

# WASTE MANAGEMENT GUIDELINES

## RESIDENTIAL FLAT BUILDINGS





*Journey Through Time*, created by local school students and artist Steven Campbell.

## Acknowledgement of Country

Cessnock City Council acknowledges that within its local government area boundaries are the traditional lands of the Wonnarua people, the Awabakal people and the Darkinjung people. We acknowledge these Aboriginal peoples as the traditional custodians of the land on which our offices and operations are located, and pay our respects to Elders past and present. We also acknowledge all other Aboriginal and Torres Strait Islander people who now live within the Cessnock Local Government Area.

# Contents

<b>1. Introduction</b>	<b><a href="#">4</a></b>
<b>2. Waste management plan</b>	<b><a href="#">6</a></b>
Waste collection service	<a href="#">7</a>
Residential waste collection service by Council	<a href="#">8</a>
Waste collection service by private contractor	<a href="#">8</a>
Waste Generation	<a href="#">9</a>
<b>3. Waste transfer &amp; collection infrastructure</b>	<b><a href="#">10</a></b>
Waste chutes	<a href="#">11</a>
Waste chute collection room	<a href="#">12</a>
Waste storage area	<a href="#">13</a>
Bulky waste storage area	<a href="#">14</a>
<b>4. Waste collection</b>	<b><a href="#">15</a></b>
Waste collection vehicle	<a href="#">16</a>
Waste collection vehicle access	<a href="#">16</a>
Waste collection point	<a href="#">16</a>
<b>5. Useful resources</b>	<b><a href="#">17</a></b>
<b>6. Appendix A</b>	<b><a href="#">17</a></b>

# ***INTRODUCTION***

# Introduction

Residential flat buildings comprise three or more residential dwellings/units within a multi-storey building on the one Lot. The complexities of the number of occupants within the building and multiple residential levels requires a responsive approach to building design to facilitate an efficient and sustainable waste management system.

This guideline will assist with developing a waste management system within residential flat buildings and includes design guidance to facilitate waste transfer and collection within the building.



# ***WASTE MANAGEMENT PLAN***

## Waste Management Plan

All proposed residential flat buildings will be required to submit a Waste Management Plan (WMP) with a development application. If the cost of the proposed development exceeds \$5M in value the WMP is required to be prepared by a suitably qualified waste management consultant/practitioner.

The WMP is to be prepared with reference to this guideline and other relevant standards or documentation.

## Waste collection service

All residential flat building developments are required to provide on-site waste collection. Each residential flat building will be required to have a nominated on-site waste collection point and loading space. Design will be based on the equipment used by the waste collection service for the site, either Council or a private waste collection service provider.



## Residential waste collection service by Council

Each residential rated property is charged a domestic waste management charge under the Local Government Act 1993. Council waste collection vehicles are limited to the collection of 240L mobile garbage bins or 360L bins for recyclables.

Standard bin sizes are provided below to enable design for waste storage areas and waste collection points.

**Table 1:** 240L and 360L bin dimensions

BIN CAPACITY (L)	HEIGHT (MM)	DEPTH (MM)	WIDTH (MM)
240L	1060	730	585
360L	1100	770	680

Specifications for Council's waste collection vehicle (12.5m heavy rigid side loading vehicle) are provided in Appendix A and are required to be considered if the proponent elects for a Council waste collection service for a proposed residential flat building.

An agreement with Council providing authority to enter the site for the purpose of waste services will be required. This agreement will include an indemnity agreement against any future claims for damage or loss.

## Waste collection service by private contractor

Residential flat buildings require access to recycling and residual waste bins and sufficient bin storage is to be provided to accommodate the projected volume of waste from the building. Private waste services may provide a variety of waste bin sizes. Mobile waste bins can range in volume and size and are typically collected by 'rear-lift' waste collection vehicles. **Table 1** provides the dimensions of mobile bins to enable sizing of the waste storage area for the proposed residential flat building.

**Table 1:** Mobile waste bin dimensions

BIN CAPACITY (L)	HEIGHT (MM)	DEPTH (MM)	WIDTH (MM)	FOOTPRINT AREA (M <sup>2</sup> )
80	870	530	450	0.24
120	940	560	485	0.27
140	1065	540	500	0.27
240	1080	735	580	0.43



BIN CAPACITY (L)	HEIGHT (MM)	DEPTH (MM)	WIDTH (MM)	FOOTPRINT AREA (M <sup>2</sup> )
360	1100	885	600	0.53
660	1250	850	1370	1.16
770	1425	1100	1370	1.5
1100	1470	1245	1370	1.7
1300	1408	1250	1770	1.21
1700	1470	1250	1770	1.27

**Source:** Appendix B Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities, NSW EPA, 2012 and Appendix G Better practice guide for resource recovery in residential development, NSW EPA, 2019.

## Waste Generation

Average households in residential flat buildings generate estimated volumes of waste outlined in **Table 1** below. The rates are a general guide based on the size of the residential dwelling/unit, but may be used to calculate overall waste generation for bin infrastructure sizing.

**Table 1:** Waste generation from residential dwellings in residential flat buildings

RESIDENTIAL DWELLING SIZE	RECYCLING (L/WEEK)	GREEN WASTE (GARDEN AND FOOD) (L/WEEK)	RESIDUAL WASTE (L/WEEK)
1 bedroom or studio	80	25	80
2 bedroom apartment	100	25	100
3 bedroom apartment or greater	120	50	120

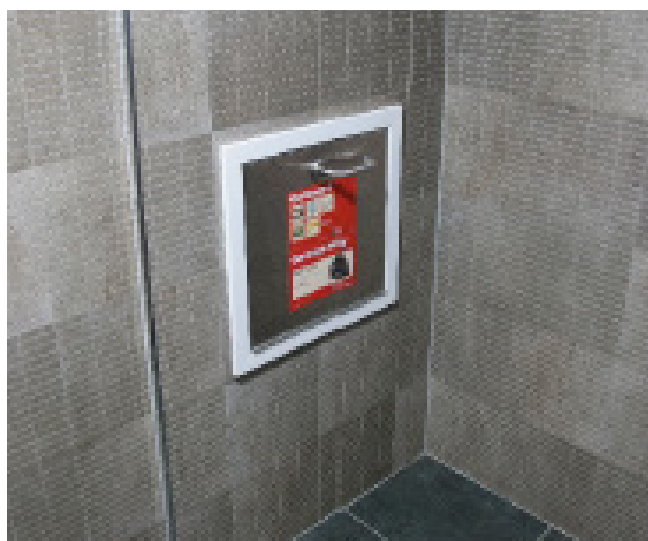
**Note:** Waste generation rates are dependent on the number of residents within the dwelling

**Source:** Better practice guide for resource recovery in residential developments, NSW EPA, 2019

# ***WASTE TRANSFER & COLLECTION*** INFRASTRUCTURE

## Waste chutes

Residential flat buildings are required to install dual chute systems for recyclable and residual waste streams. Access to the chute system is required to be provided on each residential level of the building. Each residential level should also include a room or waste cupboard next to the chute access for the storage of a 240L recycling bin for the placement of recyclable items that are irregular shape or cannot fit in the chute.



**Figure 1:** Example of waste chute inlet in a residential flat building

**Source:** Better practice guide for resource recovery in residential developments, NSW EPA, 2019

Waste chute design is to include:

- Chutes must not open onto any habitable or public space and doors must have an effective self-sealing system
- Chutes are to be completely enclosed in a fire rated shaft constructed of an approved material and fitted with sprinklers and must comply with the Building Code of Australia (BCA)
- Chutes, service openings and inlets are to be constructed of smooth, impervious and non-corrosive material that is capable of being cleaned.
- Inlets must be accessible to anyone with a disability and comply with AS1428 Design for access and mobility
- Clear signage is required on how to use the system and which materials are acceptable in the chutes
- Chute discharge outlet must have restricted access to prevent damage to equipment or injuries
- During collection empty bins must be placed at the base of the chute to allow residents access to the system at all times.

## Waste chute collection room

Each chute will deposit waste materials to a collection bin or container in a dedicated room within the residential flat building. The waste chute collection room will incorporate the following:

- A linear or circular carousal system under each chute
- Minimum 0.9m clearance around the linear or circular carousal system for bin manoeuvrability and system maintenance.
- 1.8m unobstructed clearance zone between the system and the access entrance to the room
- Floor space to accommodate two additional service bins for each chute
- The room is to be fully enclosed, walled and not permit through access to other on-site infrastructure
- Compliant with the BCA with the floor waterproofed, non-slip and sealed.
- The floor is to be graded to a central drainage point and connected to the sewer.
- Provision of an adequate water supply through a centralized mixing valve and hose cock.
- Provision of adequate lighting and ventilation in accordance with the BCA.

The waste chute collection room will need to accommodate the permanent storage of 2 service bins per chute to allow residents access to collection of all waste streams.

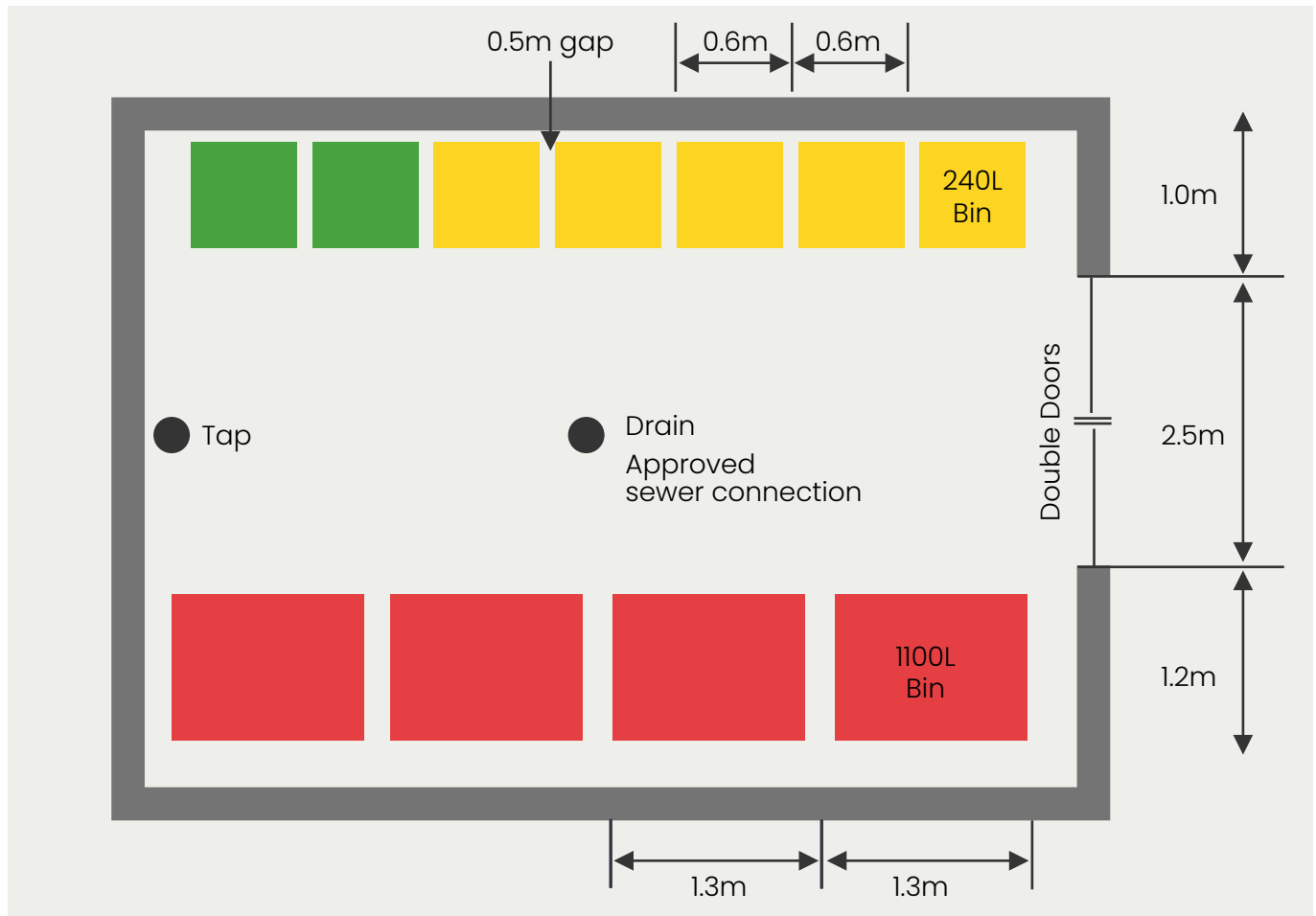
## Waste storage area

The residential flat building is to incorporate sufficient space for a waste storage area to accommodate the nominated number and sizes of bins required for the volume of waste material generated between collection periods. The waste storage area may also be designed to be utilised in connection with the waste chute collection room.

The waste storage area is to incorporate the following:

- Sufficient floor space for the required number of bins with a 0.2m space between bins to allow maneuvering.
- Unobstructed 1.8m clearance zone between the stored bins and the waste storage area entrance to permit access and movement.
- Located in close proximity to the waste collection point.
- Fully enclosed and walled with through access to other on-site infrastructure not permitted.
- Compliant with the Building Code of Australia (BCA) with the floor waterproofed, non-slip and sealed.
- The floor is to be graded to a central drainage point and connected to the sewer.
- Provision of an adequate water supply through a centralized mixing valve and hose cock.
- Provision of adequate lighting and ventilation in accordance with the BA.
- Flexible design of the waste storage area should also be considered including
  - Additional floor space for extra bins or containers to capture additional separated waste streams
  - Minimising potential obstacles within the waste storage area that would limit bin size
  - Increasing width of access or doorways to allow for potential change in bin size

**Figure 2** provides an example of a waste storage room with various sized bins



**Figure 2:** Example of waste storage area with a number of different sized bins.

**Source:** Better practice guide for resource recovery in residential development, NSW EPA, 2019

## Bulky waste storage area

The residential flat building is to provide a storage area for bulky waste items that are not collected within the normal waste service including mattresses and furniture. The bulky waste storage area must be allocated as 0.5m<sup>2</sup> for each dwelling, and may be included as individual storage areas/cages or in a communal bulk waste storage location.

If a communal waste storage area is provided within the residential flat building the area is to incorporate the following:

- The area is to be readily accessible to all residents with a suitable dual door access with minimum width of 1.5m to allow easy movement of large items.
- Compliant with the Building Code of Australia (BCA) with the floor waterproofed, non-slip and sealed.
- Located within close proximity to the waste collection point
- Provision of adequate lighting and ventilation in accordance with the BCA.
- Located at ground level or in a basement

The background is a solid green color with several white geometric shapes. A thin white line starts from the left edge and curves downwards and to the right. A larger, rounded white shape is in the top right corner. A large, light green shape is in the bottom left corner. The text 'WASTE COLLECTION' is centered in the middle of the page.

# ***WASTE*** COLLECTION

## Waste collection vehicle

The selection of waste collection vehicle will be dependent on the type of bin infrastructure utilised for the proposed development. If the applicant elects to use the Council waste collection service bins will be collected by Council's 12.5m heavy rigid side loading vehicle. Specifications for this vehicle are provided in Appendix A.

If the applicant elects a private waste collection service for the building waste collection vehicle specifications are outlined in Appendix C of the NSW EPA's 'Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities' and Appendix B of the NSW EPA's 'Better practice guide for resource recovery in residential developments'.

These waste collection vehicle specifications are to be used to determine access to the waste collection point within the building.

## Waste collection vehicle access

The waste collection vehicle must be able to safely and efficiently access the site and nominated on-site waste collection point. Access and egress to and from the building to public roads is to be supported by swept path models for the largest waste collection vehicle that could service the building. Swept path models for waste collection vehicles are outlined in Appendix D of the NSW EPA's 'Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities' and AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities. Access and egress from the building by the waste collection vehicles must be in a forward direction with a 0.5m unobstructed clearance either side of the vehicle.

The access, route of travel and waste collection point design is to be supported by a structural engineers report as part of the submitted Waste Management Plan. The report is to confirm all infrastructure, including pavement strength,

can support the waste collection vehicles 'gross weight'.

The route of travel to the waste collection point must include clearance for heavy rigid waste collection vehicle and meet the requirements of AS2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities. The route of travel is to be adequately paved and of sufficient strength to support the waste collection vehicle. The grades of entry and exit ramps must not exceed the capabilities of the waste collection vehicle in accordance with AS2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities.

## Waste collection point

The nominated on-site waste collection point must have sufficient area for maneuvering of the waste collection vehicle with minimal need for reversing. The waste collection point is to be provided on the Site or Floor Plans and include swept path models for the nominated waste collection vehicle as outlined in Appendix D of the NSW EPA's 'Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities'. For rear loaded waste collection vehicles an unobstructed 2m loading zone is required behind the vehicle for loading of bins. A 0.5m side clearance is also required on either side of the vehicle.



The background is a solid green color. There are several white geometric shapes: a thin line on the left side that curves into a shape, and a larger, rounded shape in the bottom left corner. The text 'USEFUL RESOURCES' is centered in the upper half of the page.

# *USEFUL* RESOURCES

## Useful resources

NSW Department of Planning and Environment 2015, Apartment Design Guide,  
[Apartment Design Guide | Planning \(nsw.gov.au\)](#)

NSW EPA 2012, Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities,  
[Resources for local council waste and recycling operations \(nsw.gov.au\)](#)

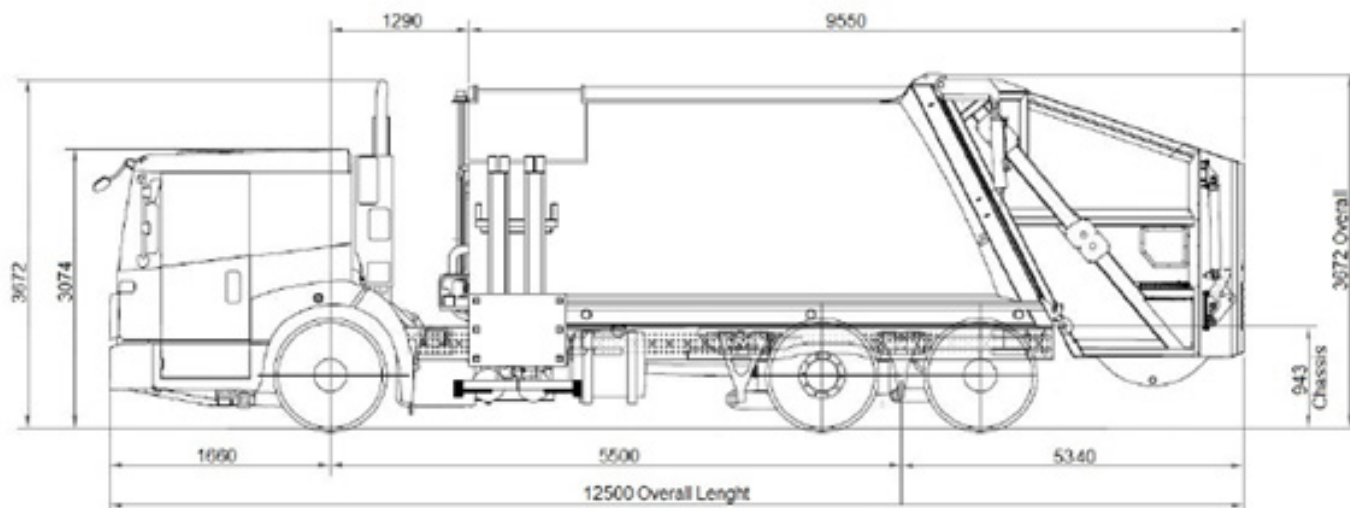
NSW EPA 2019, Better practice guide for resource recovery in residential developments,  
[Resources for local council waste and recycling operations \(nsw.gov.au\)](#)

# ***APPENDIX A***

## Council Waste Collection Vehicle Specification

The following specification is provided from AS 2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities for a 12.5m heavy rigid side loading waste collection vehicle.

VEHICLE SPECIFICATION	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 7m of travel
Gross weight (max tonnes)	28
Capacity (m <sup>3</sup> )	24
Front chassis clearance	130
Rear chassis clearance	160





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