

R7 | Residential Design Element Design for Waste

Overview

The appropriate storage and removal of domestic rubbish, recycling and food scraps is an essential consideration for multi-unit residential developments (generally four or more dwellings). Waste requirements should be considered early in the design process, as they can play an important role in determining the layout and design of a development.

Failing to provide for the easy storage and removal of waste can create a major source of inconvenience and annoyance for residents, as well as increase the ongoing running costs of a development.

For additional information or enquiries relating to waste storage and removal contact Auckland Council's Waste Solutions Team - wasteplanconsent@aucklandcouncil.govt.nz

Find more Design Elements at www.aucklanddesignmanual.co.nz

Purpose

This Residential Design Element is a non-statutory design guide created to assist developers, designers and planners achieve policy outcomes under the Auckland Unitary Plan (AUP). This guide provides assistance in achieving the following AUP policies:

	Mixed Housing Suburban Zone	Mixed Housing Urban Zone	Terrace Housing & Apartment Buildings Zone
Policies	H4.3(2)(c) H4.3(3)(b) H4.3(5)(b) H4.3(10)	H5.3(2) H5.3(3)(b) H5.3(5)(b) H5.3(10)	H6.3(2) H6.3(3)(b) H6.3(6)(b) H6.3(10)
Assessment Criteria	H4.8.2(2)(f)(iv)	H5.8.2(2)(e)(iv)	

The following regulations are also applicable to the storage and removal of solid waste:

Solid Waste Bylaw (2012)

Auckland's statutory requirements for the separated storage, collection and disposal of refuse, recycling and organic waste, and the provision of waste management plans.

New Zealand Building Code (2004) - Clause G15 Solid Waste

Building code compliance requirements for the storage and disposal of waste.

Auckland Waste Management and Minimisation Plan (2018)

Requires all rateable dwellings to pay a rates contribution towards Auckland Council waste disposal services, regardless of whether they use Auckland Council's waste collection services or a private waste collection service*.

*Developments within the former Auckland City Council area may opt out of Auckland Council waste disposal rates contributions.

1.0 Onsite Waste Storage

1.1 Overview

All dwellings are required to be provided with an area for the storage of main rubbish, recycling and food scrap bins (as per the [Solid Waste Bylaw](#)). This area must be large enough to store all waste produced onsite.

Three waste storage options are available:

Individual waste bins stored on individual sites

Each dwelling has an onsite area allocated to the storage of its waste, recycling and food scrap bins.



Individual waste bins stored communally

Each dwelling stores its individual waste, recycling and food scrap bins in a communal bin storage area (together with the bins from other dwellings).



Shared waste bins

Dwellings do not have individual waste bins, instead they share waste, recycling and food scrap bins, which are stored in a communal area.



Each bin storage option requires different design considerations. The development type, site characteristics and waste collection methods available will all play an important role in deciding which storage option is utilised.

1.2 Short Term Waste Storage

Every residential dwelling's kitchen should be designed with sufficient bin space for the short-term storage of separated rubbish, recycling and food scraps.

1.3 Individual Waste Bins Stored on Individual Sites

A. Size

Approximately 1.4m² of space should be allocated per residential dwelling for the joint onsite storage of refuse, recycling and food scrap bins*.



Attractive waste bin screening hides bins from view and contributes to an attractive front yard and streetscape. The provision of continuous paving would make moving bins to collection points easier.

B. Location and Access

- i. Bins must be stored together in an onsite location that is easily accessible, allowing for the convenient transfer of waste from within the home. Optimal waste bin storage locations include within the garage or side yards.
- ii. Access to waste bins should not require the crossing of unpaved or unsealed areas.
- iii. Waste bin storage should be on a flat and paved or sealed surface.
- iv. Waste bin storage areas should be located and designed to allow bins to be moved to waste collection points as conveniently and efficiently as possible. This should not require bins to be transported through dwellings or over unpaved surfaces, stairs or steep gradients.
- v. The location of waste bins should consider the impact of odours. Avoid locating bins in areas where odours may enter habitable areas of buildings or outdoor living areas. Ensure bin storage areas can be well ventilated.

*Refer to pg. 13 for bin size specifications.

C. Design

- i. Outdoor waste bin storage areas should be of a durable construction and integrate into and compliment the overall design of the development.
- ii. Waste bins should be screened from the view of any surrounding dwellings, outlook areas, outdoor living spaces, communal areas, accessways, roads and parks.
- iii. Any waste storage screening should be designed to allow waste to be easily inserted into bins.



Attractive waste bin screening hides bins from view and contributes to an attractive front yard and streetscape. The provision of continuous paving would make moving bins to collection points easier.

1.4 Individual Waste Bins Stored Communally

A. Size

Approximately 1.4m² of space should be allocated per residential dwelling for the joint storage of refuse, recycling and food scrap bins*.

Additional space may be required to ensure residents are able to easily access their individual bins. Consult the [Solid Waste Calculator**](#) to calculate development specific waste storage space requirements.

B. Location and Access

- i. Waste bins must be stored in an easily accessible location, allowing for the convenient transfer of waste from within the dwelling.

The New Zealand Building Code (G15/AS1 (2.0.1)) specifies a maximum carry distance of 30m for occupants transferring waste from dwellings to waste bins. For larger developments this may mean that multiple waste storage areas are required.

*Refer to pg. 13 for bin size specifications

** <http://www.aucklanddesignmanual.co.nz/resources/tools#/resources/tools/swc>

- ii. Access to waste bins should not require the crossing of unpaved or unsealed surfaces.
- iii. Waste bin storage should be on a flat and paved or sealed surface.
- iv. Waste bin storage areas should be located and designed to allow bins to be moved to waste collection points as conveniently and efficiently as possible. This should not require bins to be transported through dwellings or across unpaved surfaces, stairs or steep gradients.
- v. The location of waste bins should consider the impact of odours. Avoid locating bins in areas where odours may enter habitable parts of buildings or outdoor living areas. Ensure bin storage areas can be well ventilated.

C. Design

- i. Outdoor waste bin storage areas should be of a durable design and integrate into and compliment the overall design of the development.
- ii. Waste bins should be screened from the view of any surrounding dwellings, outlook areas, outdoor living spaces, communal areas, accessways, roads and parks.
- iii. Any waste storage screening should be designed to allow waste to be easily inserted into bins.
- iv. Storage areas should be well lit to ensure easy access and safety for users at night.
- v. Waste bin storage areas and associated screening should use durable materials and include an easily accessible tap (with appropriate drainage to the waste water network) for easy cleaning and maintenance.

D. Management

- i. Consider how waste storage areas will be managed and maintained. Communal waste bin storage areas can be subject to vermin, neglect and rubbish dumping. Appropriate management systems (such as a body corporate or residents' society) must be established to address these potential issues.

1.5 Communal Waste Bins

A. Size

An area must be provided for the combined storage of rubbish, recycling and food scrap bins (as per the Solid Waste Bylaw). This area must be large enough to store all waste produced onsite.

Use Auckland Council's [Solid Waste Calculator*](#) to generate development specific waste storage requirements.

B. Location and Access

- i. Waste bins must be stored in an easily accessible location, allowing for the convenient transfer of waste from within dwellings.

The New Zealand Building Code (G15/AS1(2.0.1)) specifies a maximum carry distance of 30m when transferring waste from dwellings to waste bins. For larger developments this may mean that multiple waste storage areas are required.

- ii. Waste bin storage may be provided for in a suitable outdoor area, or within the building (generally within the basement or a dedicated waste room).
- iii. Waste bin storage should be on a flat and paved or sealed surface.
- iv. Waste bin storage areas should be located and designed to allow bins to be moved to waste collection points as conveniently and efficiently as possible. This should not require bins to be transported through dwellings or across unpaved surfaces, stairs or steep gradients.
- v. The location of waste bins should consider the impact of waste bin odours. Bin storage areas should be well ventilated, so care must be taken to locate bins in areas where odours will not enter habitable parts of buildings or outdoor living areas.



An example of an attractive communal waste bin storage area that has been well integrated into the design of the site. The design of the storage area doors could be improved to allow easier access and better screen bins from sight.

* <http://www.aucklanddesignmanual.co.nz/resources/tools#/resources/tools/swc>

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- iii. Storage areas should be well lit to ensure easy access and safety for users at night.
- iv. Ensure bin storage areas are well ventilated.
- v. Use durable materials and include an easily accessible tap (with appropriate drainage to the waste water network) for easy cleaning and maintenance.

D. Management

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Communal waste bins are stored in an attractively designed, easily accessible communal waste area. Access is via an easily operable sliding door. The walls of the storage area provide good levels of ventilation, but could be opaquer to lessen the visibility of waste bins.

1.6 Getting it Right



Storage areas for waste bins have not been provided, forcing residents to store bins where they can, detracting from the look and feel of the neighbourhood.



The height of waste bin screening is too short, failing to screen bins from view. Moving waste bins for collection also requires bins to be dragged over garden beds and pebbled areas.



Screened waste bin storage is provided at the rear of this terraced housing block, however the storage area is an inconvenient distance from the waste collection point. Residents instead opt to store bins in the front yard, where they detract from the look and feel of the street.

2.0 Waste Collection

2.1 Overview

Waste can be collected from a development through either kerbside (waste bins are wheeled onto the street berm for public collection) or onsite (waste is collected by waste trucks from within the site) waste collection services.

Kerbside waste collection is only possible if there is enough space on the street berm for the placement of bins. If kerbside collection is not possible or preferable, then sufficient space must be provided to allow for waste to be collected onsite.

2.2 Kerbside Waste Collection

A. Collection Requirements

Kerbside waste collection requires the use of individual waste bins for each dwelling and is only possible if there is a space on the street berm that:

- i. is located directly in front of the site being serviced.
- ii. has a clear area of approximately 1.4m² per residential dwelling being served (to allow for the placement of bins on collection days)*.
- iii. has a slope of less than 10 degrees (to avoid the likelihood of bins tipping).
- iv. does not result in bins obstructing driveways or being located on the footpath.
- v. is not located under the canopy of street trees.
- vi. is not located on raingardens.

B. Resource Consent Requirements

Where a resource consent application proposes kerbside waste collection a scale plan must be provided demonstrating compliance with 2.1.A (above).

2.3 Onsite Waste Collection

A. Bin Placement

Onsite waste collection requires the provision of designated onsite areas for the placement, manoeuvring and loading of waste bins onto waste collection vehicles.

B. Waste Collection Vehicle Access

Access and manoeuvring for waste collection vehicles must be provided for. Waste vehicle access considerations include:

- i. the width of the accessway.
- ii. truck turning requirements (a 15m kerb to kerb turning circle is generally a minimum for an 8m truck, larger trucks can require up to 22.4m).
- iii. gradients (rubbish trucks have a high centre of gravity and are susceptible to tipping). Maximum gradients are generally no more than 42.2% for an 8m truck and 33.8% for a 10m truck.
- iv. ensuring onsite parking and vegetation will not impact truck access, manoeuvring or the loading of waste.
- v. the weight of waste removal vehicles, driveways need to be engineered to accommodate a 20-tonne truck.
- vi. the direction from which waste will need to be loaded into vehicles (i.e. left side, right side or rear loading).

All figures above are indicative. Discuss waste vehicle access and collection requirements with waste collection providers early in the design process to ensure collection is feasible.

3.0 Resource Consent Waste Information Requirements

The following solid waste information should be submitted with resource consent applications proposing 4 or more dwellings:

Space

- i.** Number of units/dwellings
- ii.** Estimated refuse generated
- iii.** Estimated recyclables generated
- iv.** Describe the equipment and system to be used for managing refuse
- v.** Describe the equipment and system to be used for managing recyclables
- vi.** Describe the equipment and system to be used for managing food scraps
- vii.** Provide dimensions and area (m²) of waste bin storage areas and show location on plan

Amenities

- i.** Describe how associated noise will be minimised
- ii.** Show how waste storage areas will be ventilated (if in a confined or enclosed area)
- iii.** Describe the facilities for washing bins and waste storage areas
- iv.** Describe any features to prevent vermin in waste storage areas
- v.** Describe measures for protecting waste equipment from theft or vandalism
- vi.** Show design measures taken to ensure storage areas are aesthetically consistent with rest of the development

Access

- i.** Show in plan access routes between dwellings and waste storage facilities (max carry distance 30 m – NZ Building Code G15)
- ii.** Show in plan how collection vehicles will access waste facilities: tracking, turning, etc
- iii.** Describe access arrangements if the development has a private road

Management

- i.** Describe transfer of waste between waste storage areas and collection vehicles
- ii.** State who will be responsible on site for waste-related issues and management

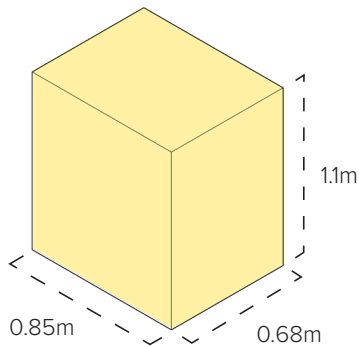
4.0 Waste Bin Dimensions

The following bin size specifications are for Auckland Council's largest waste bins and are recommended for all 3+ bedroom dwellings utilising public kerbside waste collection.

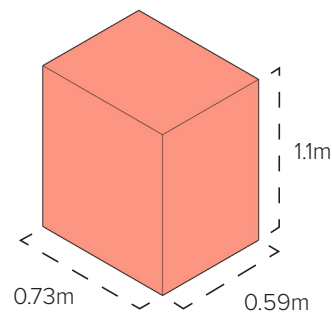
Private waste collection bin size requirements will depend on the frequency of collection.

Refer to the [Solid Waste Calculator*](#) to determine development specific waste bin requirements.

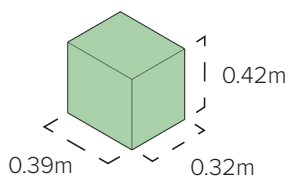
360l Recycling Bin



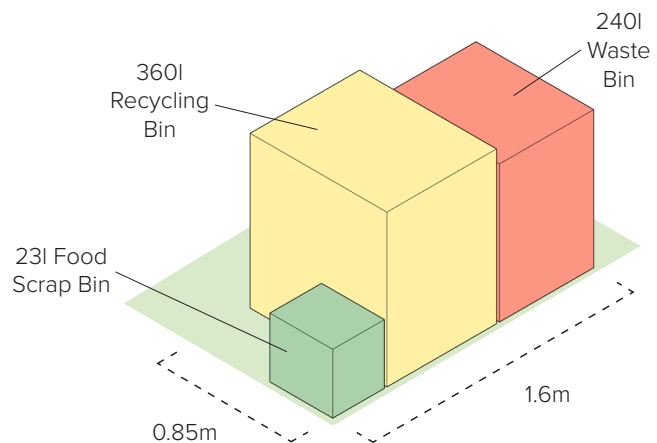
240l Waste Bin



23l Food Scraps Bin



Total Waste Bin Storage Area (1.4m²)



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