

WASTE MANAGEMENT GUIDELINES

COMMERCIAL, INDUSTRY
& COMMUNITY FACILITIES





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.

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INTRODUCTION

Introduction

Waste management practices will vary greatly at premises operated for commercial, industrial or community-related uses. This variation will be based on the nature of the operation, materials handled as part of the operation and/or manufacturing processes undertaken. However, appropriate identification of how waste will be managed and collected on-site will assist the business or operation to minimise waste products.

This guideline provides general guidance to develop a waste management system for the following landuses.

a. Commercial premises including business premises, office premises and retail premises

This also applies to the following landuses:

- Amusement centres
- Entertainment facilities
- Function centres
- Highway service centres
- Industrial retail outlets
- Registered clubs
- Restricted premises
- Service stations
- Sex service premises
- Veterinary hospitals
- Wholesale supplies

b. Industry – general industry, light industry and heavy industry

This also applies to the following landuses:

- Transport depot
- Truck depot
- Vehicle body repair workshops
- Vehicle repair stations

c. Commercial operations associated with agriculture including

This also applies to the following landuses:

- Farm experience premises with function and conference facilities
- Farm gate premises including cellar door premises and food and drink premises located on the existing commercial farm

d. Storage premises including self-storage units and the following specific landuses

- Depots
- Warehouse or distribution centres
- Local distribution premises



e. Community and recreation related premises including the following specific landuses

Landuse

- Early education and care facility
- Community facility
- Information and education facilities
- Place of public worship
- Public administration buildings
- Research stations
- Respite day care centres
- Environmental facilities
- Recreation facilities (indoor)
- Recreation facilities (outdoor)

Type

- Centre-based child care facility
- School-based child care

Waste Management Plan

All proposed residential commercial and industrial premises 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

New commercial and industrial development is required to provide waste collection services to the proposed premises by the owner of the property. The waste management system will need to be integrated into the overall design of the proposed development with waste storage and collection points located on-site. To ensure waste collection can be undertaken safely and efficiently the waste collection vehicle will need to enter and exit the site in a forward direction.

Waste generation

Recyclable and residual waste

Waste generation rates from commercial and industrial operations will vary based on the type of operation. Waste generation rates for various commercial operations have been provided in Appendix A of this guideline and should be used to determine the size and number of bins required for the proposed operation. Appendix A has been adapted from:

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

Premises types not provided in Appendix A will require supporting documentation providing estimates of the volume of recyclable and residual waste streams from the proposed operation.

Other Waste Types

Depending on the operations of the commercial, industrial or community-related use land types a variety of waste streams may be generated at the premises. This may include liquid, hazardous or restricted waste under the Protection of the Environment Operations Act (Waste) Regulation 2014.

Each waste management plan is required to submit supporting documentation providing estimates of the volume of the waste streams generated as a result of the proposed operation or facility

Bin infrastructure

All premises 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 proposed development. Operations involved in food production and preparation, or have a proportion of organic waste in their waste stream, should provide separate bin storage.

A variety of bins are available for the storing, handling and collection of waste in commercial and industrial premises. The selection of bin infrastructure is dependent on the types of waste material to be handled and the building from which it is collected.

Mobile 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 industrial or commercial premises.

Table 1: Mobile waste bin dimensions

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

Bulk bins are larger than mobile waste bins and are typically serviced by ‘front-lift ‘waste collection vehicles. Table 2 provides the typical dimensions of bulk bins to enable sizing of the waste storage area for the proposed industrial or commercial premises.

Table 2: Bulk waste bin dimensions

BIN CAPACITY (L)	HEIGHT (MM)	DEPTH (MM)	WIDTH (MM)	FOOTPRINT AREA (M ²)
1.5	1190	1080	2070	2.23
2	865	1400	1830	2.6
3	1225	1505	1805	2.7
4.5	3750	1605	1805	2.9

Source: Appendix B Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities, NSW EPA, 2012.

Development that includes multiple units or tenants is to provide an appropriate number of bins to meet the recycling and waste recycling requirements for each tenant. Mobile waste bins may be provided for each tenant and wheeled to a consolidated or communal waste storage area within the development.

WASTE MANAGEMENT SYSTEM

Waste management system

Internal waste storage area

Commercial and industrial premises should provide appropriate waste systems, including waste cupboards or identified bins, within the internal space of the premises to facilitate separation of recyclable and residual waste materials by staff. Sufficient space for the storage of at least one day's worth of recycling and residual waste are to be provided and identified on floor plans.

Developments with multiple units or tenancies are to provide internal waste systems for each unit/tenancy. If a system is available for food organics collection, then sufficient space should also be allocated for separation of food organic in a separate bin/container.

Childcare facilities

Childcare facilities can generate high volumes of nappy waste, recyclable waste and food waste. While sufficient internal waste storage space should be provided to hold a single day's waste volume internal waste storage should be appropriately positioned within the facility for efficient operation and minimisation for waste stream contamination

For design of internal spaces refer to the Department of Planning, Industry and Environment's Child care planning guideline.

Waste storage area

The design of the commercial or industrial building needs to incorporate sufficient space for the selected size and number of bins required for the volume of waste material generated between collection periods.

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

Some commercial or industrial premises will also require waste storage area space for specialized waste streams such as medical, sharps, chemicals or liquid wastes such as cooking oils. A suitable sized space must be allocated to the storage of these waste streams and be kept secured and accessible to staff members and specific waste collection contractors only.

Suitable space is to be provided near the waste storage area (or near each tenancy) to store re-usable commercial items such as crates, pallets, kegs etc so that storage in a public place is completely avoided.

Figure 1 provides an example of a waste storage room with various sized bins

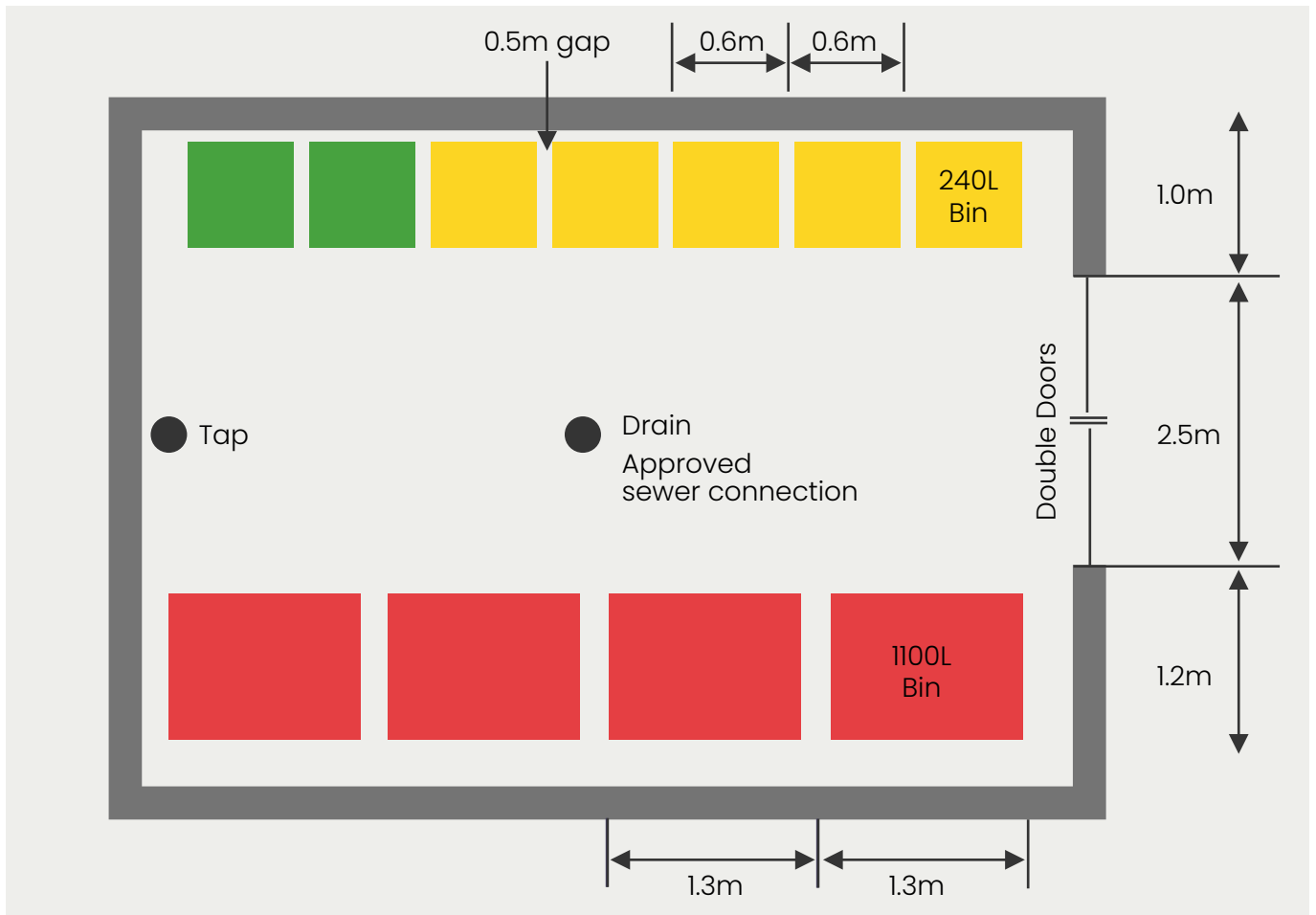


Figure : Example of waste storage area with a number of different sized bins.

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



Commercial premises

- Retail premises with high volumes of cardboard should consider allocation of space within the waste storage area for a cardboard compactor or volume reduction equipment.
- If the retail premises includes more than 2000m² of retail space and area for a cardboard compactor/baler is to be provided in close proximity to the waste storage area.

Additional space within the waste storage area for handling/storage of plastic wrapping should be allocated.

Communal waste storage areas

Developments with multiple tenancies may require communal waste storage facilities in the following circumstances

- Where the development design cannot allow for all tenancies to have ready access to a waste collection point
- Where site characteristics restrict entry of vehicles to each collection point

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

The communal waste storage area is to be designed to enable each separate tenancy to be provided with designated and clearly identified space for the housing of containers for the quantity of waste and recyclable material generated.

Buildings containing more than three storeys should be provided with a method for transporting waste from each level to the waste storage area. This may include a goods lift or waste chute system.

The background is a vibrant green with abstract white shapes. A thin white line starts from the left edge and curves upwards 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.

WASTE COLLECTION

Waste management system

Waste collection vehicle

The selection of waste collection vehicle will be dependent on the type of bin infrastructure utilised for the proposed development.

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 proposed development 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'
- Section 5 of AS/NZS 2890.2 Parking facilities, Part 2:Off-street commercial vehicle facilities.

The access/egress point from the site is to be designed with the following requirements:

- The waste collection vehicle must enter and exit the site in a forward direction
- A 0.5m unobstructed clearance either side of the waste collection vehicle
- Grades of entry/exit ramps must not exceed the capabilities of the waste collection

vehicle in accordance with Australian Standard AS2890.2 Parking Facilities: Off-Street Commercial Vehicle Facilities

- Height clearance must be sufficient for the entry of the waste collection vehicle, with a general minimum clearance of 3.8m.

The WMP submitted with a development application is to include a structural engineer's report confirming the following:

- The design of the access driveway, or ramp, to the site is of sufficient strength to support the weight of the waste collection vehicle
- The route of waste collection vehicle travel (or circulation roadway), including pavement, are of sufficient strength to support the weight of the waste collection vehicle
- The waste collection point (or service area) is of sufficient strength for movement and maneuvering of the waste collection vehicle.

Note: When assessing pavement strength, the area/pavement will need to support the waste collection vehicle 'gross weight'.

Waste collection point

The waste collection point for the proposed commercial or industrial premises is to be appropriately located to allow easy collection. The waste collection point is to be located:

- Away from intersections, roundabouts or slow-points such as pedestrian crossings
- Away from busy roads or narrow lanes
- Free from obstructions such as awnings, trees or overhead structures, wires or services
- Away from public areas
- Away from driveways, loading areas or parking bays
- Where normal operations of the premises will not be blocked or impeded
- Where there is clear vision of traffic as the collection vehicle leaves the 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 a waste collection vehicles 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 and 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.

Bin transfer

If the waste storage area and waste collection point are in separate locations bins will be required to be moved between the locations. The bin carting route between the two locations for bins smaller than 660L is to be designed with consideration of the following:

- Free of stairs or kerbs along the route
- Grades along the route should not exceed 1:14
- The route distance should not exceed 75m.

Bins between 660L and 1.5m³ should not be moved more than 5m between the waste storage area and waste collection point while movement of bins greater than 1.5m³ should be avoided.

APPENDIX A

Appendix A.

All development applications to be submitted with accompanying 'Plan of Operations', outlining proposed; Bin Infrastructure Sizes, Collection Frequency, Waste Collection Vehicle Dimensions, Hours of Collection and Access to Waste Collection Room.

Appendix A: Waste generation rates from commercial premises

TYPE OF PREMISES FOOD PREMISES	RESIDUAL WASTE (L PER 100M2 FLOOR SPACE/DAY)	RECYCLING (L PER 100M2 FLOOR SPACE/DAY)	COMMENT
Bakeries	300	150	
Butcher	313	63	
Cafes	100	120	
Greengrocer	675	75	If separate organics collection then residual waste reduced
Grocery and convenience stores	120	240	
Hotels/pubs (without meals/ food service)	50	50	Calculate restaurant separately Calculate any accommodation separately
Restaurants	400	280	
Retail- Food (Large/medium retailer)	520	410	
Retail – Food (small retail)	150	100	
Seafood retail	313	62	
Takeaway (with sit-down area)	625	300	
Takeaway (food preparation only)	150	75	



TYPE OF PREMISES COMMERCIAL & COMMUNITY FACILITIES	RESIDUAL WASTE (L PER 100M2 FLOOR SPACE/DAY)	RECYCLING (L PER 100M2 FLOOR SPACE/DAY)	COMMENT
Book and audio-visual shops	38	116	
Chemist	20	45	
Childcare centre	5	5	Per child
Cultural and recreational services (museums, theatres, cinemas)	5	10	Based on floor space for patrons (seating areas for theatre)
Dry cleaners	19	6	
General services	108	20	
Gymnasiums	20	15	
Hair and Beauty	63	50	
Licensed clubs (with gaming)	50	50	Calculate restaurant separately Calculate any accommodation separately
Motels	10	5	Per guest room
Newsagents and stationary shops	20	120	
Office-based retail eg travel agents	30	40	
Offices	10	15	
Pre-school	10	15	Per student/child
Retail – chain stores, clothing, Manchester etc	5	20	
Retail – non-food	50	100	
Retail – homewares and kitchenware	20	120	
Retail – variety gift stores	20	120	
Shopping centres (common floor space areas)	20	18	
Showrooms	10	25	
Supermarkets	240	300	
Variety gift shop	19	73	
Wholesale trade	100	50	



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