins. The minimum dimensions required are 2m wide by 1m deep. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.
- Lots incorporating 'Fonzie Flats' or dual dwellings are to provide bin presentation areas large enough to accommodate 4x 240L bins. The proposed area must not be obstructed by driveway access, street trees and on-street vehicle parking.

4.3.3 Waste Collection Vehicle Specification

- To permit a safe and efficient waste collection service, turning provisions for Council's heavy rigid waste collection vehicles are to be provided in accordance with section 4.1.2.

4.3.4 Terrace Styled Developments Model Side Access Configuration



Figure 3: Model terrace dwelling configuration depicting side access permitted through the garage

Note: The following configuration is a guide to facilitate the development of an innovative on-site waste collection solution and is not viewed as a definitive design outcome.

4.4 SITE RESTRICTED SERVICED DEVELOPMENTS

There may be site characteristics that restrict the opportunity for the development to accommodate waste collection in accordance with sections 4.1, 4.2 & 4.3. The site characteristics may include the width of the development and its topography. There may also be circumstances where the applicant is able to demonstrate an improved planning outcome is achieved for the site.

NOTE: This outcome is not acceptable on arterial roads, high vehicle and pedestrian movement areas and developments adjacent to schools.

4.4.1 Alternative Solutions

To apply for alternative solutions on restricted sites the following will need to be addressed and submitted:

- The onus is on the applicant to demonstrate that:
 - An improved planning outcome and waste operational outcome is achieved for the site
 - Site characteristics restrict or limit the development accommodating traditional waste collection as outlined in sections 4.1, 4.2 & 4.3.
 - The improved waste collection solution does not compromise public, resident and contractor safety
 - The solution can be service by Council's standard waste collection fleet vehicles
- The development application must be supported by scaled plans illustrating the swept paths required for the waste collection vehicle to perform collection within a single continuous movement
- Detailed architectural plans are to incorporate key features including:
 - Specifications (systems dimensions, operational clearances, systems workings) of the proposed waste collection technology
 - Detailed internal and external plans showing the waste collection system integrated within the proposed development
 - Road cross-sections outlining carriageway clearances for Council's standard waste collection vehicle. Clearances to include on-street parking during calculations.

4.4.2 Alternative Solution Proposals

Alternative solutions may be proposed to Council. These solutions are permitted in circumstances where all options to accommodate waste collection (sections 4.1, 4.2 & 4.3) have been explored and deemed unviable by Council's Waste and Resource Recovery Department.

5. WASTE COLLECTION VEHICLE

5.1 COUNCIL'S WASTE COLLECTION VEHICLE

Council's standard waste vehicle to service residential subdivisions is a 12.5m heavy rigid side loading waste collection vehicle. The following dimensions are provided in accordance with Australian Standard 2890.2:

Vehicle Class:	Heavy Rigid Vehicle Dimensions
Overall Length (m)	12.5
Design Width (m)	2.8
Design Height (m)	3.7
Swept Circle (m)	22.5
Clearance (travel height) (m)	4.5
Roadway/ramp grade (max)	1:6.5 (15.4%)
Rate of change of grade (max)	1:16 (6.25%) in 7.0m of travel
Gross Weight (max tonnes)	28.0
Capacity (m ³)	24
Front Chassis Clearance	13°
Rear Chassis Clearance	16°

Table 2: Standard dimensions sourced from AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities

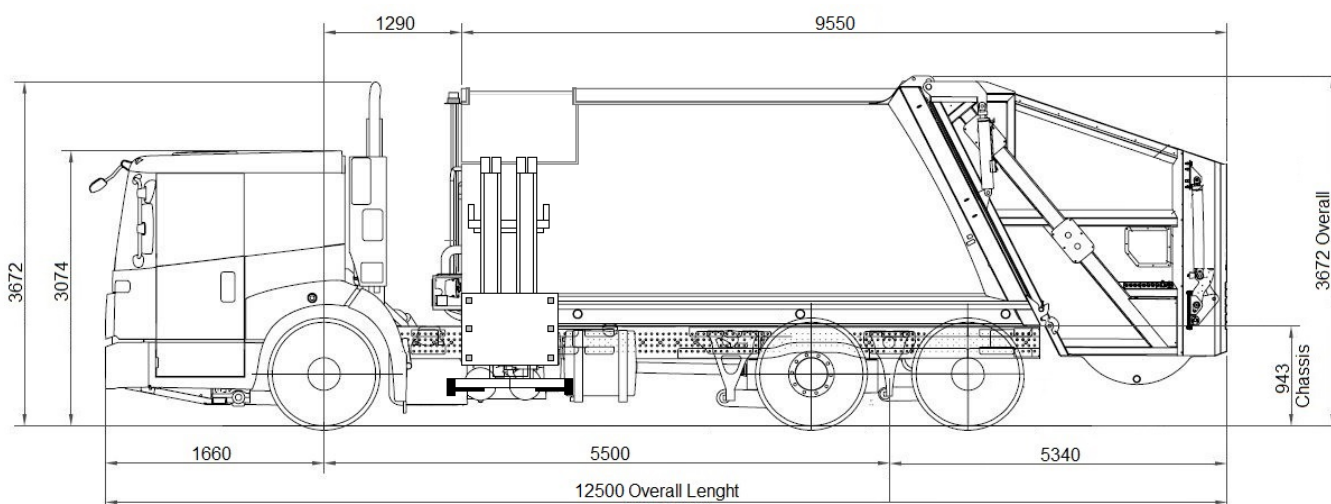


Figure 4: 12.5m Heavy Rigid Waste Collection Vehicle specifications

NOTE: Consideration of vehicle dimensions including rear operational requirements and overhead clearances are required when assessing collection points and route of travel for waste collection vehicles.

5.2 SERVICE VEHICLE CLEARANCE ZONE

The following (figure 5) represents the unobstructed clearance zone required for Council's heavy rigid waste collection vehicle to perform a safe and efficient waste collection service.

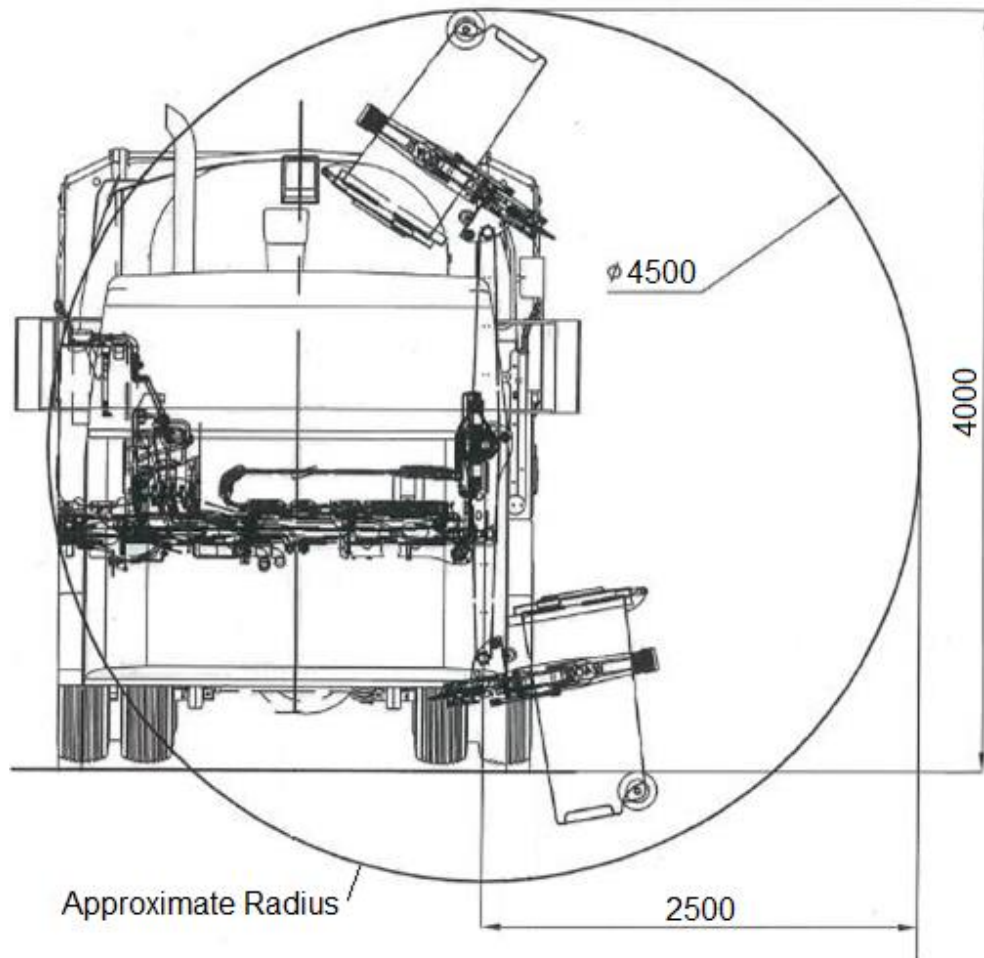


Figure 5: Schematic representing Council's collection arm operational clearances required during kerbside bin collection.

6. GLOSSARY

The following are standard terms used within this document:

Term	Definition
Battle-axe lot	A lot that has an access handle, an access corridor (a hatchet shaped lot) or a right-of-carriageway over another lot.
Bin Presentation Area	2m area nominated for individual residents to place their bins for collection kerbside.
Collection Point	The nominated point from which waste and recycling is collected by Council's waste service.
Kerbside Collection	Where presented bins are collected kerbside by Council's waste service.
Heavy Rigid Vehicle	Heavy Rigid Vehicle in accordance with Australian Standard 2890.2
Mobile Garbage Bins	Small bins that have two wheels so can only be moved forwards and backwards (not sideways).
Fonzie Flat	A detached separate dwelling occupying the air space above the garage of the primary dwelling.