

Attachment 1
Site Waste Minimisation and Management

Guidelines for the preparation of site waste minimization and management

This guide was developed to complement the Woollahra Development Control Plan 2014, Chapter E5 - Waste management. It assists people who are intending submit a development application (DA) to include relevant information regarding minimising and managing waste.

All DAs are required to submit a Site Waste Minimisation and Management Plan (SWMMP). The SWMMP must address all phases of development, including demolition, construction and occupation of site/premises.

In addition to submission of an SWMMP, DA plans must clearly illustrate the proposed waste management facilities.

This guide contains:

1. A template for SWMMPs
2. A checklist of DA plan requirements
3. Information to assist applicants complete the SWMMP

Site waste minimisation and management plan

What is an SWMMP?

An SWMMP outlines measures to minimise and manage waste generated during demolition, construction and the ongoing use of the site/premises.

The SWMMP nominates:

- ▶ volume and type of waste and recyclables to be generated
- ▶ storage and treatment of waste and recyclables on site
- ▶ disposal of residual waste and recyclables
- ▶ operational procedures for ongoing waste management once the development is complete
- ▶ information to be shown on the DA plans

The SWMMP highlights the method of recycling or disposal and the waste management service provider.

SWMMP template

Part A - Project details

Applicant and project details (all developments)	
Applicant details	
Application no.	
Name	
Address	
Phone number(s)	
Email	
Project details	
Address of development	
Existing buildings and other structures currently on the site	
Description of proposed development	
<i>This development achieves the waste objectives set out in the Woollahra Development Control Plan 2014, Chapter E5 - Waste management. The details on this form are the provisions and intentions for minimising waste relating to this project. All records demonstrating lawful disposal of waste will be retained and kept readily accessible for inspection by regulatory authorities such as council, DECC or Work Cover NSW.</i>	
Name	
Signature	
Date	

Part B - Reuse, recycling or disposal of materials during demolition

	<i>Most favourable</i> Reuse	Recycling	<i>Least favourable</i> Disposal	
Type of waste generated	Estimated volume (m³) or weight (t)	Estimated volume (m³) or weight (t)	Estimated volume (m³) or weight (t)	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material				
Timber (specify)				
Concrete				
Bricks/pavers				
Tiles				
Metal (specify)				
Glass				
Furniture				
Fixtures and fittings				
Floor coverings				
Packaging (used pallets, pallet wrap)				
Garden organics				
Containers (cans, plastic, glass)				
Paper/cardboard				
Residual waste				
Hazardous/special waste e.g. asbestos (specify)				
Other (specify)				

Part C - Reuse, recycling or disposal of materials during construction

	<i>Most favourable</i> Reuse	Recycling	<i>Least favourable</i> Disposal	
Type of waste generated	Estimated volume (m ³) or weight (t)	Estimated volume (m ³) or weight (t)	Estimated volume (m ³) or weight (t)	Specify method of onsite reuse, contractor and recycling outlet and/or waste depot to be used
Excavation material				
Timber (specify)				
Concrete				
Bricks				
Tiles				
Metal (specify)				
Glass				
Plasterboard (offcuts)				
Fixtures and fittings				
Floor coverings				
Packaging (used pallets, pallet wrap)				
Garden organics				
Containers (cans, plastic, glass)				
Paper/cardboard				
Residual waste				
Hazardous/special waste (specify)				
Other (specify)				

Part D - Ongoing waste management

Applicants must estimate the total volume of waste the development will generate and its associate waste storage requirements. Table 1 below will assist the completion of Part D.

	Recyclables		Compostables	Residual waste	Other
	Paper and cardboard	Metals, plastic or glass			
Amount generated (L per unit per day)					
Amount generated (L per development per week)					
Any reduction due to compacting equipment					
Frequency of collections (per week)					
Number and size of storage bins required					
Floor area required for storage bins (m ²)					
Floor area required for manoeuvrability (m ²)					
Height required for manoeuvrability (m)					

Source: Model Waste Chapter 2008 - Department of Environment and Climate Change

Premises type	Waste generation	Recyclable material generation
Backpackers' accomodation	40L/occupant space/week	20L/occupant space/week
Boarding houses, Guest house	60L/occupant space/week	20L/occupant space/week
Hairdresser, beauty salon	60L/occupant space/week	Variable
Hotel or motel accommodation, registered clubs	5L/bed space/day 50L/100m ² bar area/day 10L/1.5m ² dining area/day	1L/bed space/day 50L/100m ² bar area/day 50L/100m ² dining area/day
Office premises	10L/100m ² floor area/day	10L/100m ² floor area/day
Restaurants or cafes Take away food and drink premises	10L/1.5m ² floor area/day 80L/100m ² floor area/day	2L/1.5m ² floor area/day Variable
Retail premises e.g. Butcher Delicatessen Fish Shop Greengrocer Showroom Supermarket	80L/100m ² floor area/day 80L/100m ² floor area/day 80L/100m ² floor area/day 240L/100m ² floor area/day 40L/100m ² floor area/day 240L/100m ² floor area/day	Variable Variable Variable 120L/100m ² floor area/day 10L/100m ² floor area/day 240L/100m ² floor area/day
Shop less than 100m ² floor area Shop greater than 100m ² floor area	50L/100m ² floor area/day 50L/100m ² floor area/day	25L/100m ² floor area/day 50L/100m ² floor area/day

Table 1: Waste and recycling generation rates

Part E - Waste avoidance from design to construction

Construction design

Outline how measures for waste avoidance have been incorporated into the design, material purchasing and construction techniques of the development. Refer to Table 2 below for potential reuse/recycling opportunities.

Materials

Lifecycle

Material	Reuse/recycling potential
Concrete	Can be reused for filling, levelling or road base
Bricks and pavers	Can be cleaned for reuse or rendered over or crushed for use in landscaping and driveways
Untreated timber	Can be reused as floorboards, fencing, furniture, mulched or sent to second hand timber suppliers
Treated timber	Can be reused as formwork, bridging, blocking and propping or sent to second hand timber suppliers
Doors, windows, fittings	Sent to second hand suppliers
Glass	Can be reused as glazing or aggregate for concrete production
Metals (fittings, appliances and wiring)	Removal for recycling
Synthetic rubber (carpet underlay)	Reprocessed for use in safety devices and speed humps
Significant trees	Relocated either onsite or offsite
Overburden	Power screened and used as topsoil
Garden waste mulched	Composted
Carpet	Can be sent to recyclers or reused in landscaping
Plasterboard	Removal for recycling, return to supplier

Table 2: Examples of demolition materials and potential reuse/recycling opportunities (based on the Combined Sydney Regional Organisation of Councils Model DCP 1997)

DA plan checklist

SWMMs must be accompanied by DA plans to allow application assessment. Plans must be to scale, clearly indicating the location of, and provisions for, the storage and collection of waste and recyclables during demolition, construction and during the ongoing operation of the completed buildings.

Refer to Chapter E5, section 5.2 to 5.7 of the Woollahra DCP for specific objectives and measures.

Demolition

The site plans detail/indicate:

	Tick Yes
Size and location of waste and recycling storage area	
Types and numbers of storage bins likely to be required	
Signage required to facilitate correct use of storage facilities	
Access for waste collection vehicles	
Areas to be excavated	

Construction

The site plans detail/indicate:

	Tick Yes
Size and location(s) of waste and recycling storage area(s)	
Types and numbers of storage bins likely to be required	
Signage required to facilitate correct use of storage facilities	
Access for waste collection vehicles	
Areas to be excavated	

Ongoing operation

The site plans detail/indicate:

	Tick Yes
Space	
Location and size of the temporary indoor waste and recycling space which accommodates at least one day's waste and recycling for each dwelling or and tenancy (See and waste generation rates in Table 1)	
Size and location(s) of waste and recycling storage areas (See 3.2.3 Bin sizes)	
Recycling bins are placed next to residual waste bins in the waste and recycling storage area	
Any additional facilities	
Location of individual or communal composting in residential development	
Waste chute, compaction unit and caged area for bulky goods (if required)	
Location of goods lift (if required)	
Waste and recycling collection point	
Access	
Space for accessing and manoeuvring bins/equipment in the waste and recycling storage area	
Access route(s) to deposit material in the waste and recycling storage area	
Access route(s) from the waste and recycling storage area to collection point (including distances)	
A grade of no more than 1:8 between the waste and recycling storage area and the collection point	
Clearance, geometric design and strength of internal access driveways and roads	
Direction of traffic flow for internal access driveways and roads	
Security to prevent public access to waste and recycling storage areas	
Amenity	
The location and type of any signage	
Construction details of waste and recycling storage areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions etc.)	

Information to assist applicants to complete the SWMMP

Implementing the SWMMP during demolition and construction - All buildings or structures

The following information can assist applicants to implement an SWMMP and maximise resource recovery and minimise residual waste during demolition and construction, per Chapter E5 Waste Management of the Comprehensive DCP.

When implementing the SWMMP you must:

- ▶ Clearly 'signpost' the purpose and content of the bins and storage areas.
- ▶ Implement measures to prevent damage by the elements, odour and health risks, and windborne litter.
- ▶ Promote separate collection bins or areas for the storage of residual waste.
- ▶ Arrange contractors for the transport, processing and disposal of waste and recycling. Ensure that all contractors are aware of the legal requirements for disposing of waste.
- ▶ Retain all records demonstrating lawful disposal of waste such as weighbridge dockets and invoices for waste disposal and recycling services.

Additional considerations during construction:

- ▶ Arrange for the delivery of materials so that materials are delivered 'as needed' to prevent the degradation of materials through weathering and moisture damage.
- ▶ Consider organising to return excess materials to the supplier or manufacturer.

Waste and recycling requirements for multi-unit development and commercial development

Waste storage areas and servicing arrangements:

Location and appearance

The development must integrate waste recycling and storage areas into its design, preferably:

- ▶ behind the front building line,
- ▶ in a basement within the main building envelope, and
- ▶ finished in a similar style and quality to external elements of the building.

Waste recycling and storage areas must be located and designed to reduce adverse impacts upon the inhabitants or any dwellings on the site and upon neighbouring properties. The room should minimise impacts associated with:

- ▶ The proximity of the room to any dwellings
- ▶ The visibility of the room
- ▶ Noise generated by any equipment
- ▶ Noise generated by the movement of bins into and out of the room
- ▶ Noise generated by collection vehicles accessing the site
- ▶ Odours

Separate waste recycling and storage areas are required for the residential and commercial component of mixed use development.

Size

Waste recycling and storage must comfortably contain all waste and recycling bins associated with the development.

Waste recycling and storage areas for commercial tenancies must comfortably contain separate general waste bins and recycling bins to cater for the quantity of waste generated at the rate described in Table 1 of the SWMMP template between collections.

To calculate the appropriate area based on the number of bins, see 3.2.3 Bin sizes below.

Surfaces

Floors must be smooth and durable.

Any floors or ramps associated with emptying bins must have a grade of no more than 1:8.

Durable walls or fences must enclose waste and recycling storage areas and extend to the height of any bins kept within it.

Access

Where bins cannot be collected from a kerbside location or from a temporary holding area located immediately inside the property boundary, the development design must allow access by waste collection vehicles used by the nominated waste contractor.

Driveways to be used by collection vehicles must be of sufficient strength to support such vehicles and provide a sufficient turning area.

Collection vehicles should be able to enter and exit the site in a forward direction.

Commercial development must provide convenient access from each tenancy to the waste recycling and storage area. Step-free access must be provided between the waste collection area and the storage area.

Waste recycling and storage areas must be inaccessible to the public and vermin proof.

The dimensions and weight of garbage trucks for domestic waste collection are provided in **Table 3** below.

Length	8.0 metres
Width	2.5 metres
Operational height	4.3 metres
Travel height	4.3 metres
Weight (vehicle and load)	22.5 tonnes
Weight (vehicle only)	13 tonnes
Turning circle	25.0 metres

Table 3: Garbage truck dimensions and weights

Doors and gates

Any doors/gates to waste recycling and storage areas must be durable. A sign should indicate whether the door/gate is to remain closed when the room is not being accessed

All doors/gates must be openable from both inside and outside the room, and wide enough to allow easy passage of bins.

Signage

Signage should clearly describe the types of materials that can be deposited in recycling and general waste bins.

Services

Waste/recycling storage areas must be serviced by hot and cold water provided through a centralised mixer. A tap for hoses should be provided, which is protected from the waste containers and accessible when the bins are in the room.

The floor must have drainage to the sewer.

Ongoing management

Waste recycling and storage areas must be regularly maintained and cleaned. Bins or containers must be washed in an area which drains to the sewer.

Garbage chutes and service rooms

- ▶ Garbage chutes must be located and insulated in a manner that reduces noise impacts
- ▶ Chutes, service openings and charging devices must be constructed of material (such as metal) that is smooth, durable, impervious, non-corrosive and fire resistant
- ▶ Chutes, service openings and charging devices must be capable of being easily cleaned
- ▶ Chutes must be cylindrical and should have a diameter of at least 500mm
- ▶ There must not be bends (or sections of reduced diameter) in the main shaft of the chute
- ▶ Internal overlaps in the chute must follow the direction of the waste flow
- ▶ Chutes must deposit rubbish directly into a bin or compactor located within a waste and recycling storage area
- ▶ A cut-off device must be located at or near the base of the chute so that the bottom of the chute can be closed when the bin or compacting device at the bottom is withdrawn or being replaced
- ▶ The upper end of the chute should extend above the roofline of the building
- ▶ The upper end of the chute should be weather protected in a manner that doesn't impede the upward movement of air out of the chute

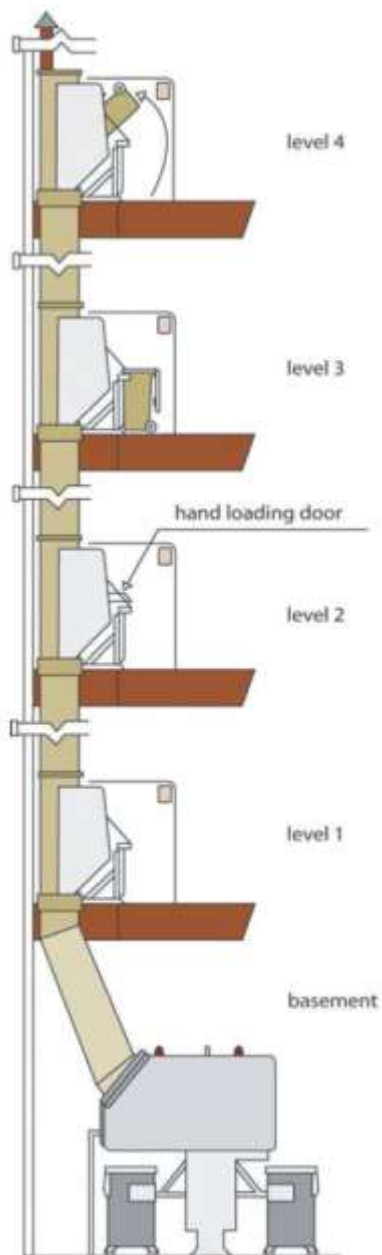
Garbage chute service room design

- ▶ The service opening (for depositing rubbish into the main chute) on each floor of the building must be located in a dedicated service room
- ▶ The charging device for each service opening must be self-closing and must not project into the main chute
- ▶ Branches connecting service openings to the chute are to be no more than one metre long
- ▶ Each service room must include containers for the storage of recyclables. Signage regarding the materials that can be recycled should be displayed near these containers
- ▶ Each service room must be located for convenient access by users and must be well ventilated and well lit
- ▶ The floors, walls and ceilings of service rooms must be finished with smooth, durable materials that are capable of being easily cleaned
- ▶ Service rooms must include signage that clearly describes the types of materials which can be deposited into the garbage chute and the types of materials that can be recycled

Ongoing management

- ▶ Garbage chutes are not to be used for the disposal of recyclables. Signage to this effect should be displayed near service openings
- ▶ Arrangements must be in place for the regular maintenance and cleaning of garbage chutes and associated service rooms, service openings and charging devices

Example of a garbage chute system



Source: *Better Practice Guide for Waste Management in Multi-Unit Dwellings*, DECC, 2008

Bin sizes

Bin type	Height	Length	Width
55L black co-mingled recycling crate	330mm	510mm	420mm
55L garden refuse crate	330mm	510mm	420mm
55L garbage bin (Paddington/West Woollahra only)	560mm	450mm	450mm



Garden refuse crate

Co-mingled recycling crate

55L garbage bin (Paddington & West Woollahra only)

Bin type	Height	Depth	Width
120L	940mm	560mm	485mm
240L	1,080mm	735mm	580mm
660L (bulk bin)	1,250mm	850mm	1,370mm

120L garbage bin



120L & 240L food and garden organics bin (60L available in Paddington/West Woollahra)



120L & 240L co-mingled recycling bin

