

Waste Management Strategies for Development Guide

*Helping You
Achieve Better
Resource Recovery*

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www.bmcc.nsw.gov.au/building&development

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Waste in the Blue Mountains

The building and construction industry generates a massive amount of waste in Australia. This is particularly challenging to the Blue Mountains Local Government Area due to:

- The lack of space suitable for waste disposal,
- Our distance from alternative disposal options, and
- The unique World Heritage environmental assets that surround the City area.

This guide will help you:

- Avoid waste from your development,
- Save money on waste disposal and purchasing materials,
- Recover potential 'resources' from your waste,
- Understand whether you need to submit a formal Waste Management Strategy (WMS) for your development application.
- Write a WMS for your development if required. A proforma is available at Appendix 1 of this document.

While not all developments require submission of a formal WMS, Blue Mountains City Council recommends that you consider this guide in all developments as it presents a significant opportunity for improved environmental outcomes and the opportunity to reduce the costs associated with your development.

How effective waste management benefits you

Effective waste planning and management will benefit you in the following ways:

- Reduce your costs through reduced material and disposal costs.
- Improve your workplace safety by keeping materials and waste stored appropriately.
- Enhance your public image through environmentally responsible management of your building site.
- Reduce your operational risk through compliance with legislation.

Objectives of good Waste Management

The ultimate goal of waste management is waste reduction through:

- Avoiding unnecessary consumption of materials.
- Reducing the total additional material inputs through efficient design.
- Reuse of the greatest portion of recycled materials from on site.
- Recycling the greatest portion of remaining material off site.
- Responsibly disposing of the smallest possible amount of waste to a licensed waste management facility.

When should I consider waste management for my development?

Many of the best benefits for both you and the environment are achieved by including waste minimisation and management from the design phase of your development.

If you are contracting a builder, make sure you discuss and include waste minimisation from the outset in their contract.

Looking at waste across the lifetime of your development

You also need to consider how waste will be managed across the ongoing life of your development from the design stage.

This includes not only the built space and requirements for waste and recycling facilities, such as various bin storage areas and onsite compost facilities/areas, but also planning for the provision of collection services such as garbage trucks or liquid waste pump outs. These services should be able to be delivered in a way that does not unnecessarily impact on the property itself or on the amenity of neighbours or the area.

For more detailed information on waste facility design specifications please refer to Part E6 of the Blue Mountains Development Control Plan (DCP). Information developed by the State Government titled Better Practice Guide for Waste Management in Multi Unit Dwellings may also be of use.

Five rules of thumb for waste management

Waste management sounds complex, but really it's about keeping in mind the following five simple rules of thumb.

1. AVOID

Avoiding unnecessary material use during design and construction is the simplest and most effective way to minimise waste and the best way to eliminate additional building costs. If you're not using it, you're not paying for it, and none of it is going to waste.

Here are some waste avoidance opportunities you can consider at the design phase:

- Repurpose a whole or part of an existing building. Is a renovation an alternative to demolition?
- Favour efficient design fit for purpose. Avoid over engineering. More materials mean greater costs, increased wastage and often higher operating/maintenance costs during the life of the development.
- Factor in the design specifications of the project to material sizes. If the building is designed with the material in mind, additional handling and material wastage can be avoided.
- Design to landform to minimise clearing and earth work requirements.
- Select appropriately durable materials with long service life to reduce the need for replacement during the project's service life.

2. REDUCE

Reducing your project waste will also reduce the costs of waste disposal and volumes of waste going to landfill.

You can achieve this if you:

- Accurately estimate material requirements to prevent over purchasing and wastage.
- Effective communication during both design and build stage is essential. A huge amount of material is wasted on Australian building sites each year due to mistakes and duplications caused by poor communication from design right through to completion.
- Consider the use of prefabricated design elements and materials.
- Take back agreements for wastage or packaging with material suppliers to reduce wastage and rubbish.
- Reduce wastage by ensuring materials are well protected prior to delivery and onsite to minimise damage.

3. REUSE

By Reusing "waste" materials generated on site you can avoid the costs of both disposal and purchasing new materials. When you demolish a building, there is a massive opportunity to salvage a range of materials cost effectively and reuse them in your new construction.

- You can maximise your reuse of materials if you stage your demolition to minimise damage to usable materials and increase opportunities for reuse.
- Design your new development to incorporate reusable materials such windows, doors and joinery from demolition.
- Prepare non load bearing formwork such as paths to reuse waste cement or concrete before it sets.
- Reuse broken brick, tile or aggregate as fill.
- Store onsite and then reuse earth works soil for landscaping.
- Mulch or compost organic waste from on-site for use in landscaping.
- Use carpet for sediment barriers, erosion control or weed matting onsite.
- Consider the storage requirements of reused materials. Consider moisture/rain, slope, drainage, location of water ways, vegetation and wind effects.

NOTE – Materials contaminated with hazardous substances such as asbestos must not be reused or reworked.



4. RECYCLE

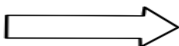


Many of the waste materials generated onsite can be reused off site in other developments or recycled to make new materials. By conserving useful materials through recycling, you can benefit the environment, cut your disposal costs and, in some cases, offset your costs by generating income from waste.

Tips to maximise your recycling:

- Plan how you will separate and store your waste. Timbers, bricks, packaging cardboard, topsoil, clean fill, roof tiles and other materials can often be recycled for free if they are separated out. Other materials such as metal may generate significant income to recyclers.
- Arrange separate storage areas/vessels for recyclable materials.
- Clearly sign-post waste and recycling areas to reduce accidental discarding of recyclables or contamination of recycling bins/areas with other waste.
- Discuss with suppliers possible take back schemes for wastage such as plaster board or unused cement.
- Buy/source recycled material. Using recycled materials reinforces the market, increasing the opportunities for recycling across the industry. It may also be cheaper.
- Consider using recycling exchange networks such as "Free Cycle" (www.freecycle.org), the Waste Not Resource Exchange (wastenot.streamline.org.au) or trading posts to give or sell your non hazardous waste to someone else that can use it.

How 'waste' can become a valuable 'resource' through recycling.

Waste Stream  Recycled Product

Topsoil	Use by landscape supplier
Cardboard packaging	New Cardboard
Crushed Concrete	New Concrete
Crushed Masonry/ Bricks	Road Base/ Clean Fill
Office Paper, Plans	Recycled Paper
Scrap Plaster Board	Plaster Board, Soil Amendment
Hard Plastic Waste	Rubbish Bins, Pipes
Green Waste	Compost
Ferrous metal Scrap	Roofing Sheet
Non ferrous Metal	New Fittings
Pallet Wrap Film	New Plastic Products
Soft Wood	Chipboard
Hard Wood	Landscaping Projects



5. RESPONSIBLE DISPOSAL

Regardless of how well you avoid, reduce, reuse and recycle your waste some of it will inevitably require disposal. If you fail to responsibly dispose of wastes you may expose the community to hazardous materials such as solvents, lead or asbestos and face significant fines enforced by the NSW State Government. It is important to remember that failure to dispose of materials correctly is an illegal offense. Both the dumper and the company or individual responsible for the generation of the waste may be held liable. It is your responsibility as a developer to ensure that your waste is being disposed of appropriately.

To dispose of your waste responsibly, you need to:

- Dispose of waste through an authorised waste disposal company or facility.
- Handle and dispose of hazardous wastes such as asbestos, paints and solvents appropriately. These should not be disposed of with mixed waste loads.
- For developments requiring a formal WMS, you must keep copies of all disposal dockets and the plan onsite. These may be inspected by council officers or certifiers. This is also true for the disposal of asbestos.

What is a Waste Management Strategy?

A WMS outlines measures to minimise and manage waste generated during:

- Demolition.
- Construction.
- The ongoing use of the premises.

The WMS highlights the method of recycling or disposal and the waste management service provider. It should also link to development plans with storage areas and access paths outlined.

Do I need to submit a Waste Management Strategy?

Some developments in the Blue Mountains City Council require the submission of a formal WMS. The chart below outlines the developments that require submission of a WMS before a development application may be approved. However this list is not exhaustive and in some cases other forms of development may be required to issue a WMS as a condition of consent.

Type of Development	Requires WMS at Application Stage
Exempt & complying development	No
Ancillary structures	No, but may be required as condition of consent
Demolition	No, but may be required as condition of consent
Single dwelling	No, but may be required as condition of consent
Subdivision	Yes
Multi-dwelling housing	Yes
Accessible housing	Yes
Commercial buildings	Yes
Industrial buildings	Yes
Road construction	Yes

How to prepare and submit your Waste Management Strategy

Steps in the preparation and submission of a WMS:

Step 1 - Understand the objectives and strategies of effective waste management included in this guide.

Step 2 - Familiarise yourself with the WMS pro forma.

Step 3 - Consider avoidance, reduction, reuse, recycling and disposal options from the design stage.

Step 4 - Prepare a WMS.

Step 5 - Submit the Stage 1 WMS along with your other development application specified documents.

Step 6 - Submit the Stage 2 WMS for construction/demolition prior to commencement of works.

Writing your Waste Management Strategy – what you need to include

A WMS is a brief overview of waste management on the site and is split into several parts as follows.

- Cover sheet - Developments details and contacts. Include this cover sheet with your Stage 1 and Stage 2 Waste Management Strategy submission.
- Stage 1 - WMS Design - Outline of waste considerations in design of the development. Provide an outline of the operational waste management considerations, including where the ongoing waste service collection, such as garbage, recycling and green bins, will be collected by Council. If it is proposed to be collected within the development, be aware that a Deed of Agreement will be required.
- Stage 2 - WMS Demolition & Construction - Outline waste estimates and management of site wastes including site plan indicating waste storage and access paths.

A basic pro-forma is available at Appendix 1 of this document to help develop your WMS.



Domestic waste collection within the property

Is there sufficient room to place bins out for the kerbside collection?

Will presenting the bins from your development on the kerbside significantly affect the streetscape?

Will you need to organise a waste service to be collected from within your medium density residential or mixed use property?

Here's what you need to know.

- The Applicant should notify Council at the development application submission stage that they wish to request the collection of domestic waste to be undertaken within the property.
- Council will not enter private property for the purposes of providing the domestic waste management service without indemnity against any claims for loss or damage.
- The design must consider such factors as allocation of sufficient space for the unimpeded presentation of bins on collection day, the wear and tear that heavy vehicles can have on infrastructure such as driveways and roads, traffic flow and pedestrian safety. Further information regarding design considerations can be found in Part E6 of the Blue Mountains DCP and the *NSW Better Practice Guide for Waste Management in Multi-unit Dwellings*.
- If the request is for an existing development, Council will undertake a hazard assessment on the property prior to any waste services agreement.
- A Deed of Agreement will then be drawn up by Council, outlining the terms of service delivery and executed by the authorised stakeholders.



Enforcement

Whether your WMS is required by a condition of development consent or under a building type specified by the Blue Mountains DCP you are required to retain a copy of the plan and copies of disposal receipts. This is enforceable through the development assessment and approval process of the Environmental Planning and Assessment Act, 1979.

This plan and waste disposal receipts may be required for inspection by Council Officers, Work Cover or the NSW EPA.

APPENDIX 1 - WASTE MANAGEMENT STRATEGY PROFORMA

Waste Management Strategy Cover Sheet

Include this cover sheet with your Stage 1 and Stage 2 Waste Management Strategy submission



Applicant Details	
Application No.	
Name	
Address	
Phone number(s)	
Email	
Development Details	
Address of development	
Existing building/ structures	
Description of proposed development	
<p>This development achieves the waste objectives set out in Blue Mountains City Council's <i>Blue Mountains Development Control Plan</i> and <i>A Guide to Waste Management Strategies for Development</i>.</p> <p>The details on this form are the plans and provisions for minimising and managing this waste relevant to this project. A copy of this plan and all records demonstrating lawful disposal of waste will be retained and kept accessible for inspection by regulatory authorities such as Council, NSW EPA & Work Cover.</p>	
Name	
Signature	
Date	

Waste Management Strategy Checklist Plans & Drawings

This checklist will help ensure all necessary documentation have been submitted for approval with your development application.

Please note that drawings are to be submitted to scale, clearly indicating the location and provisions for the storage and collection of waste and recyclables:

- In the design of the development.
- During demolition.
- During construction.

Do your plans clearly show:

Stage 1 - WMS Design	Tick yes
Size and location of waste storage areas?	
Recycling bins placed next to residual waste bins?	
Space provided for access and the manoeuvring of bins/equipment?	
Any additional facilities i.e compactors, waste chutes etc?	
Access route(s) to deposit waste/recycling in storage areas?	
Access route(s) to collect waste/recycling from storage areas?	
Bin carting grade?	
Location of final collection point?	
Clearance, geometric design and strength of internal access driveways and roads?	
Direction of traffic flow for internal access driveways and roads?	
Aesthetic design of external waste storage areas?	
Signage, type and location	
Construction details of storage rooms/areas including floors, wash down provisions, ventilation, sewer connection etc	

Stage 2 - WMS Demolition/Construction	Tick yes
Size and location of waste storage areas?	
Access for waste collection vehicles?	
Areas to be excavated?	
Types and number of storage bins/vessels likely to be required?	
Signage required to facilitate correct use of waste/recycling facilities?	

Stage 1 Waste Management Strategy

To be submitted with your development application.

Construction Design

Outline how measures for waste minimisation and avoidance have been incorporated into the design and material selection of the development.

Outline how measures for waste minimisation and avoidance have been incorporated into the construction techniques of the design.

Ongoing Management

Outline how measures for waste minimisation and avoidance will be managed and maximised during the operational life of the building.

Detail the arrangements that would be appropriate for the ongoing use of waste facilities as provided in the development. Identify each stage of waste transfer between resident's units/commercial tenancies to storage areas and loading into the collection vehicle. Consider responsibility for, and location and frequency of, transfer and collection.

Indicate whether waste collection services will be requested to be undertaken within the development property rather than on public land. Note: If this is the case, a Deed of Agreement between Council and the Property Manager/Group will be required. Contact the Assessment Officer for your development application for further details.

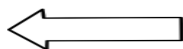
Stage 2 Waste Management Strategy

To be submitted prior to commencement of any site works.

Demolition phase

Refer to the BMCC Guide to Developing a Waste Management Strategy for objectives regarding demolition waste.

Most Favourable



Least Favourable

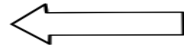
	Reuse	Recycle	Disposal	
Type of Waste Generated	Estimated Volume (m3)	Estimated Volume (m3)	Estimated Volume (m3)	Specify on site reuse, contractor or recycling outlet and/or waste disposal depot to use.
Excavation material				
Timber				
Concrete				
Bricks/pavers				
Tiles				
Metal				
Glass				
Fixtures & fittings				
Floor coverings (carpet, etc.)				
Garden organics				
Plastics (pallet wrap etc)				
Paper/cardboard				
Residual waste				
Hazardous wastes e.g asbestos, lead paints (specify)				
Other (specify)				

How will materials and waste be separated and/or stored on site for reuse, recycling and disposal?
How will the site be managed to ensure minimum waste creation and maximum reuse and recycling?

Construction Phase

Refer to the BMCC Guide to Developing a Waste Management Strategy for objectives regarding waste management.

Most Favourable



Least Favourable

	Reuse	Recycle	Disposal	
Type of Waste Generated	Estimated Volume (m3)	Estimated Volume (m3)	Estimated Volume (m3)	Specify on site reuse, contractor or recycling outlet and/or waste disposal depot to use.
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Residual waste				
Hazardous wastes e.g asbestos, lead paints (specify)				
Other (specify)				
How will materials and waste be separated and/or stored on site for reuse, recycling and disposal?				
How will the site be managed to ensure minimum waste generation and maximum reuse and recycling?				