

WASTE MANAGEMENT GUIDELINES

HEALTH SERVICES & ANIMAL
HEALTH 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

Facilities providing health services require a multi-layered waste management system to assist with the variety of waste streams that result from the operation of these premises. In addition to standard recyclable and residual waste streams health service facilities are required to manage, dependant on the scope of services within the facility,

- Clinical waste
- Sharps waste
- Cytotoxic waste
- Pharmaceutical waste
- Radioactive waste

These waste streams require appropriate storage and collection to prevent transfer of pathogens or infectious substances or manage other health-related impacts. These waste streams are also associated with facilities that undertake health animal health management.

This guideline provides general guidance to develop a waste management system for the following health service facilities

- a. Community health service facilities
- b. Health consulting rooms
- c. Hospital
- d. Medical centre
- e. Patient transport facilities

The guideline also applies for waste management systems for residential care facilities listed within the seniors housing landuse.

Guidance is also provided to develop a waste management system for landuses associated with animal health management including

- a. Animal boarding or training establishments
- b. Veterinary hospitals

Waste Management Plan

All proposed health service facilities and animal health management facilities 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. Section 10 of AS 3816: 2018 Management of clinical and related wastes provides guidance on the preparation of waste management plans for various waste streams associated with the facilities outlined in this guideline.

Waste collection service

Waste collection services for new health service facilities or animal health management facilities are required to be provided by the owner or operator of the premises. The proposed waste management system is required to be integrated into the overall design of the 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.

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WASTE GENERATION

Recyclable and residual waste

Waste generation rates from health service facilities and animal health management facilities will vary based on the size of the facility and the types or service provided within the development.

Average recyclable and residual waste generation has been provided to Table 1 and each proposed facility should account for waste generation from each area of the development.

Table 1: Recyclable and residual waste generation rates from health service and animal health management facilities

PART OF FACILITY	RECYCLING (L/100M ² /DAY)	RESIDUAL (L/100M ² /DAY)	COMMENT
Medical rooms	20	10	Rate is per consulting room
Offices	10	15	
Optical	18.8	31.3	

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

Waste generation rates from **Table 1** should be used to determine the size and number of bins required for recyclable and residual waste for the proposed facility. If the premises type is not provided in **Table 1** supporting documentation providing estimates of the volume of waste streams from the proposed operation is to be provided in the submitted WMP.

Special waste and radioactive waste

Health service facilities and animal health management facilities may generate wastes classified as special waste under the Protection of the Environment Operations Act (Waste) Regulation 2014. Special waste includes clinical and related waste that involves

- Clinical waste including pathology and anatomical waste
- Pharmaceutical, drug and medicine waste
- Cytotoxic waste
- Clinical sharps waste

Health service facilities and animal health management facilities may also generate waste classified as containing radioactive material through services provided at the site.

Each waste management plan is required to submit supporting documentation providing estimates of the volume of the waste streams for special waste and radioactive waste generated as a result of the proposed facility.

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BIN INFRASTRUCTURE

Recyclable and residual waste

All health service facilities and animal health management facilities 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. Facilities that include food production and preparation, such as hospitals, should provide separate bin storage for organic/food waste.

A variety of bins are available for the storing, handling and collection of recyclable and residual waste streams in health service facilities and animal health management facilities. The selection of bin infrastructure is dependent on the types of materials to be handled and the building design.

Mobile bins can range in volume and size and are typically collected by 'rear-lift' waste collection vehicles. Table 2 provides the dimensions of mobile bins to enable sizing of the waste storage area for the proposed health service facility or animal health management facility.

Table 2: Mobile waste bin dimensions

BIN CAPACITY (L)	HEIGHT (MM)	DEPTH (MM)	WIDTH (MM)	FOOTPRINT AREA (M2)
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 3** provides the typical dimensions of bulk bins to enable sizing of the waste storage area for the proposed health service facility or animal health management facility.

Table 3: Bulk waste bin dimensions

BIN CAPACITY (M ³)	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.

Special waste and radioactive waste

Special wastes and radioactive wastes are required to be separated into distinct containers or bins for collection as required by the Protection of the Environment Operations Act (Waste) Regulation 2014. Waste bins or receptacles are to be clearly labelled and colour coded for each identified waste stream as required by Australian Standard AS 3816 2018: Management of clinical and related waste.

The submitted waste management plan is to provide the size and number of bins/receptacles for each waste stream applicable for the proposed facility. **Table 2** provides sizing of bins/receptacles to enable sizing of areas for storage of these waste streams. Supporting documentation can also be provided for alternative bins/receptacles for these waste streams if not provided in **Table 2**.

WASTE MANAGEMENT SYSTEM

Waste storage area

Internal Waste Storage Area

Recyclable and residual waste

Waste storage areas are to be identified on a Site Plan and located:

All health service facilities and animal health management facilities are to 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.

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.

Special waste and radioactive waste

Internal storage of special waste or radioactive waste must be incorporated into the design of the building as required by Australian Standard AS 3816 2018: Management of clinical and related waste. Any internal storage receptacle/bin must be marked, labelled and placarded as required by the Australian Dangerous Goods Code and Table 2 of AS 3816 2018: Management of clinical and related waste.







WASTE	BODY COLOUR	LID COLOUR	MINIMUM MARKINGS IN ADDITION TO DANGEROUS GOODS MARKINGS
Clinical waste not requiring incineration	Yellow	Yellow	 "Clinical Waste" and "Contains GMOs" (if applicable)
Sharps not contaminated with Cytotoxic material	Yellow	Not specified	 Biohazard symbol and the word "sharps"
Sharps contaminated with Cytotoxic material	Purple	Not specified	 Cytotoxic waste
Clinical and related - incineration	Yellow	Orange	 Clinical and related waste for incineration
Category A infectious waste	Yellow	Orange	 Clinical and related waste for incineration
Cytotoxic waste (excluding sharps)	Purple	Purple	 Cytotoxic waste
Pharmaceutical waste	Yellow	Orange	Pharmaceutical waste

Table 2: Rigid receptacle colours and markings

WASTE STORAGE AREA

Waste storage area

The design of the health service facility or animal health management facility 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

Special waste and radioactive waste

The waste storage area for special waste and radioactive waste can be combined with the above waste storage area or separated within the design of the building. The waste storage area must meet the requirements as above with the following additional requirements in accordance with Australian Standard AS 3816 2018: Management of clinical and related waste

- The waste storage area must be enclosed with a lockable door. Access is to be limited to authorised personnel
- All individual waste streams, whether types of special waste or radioactive waste, are to have dedicated areas with appropriate signage to avoid mixing of waste streams.

Waste pharmaceuticals are to be contained within a separate storage area to the waste storage area within the building. The storage area is to be enclosed and lockable with the same level of security for pharmaceuticals, drugs or medicines that are in use.

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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. 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 site.

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 facility 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 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.

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USEFUL RESOURCES

Useful resources

Animal Health Australia 2021, AUSVETPLAN Operational Manuals, Informing EAD Responses – [AUSVETPLAN - Animal Health Australia](#)

Government Architect of NSW 2023, Design Guide for Health, <https://www.planning.nsw.gov.au/government-architect-nsw/design-guidance/design-guide-for-health>

NSW Planning and Environment 2023, Seniors Housing Design Guide, <https://www.planning.nsw.gov.au/policy-and-legislation/housing/housing-sepp/seniors-housing>

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 \(nsw.gov.au\)](#)

NSW Health 2020, Clinical and Related Waste Management for Health Services, [Clinical waste management \(nsw.gov.au\)](#)

Safework NSW 2017, Cytotoxic Drugs and related Waste – Risk Management, https://www.safework.nsw.gov.au/_data/assets/pdf_file/0005/287042/SW08559-Cytotoxic-drugs-and-related-risk-management-guide.pdf





62-78 Vincent Street, Cessnock NSW 2325 | PO Box 152 Cessnock NSW 2325
02 4993 4100 | council@cessnock.nsw.gov.au | www.cessnock.nsw.gov.au