## SECTION 24 – WASTE MINIMISATION AND MANAGEMENT

This Section of the Muswellbrook Development Control Plan has been prepared based on the Model Waste Not DCP Chapter 2008, prepared by the *Department of Environment and Climate Change (now Environment Protection Authority).*

This Section contains the following subsections:

24.1 Site Waste Minimisation and Management
24.2 Submission/Application Requirements
24.3 Assessment Criteria/Controls for All Development
24.4 Development-Specific Assessment Criteria/Controls
24.5 Appendices

## 24.1 SITE WASTE MINIMISATION AND MANAGEMENT

Waste and resource consumption is a major environmental issue and a priority for all levels of government within Australia. This is particularly the case as landfill sites become scarce and the environmental and economic costs of waste generation and disposal rise. Government and society alike are exposed to the issue of managing the increasingly large volumes of waste generated by our society.

Sustainable resource management and waste minimisation has emerged as a priority action area and a key in the quest for Ecologically Sustainable Development (ESD). Critical actions in this regard include the following:

- avoiding unnecessary resource consumption
- recovering resources for reuse
- recovering resources for recycling or reprocessing
- disposing of residual waste (as a last resort).

The building and construction industry in particular is a major contributor to waste, much of which is still deposited to landfill. The implementation of effective waste minimisation strategies has the potential to significantly reduce these volumes. Effective waste planning and management can also benefit the builder/developer. Some of the benefits of good waste planning and management include:

- reduced costs
- improved workplace safety
- enhanced public image
- compliance with legislation such as the Protection of the Environment Operation Act 1997 that requires waste to only be transported to a place that can lawfully accept it.

This section aims to facilitate sustainable waste minimisation and management within the Muswellbrook Local Government Area in a manner consistent with the principles of ESD.

The objectives of this section include:

- To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources.
- To encourage building designs, construction and demolition techniques in general which minimise waste generation.
- To maximise reuse and recycling of household waste and industrial/commercial waste.

- To assist applicants in planning for sustainable waste management, through the preparation of a site waste minimisation and management plan.
- To provide guidance in regards to space, storage, amenity and management of waste management facilities.
- To ensure waste management systems are compatible with collection services.
- To minimise risks associated with waste management at all stages of development.

This section applies to the following types of development that may only be carried out with development consent.

- demolition
- construction
- subdivision
- change in use

## 24.2 SUBMISSION/APPLICATION REQUIREMENTS

All applications for development, including demolition, construction and the ongoing use of a site/premise, must be accompanied by a Site Waste Minimisation and Management Plan. Waste management facilities proposed as part of the development shall be clearly indicated on the plan accompanying the development application.

### Site Waste Minimisation and Management Plan (SWMMP)

A Site Waste Minimisation and Management Plan outlines measures to minimise and manage waste generated during demolition, construction and ongoing use of the site/premises.

In doing so, 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.

A SWMMP (and/or site plan) should detail the location of waste management facilities proposed both during construction and for ongoing operation. Appendix A provides a template for the compilation of a SWMMP.

A SWMMP must be submitted for all types of development including demolition, construction and ongoing use of the site/premises; including local development, integrated development and state significant/major project development (as defined by the Environmental Planning and Assessment Act and Amendments). More details are required in SWMMPs for larger and more complex developments.

Where a DA is required, with or without the need for a Construction Certificate (CC), a SWMMP must be submitted at development application stage. Where only a CC is required, a SWMMP shall be submitted at the construction certificate stage. The submission of an updated SWMMP (providing contractor details etc) may be required prior to commencement of works.

When implementing the SWMMP the applicant must ensure:

- Footpaths, public reserves, street gutters are not used as places to store demolition waste or materials of any kind without Council approval.
- Any material moved offsite is transported in accordance with the requirements of the Protection of the Environment Operations Act (1997).
- Waste is only transported to a place that can lawfully be used as a waste facility.
- Generation, storage, treatment and disposal of hazardous waste and special waste (including asbestos) is conducted in accordance with relevant waste legislation administered by the EPA and relevant Occupational Health and Safety legislation administered by WorkCover NSW.
- Evidence such as weighbridge dockets and invoices for waste disposal or recycling services are retained.
- Evidence of compliance with any specific industrial waste laws and protocols, such as the Protection of the Environment Operations Act 1997.
- Materials which are to be disposed of and those which are to be reused/ recycled are to be separated through the demolition and construction process.
- Materials that have existing reuse or recycling markets should not be disposed of in landfill when possible.

In the absence of project specific calculations, the rates specified in Appendix B Waste/Recycling Generation Rates and Council's current rate of provision of services to residential properties can be used to inform the compilation of a SWMMP.

## 24.3 ASSESSMENT CRITERIA/CONTROLS FOR ALL DEVELOPMENT

### 24.3.1 Demolition of Buildings or Structures

The demolition stage provides great scope for waste minimisation. Proponents are actively encouraged to consider possible adaptive reuse opportunities of existing buildings/structures, reuse of materials or parts thereof.

The principal aim of managing this activity is to maximise resource recovery and minimise residual waste from demolition activities.

**Objectives**

- Optimise adaptive reuse opportunities of existing building/structures.
- Maximise reuse and recycling of materials.
- Minimise waste generation.
- Ensure appropriate storage and collection of waste.
- Minimise the environmental impacts associated with waste management.
- Avoid illegal dumping.
- Promote improved project management.

**Controls/Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the demolition application.
- Identify all waste likely to result from the demolition, and opportunities for reuse of materials.
- Facilitate reuse/recycling by using the process of 'deconstruction', where various materials are carefully dismantled and sorted.
- Reuse or recycle salvaged materials onsite where possible.

- Allocate an area for the storage of materials for use, recycling and disposal (giving consideration to slope, drainage, location of waterways, stormwater outlets, vegetation, and access and handling requirements).
- Provide separate collection bins or areas for the storage of residual waste.
- 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.

### 24.3.2. Construction of Buildings or Structures

Attention to design, estimating of materials and waste sensitive construction techniques and management practices can achieve significant rewards in managing waste.

The principal aim of managing this activity is to maximise resource recovery and minimise residual waste from demolition activities.

**Objectives**

- Maximise reuse and recycling of materials.
- Minimise waste generation.
- Ensure appropriate collection and storage of waste.
- Minimise the environmental impacts associated with waste management.
- Avoid illegal dumping.
- Promote improved project management.

**Controls / Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the development application.
- The SWMMP shall identify all waste likely to result from the construction process, and the opportunities for the reuse and recycling of these materials.
- Incorporate the use of prefabricated components and recycled materials.
- Allocate an area for the storage of materials for use, recycling and disposal (considering slope, drainage, location of waterways, stormwater outlets and vegetation). Provide separate collection bins or areas for the storage of residual waste and 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.
- Ensure that all waste is transported to a place that can lawfully be used as a waste facility. Retain all records demonstrating lawful disposal of waste and keep them readily accessible for inspection by regulatory authorities such as council, Environment Protection Authority or WorkCover NSW.

## 24.4 DEVELOPMENT-SPECIFIC ASSESSMENT CRITERIA/CONTROLS

### 24.4.1 Single Dwellings, Semi-Detached and Dual Occupancy

The design of waste and recyclables storage areas within the home and property affect ease of use, amenity, the movement and handling of waste for the life of the development.

This section aims to encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

**Objectives**

- Maximise reuse and recycling of materials.
- Minimise waste generation.
- Ensure appropriate collection and storage of waste.
- Minimise the environmental impacts associated with waste management.
- Avoid illegal dumping

**Controls/Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the development application.
- Plans submitted with the SWMMP must show:
  -The location of an indoor waste/recycling cupboard (or other appropriate storage space) for each dwelling.
  -The location of an onsite waste/recycling storage area for each dwelling, that is of sufficient size to accommodate Council's waste, recycling and garden waste bins.
- Waste containers are to be stored in a suitable location so as to avoid vandalism, nuisance and adverse visual impacts.
- Where possible, the waste/recycling storage area should be located in the rear yard and minimise the distance of travel to the collection point.
- The waste storage area is to be easily accessible and have unobstructed access to Council's usual collection point.
  *(Note: It is the responsibility of dwelling occupants to move bins to the identified collection point no earlier than the evening before collection day and to then return the bins to their storage area no later than the evening of collection day. Bins are to remain in their on-site storage area at all other times.)*

### 24.4.2 Multi-Unit Dwellings (Town Houses, Flats and Villas)

The design of waste and recycling storage areas within the unit and property affects ease of use, amenity, movement and handling of waste for the life of the development. Multiple households within the property increase challenges with regard to waste volumes, ease of access and operation of waste sorting and removal systems. Resources such as the *Better Practice Guide for Waste Management in Multi-Unit Dwellings* (available from NSW Office of Environment & Heritage) should be used to inform design of multi-unit dwellings.

This section aims to encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

**Objectives**

- Ensure appropriate waste storage and collection facilities.
- Maximise source separation and recovery of recyclables.
- Ensure waste management systems are as intuitive for occupants as possible and are readily accessible.
- Ensure appropriate resourcing of waste management systems, including servicing.
- Minimise risk to health and safety associated with handling and disposal of waste and recycled material, and ensure optimum hygiene.
- Minimise adverse environmental impacts associated with waste management.
- Discourage illegal dumping by providing on site storage, and removal services.

**Controls/Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the development application.

- Plans submitted with a development application must show:
  -The location of an indoor waste/recycling cupboard (or other appropriate storage space) for each dwelling.
  -The location of individual waste/recycling storage areas (such as for townhouses and villas) or a communal waste/recycling storage room(s) able to accommodate Council's waste, recycling and garden waste bins.
  -The location of any garbage chute/s and interim storage facilities for recyclable materials.
  -The location of any service rooms (for accessing a garbage chute) on each floor of the building.
  -The location of any waste compaction equipment.
  -The on-site path of travel for collection vehicles (if collection is to occur on-site), taking into account accessibility, width, height and grade.

- Waste management solutions should be taken into account early in the design process. Systems should be designed to maximise source separation and recovery of recyclables.

The following minimum collection and storage facilities shall be provided:

- Each dwelling unit should be provided with an indoor waste/recycling cupboard (or other appropriate storage space) for the interim storage of a minimum one day's garbage and recycling generation.
- Where a development site has limited street frontage (e.g., cul-de-sac, battle-axe lots, or higher density developments) and the area available for kerbside bin storage on collection day is limited, the provision of a communal waste/recycling storage facility may be required.
  *(Note: Building designers are encouraged to consult the Better Practice Guide for Waste Management in Multi-Unit Dwellings for individual site solutions.)*
- Multi-unit housing in the form of townhouses and villas must include either individual waste/recycling storage areas for each dwelling or a communal facility in the form of a waste/recycling storage room/s designed in accordance with the *Better Practice Guide for Waste Management in Multi-Unit Dwellings.*
- Residential flat buildings must include communal waste/recycling storage facilities in the form of a waste/recycling storage room/s designed in accordance with the *Better Practice Guide for Waste Management in Multi-Unit Dwellings.*
- The waste/recycling storage area/s or room/s must be of a size that can comfortably accommodate separate garbage, recycling and garden waste containers at the rate of Council provision.
- For multi-storey developments that include ten or more dwellings, a dedicated room or caged area must be provided for the temporary storage of discarded bulky items which are awaiting removal. The storage area must be readily accessible to all residents and must be located close to the main waste storage room or area.

The following location and design criteria shall apply to collection and storage facilities:

- In townhouse and villa developments with individual waste/recycling storage areas, such areas should be located and designed in a manner which reduces adverse impacts upon neighbouring properties and upon the appearance of the premises.
- There must be an unobstructed and *Continuous Accessible Path of Travel (as per Australian Standard 1428 Design for Access and Mobility - 2001)* from the waste/recycling storage area/s or room/s to:
  - the entry to any Adaptable Housing (as per *Australian Standard 4299 Adaptable Housing - 1995)*
  - the principal entrance to each residential flat building
  - the point at which bins are collected/emptied.

*In instances where a proposal does not comply with these requirements, Council will consider alternative proposals that seek to achieve a reasonable level of access to waste/recycling storage area/s or room/s.*

- Communal waste storage areas should have adequate space to accommodate and manoeuvre Council's required number of waste and recycling containers.
- Each service room and storage area must be located for convenient access by users and must be well ventilated and well lit.
- Where bins cannot be collected from a kerbside location or from a temporary holding area located immediately inside the property boundary, the development must be designed to allow for on-site access by garbage collection vehicles. (requirements regarding vehicle turning circles and driveway width/gradient are contained in *Australian Standard 2890.2 2002/ Planning Facilities – off street commercial vehicles*) In these instances, the site must be configured so as to allow collection vehicles to enter and exit the site in a forward direction and so that collection vehicles do not impede general access to, from or within the site. Access driveways to be used by collection vehicles must be of sufficient strength to support such vehicles.

  *(Note: As a minimum requirement for collection vehicle access, Council will require indemnity against claims for loss or damage to the pavement or other driving surface. Council may also require indemnity against liabilities, losses, damages and any other demands arising from any on-site collection service. In all cases, a hazard assessment will need to be conducted prior to Council agreeing to undertake the service.)*

  The applicant is required to address potential site impacts (odour, early morning noise/lighting from garage truck) upon occupants of the proposed and adjacent developments in accordance with *Better Practice Guide for Waste Management in Multi Unit Dwellings.*

  Proponents are encouraged to discuss this option with Council early in the design process.

- Should a collection vehicle be required to enter a property, access driveways and internal roads must be designed in accordance with *Australian Standard 2890.2 Parking Facilities – Off-Street Commercial Vehicle Facilities – 2002.*
- If Council waste collectors and/or waste collection vehicles are required to enter a site for the purpose of emptying bins, then site specific arrangements must be in place.
- If bins need to be moved from normal storage areas to a different location for collection purposes, it is the responsibility of agents of the owners' corporation to move the bins to the collection point no earlier than the evening before collection day and to then return the bins to their storage areas no later than the evening of collection day. Bins are to remain in their on-site storage areas at all other times.
- The design and location of waste storage areas/facilities should be such that they complement the design of both the development and the surrounding streetscape.
- Developments containing four or more storeys should be provided with a suitable system for the transportation of waste and recyclables from each storey to waste storage/collection areas.
- Garbage chutes must be designed in accordance with the *Building Code of Australia* and *Better Practice Guide for Waste Management in Multi Unit Dwellings*. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use. Alternative interim disposal facilities for recyclables should be provided at each point of access to the garbage chute system.
- The following management responsibilities shall be addressed:
  -Agents of the owners' corporation must take responsibility for the management of waste and recyclable materials generated upon the site. Arrangements must be in

place in regards to the management, maintenance and cleaning of all waste/recycling management facilities.

### 24.4.3 COMMERCIAL DEVELOPMENTS AND CHANGE OF USE

(Shops, Offices, Food Premises**,** Hotels, Motels, Licensed Clubs, Education Establishments, Entertainment Facilities and Hospitals)

A range of non-residential uses present an array of unique waste minimisation opportunities and management requirements. Flexibility in size and layout is often required to cater for the different needs of multiple tenants as well as future changes in use.
*Note: Storage and disposal of liquid waste, such as oils and chemicals, are not covered by this Site Waste Minimisation and Management section*.

This section aims to ensure new developments and changes to existing developments are designed to maximise resource recovery (through waste avoidance, source separation and recycling); and to ensure appropriate well-designed storage and collection facilities are accessible to occupants and service providers.

**Objectives**

- Ensure appropriate waste storage and collection facilities.
- Maximise source separation and recovery of recyclables.
- Ensure waste management systems are as intuitive for occupants as possible and readily accessible to occupants and service providers.
- Ensure appropriate resourcing of waste management systems, including servicing.
- Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene.
- Minimise adverse environmental impacts associated with waste management.
- Discourage illegal dumping by providing on site storage, and removal services.

**Controls/Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- Plans submitted with the SWMMP must show:
  -The location of designated waste and recycling storage room(s) or areas sized to meet the waste and recycling needs of all tenants. Waste should be separated into at least 3 streams, paper/cardboard, recyclables, general waste.
  -The location of temporary waste and recycling storage areas within each tenancy. These are to be of sufficient size to store a minimum of one day's worth of waste.
  -An identified collection point for the collection and emptying of waste, recycling and garden waste bins.
  -The on-site path of travel for collection vehicles (if collection is to occur on-site).
- There must be convenient access from each tenancy to the waste/recycling storage room/s or area/s. There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage room/s or area/s.
- Every development must include a designated waste/recycling storage area or room/s.
- Depending upon the size and type of the development, it may be necessary to include a separate waste/recycling storage room/area for each tenancy.
- Arrangements must be in all parts of the development for the separation of recyclable materials from general waste. Arrangements must be in all parts of the development for the movement of recyclable materials and general waste to the main

waste/recycling storage room/area. For multiple storey buildings, this might involve the use of a goods lift.

- The waste/recycling storage room/area must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated between collections.
- The waste/recycling storage room/area must provide separate containers for the separation of recyclable materials from general waste. Standard and consistent signage on how to use the waste management facilities should be clearly displayed.
- Waste management facilities must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.
- Where possible, waste/recycling containers should be collected from a rear lane access point. Consideration should be given to the time of day at which containers are collected so as to minimise adverse impacts upon residential amenity, pedestrian movements and vehicle movements.
- A waste/recycling cupboard must be provided for each and every kitchen area in a development, including kitchen areas in hotel rooms, motel rooms and staff food preparation areas. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day's waste and to hold separate containers for general waste and recyclable materials.
- Premises that discharge trade wastewater must do so only in accordance with a written agreement from the local sewer authority. Trade wastewater may be defined as "any liquid, and any substance contained in it, which may be produced at the premises in an industrial and commercial activity, but does not include domestic wastewater (e.g. from hand-basins, showers and toilets)."
- Premises which generate at least 50 litres per day of meat, seafood or poultry waste must have that waste collected on a daily basis or must store that waste in a dedicated and refrigerated waste storage area until collection.
- Arrangements must be in place regarding the regular maintenance and cleaning of waste management facilities. Tenants and cleaners must be aware of their obligations in regards to these matters.
- Any garbage chutes must be designed in accordance with the requirements of the *Building Code of Australia* and *Better Practice Guide for Waste Management in Multi-Unit Dwellings*. Garbage chutes are not suitable for recyclable materials and must be clearly labelled to discourage improper use.
- Food and drink premises that use disposable wrappers or containers should provide waste bins that are appropriate to the waste materials generated. In particular containers that are recyclable should be able to be recycled at the premises of origin.
- Recyclable receptacles are to be provided in premises that provide food and drinks in recyclable containers either pre-packaged or prepared in store. The following items should be recycled within the receptacles:
    - glass bottles
    - paper
    - cardboard
    - aluminium cans
    - steel cans
    - plastic bottles and containers
    - milk and juice cartons
- All waste receptacles should be coloured in conformance with the Australian Standard.
- Signage should be provided that assists patron in the proper sorting of waste and food scraps.
- Appropriate collection services should be contracted to ensure well sorted waste is disposed of accordingly.

### 24.4.4 MIXED USE DEVELOPMENTS (Residential/Non-Residential)

Where residential and commercial land uses occur within the one building or development waste management will necessitate a balancing of variable demands, including preservation of residential amenity.

This section aims to ensure new developments and changes to existing development are designed to maximise resource recovery (through waste avoidance, source separation and recycling) and to ensure appropriate, well-designed storage and collection facilities are accessible to occupants and service providers.

**Objectives**

- Ensure appropriate waste storage and collection facilities.
- Maximise source separation and recovery of recyclables.
- Ensure waste management facilities are safely and easily accessible to occupants and service providers.
- Ensure appropriate resourcing of waste management systems, including servicing.
- Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene.
- Minimise adverse environmental impacts associated with waste management.
- Discourage illegal dumping by providing on site storage, and removal services.

**Controls/ Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- The controls at Section 24.4.2. Multi-Unit Dwellings apply to the residential component of mixed-use development.
- The controls at Section 24.4.3. Commercial Developments apply to the non-residential component of mixed-use development.
- Mixed Use development must incorporate separate and self-contained waste management systems for the residential component and the non-residential component.
- In particular, the development must incorporate separate waste/recycling storage rooms/areas for the residential and non-residential components. Commercial tenants must be prevented (via signage and other means), from using the residential waste/recycling bins and vice versa.
- The residential waste management system and the non-residential waste management system must be designed so that they can efficiently operate without conflict. Conflict may potentially occur between residential and non-residential storage, collection and removal systems, and between these systems and the surrounding land uses. For example, collection vehicles disrupting peak residential and commercial traffic flows or causing noise issues when residents are sleeping.

### 24.4.5 INDUSTRIAL

Industrial developments typically produce a diverse range of waste products. Some of these waste products may be hazardous and require compliance with established laws/protocols that are additional to this section. Other waste products are similar in nature to commercial and domestic waste streams. Mixing waste products limits potential reuse and recycling opportunities and may distribute toxic material through a larger volume of wastes.

This section aims to ensure new developments and changes to existing developments are designed to maximise resource recovery (through waste avoidance, source separation and recycling) and to ensure appropriate, well-designed storage and collection facilities are accessible to occupants and service providers.

**Objectives**

- Ensure appropriate waste storage and collection facilities.
- Maximise source separation and recovery of recyclables.
- Ensure waste management facilities are as intuitive for occupants as possible and readily accessible to occupants and service providers.
- Ensure appropriate resourcing of waste management systems, including servicing.
- Minimise risk to health and safety associated with handling and disposal of waste and recycled material and ensure optimum hygiene.
- Minimise adverse environmental impacts associated with waste management.
- Discourage illegal dumping by providing on site storage, and removal services.

**Controls/Requirements**

- A completed Site Waste Minimisation and Management Plan (SWMMP) shall accompany the application.
- Plans submitted with the SWMMP must show:
  -The location of designated waste and recycling storage rooms or areas sized to meet the waste and recycling needs of all tenants. Waste should be separated into at least 4 streams, paper/cardboard, recyclables, general waste, industrial process type wastes.
  -The on-site path of travel for collection vehicles.
- Evidence of compliance with any specific industrial waste laws/protocols. For example, those related to production, storage and disposal of industrial and hazardous wastes as defined by the *Protection of the Environment Operations Act 1997.*

- There must be convenient access from each tenancy and/or larger waste producing area of the development to the waste/recycling storage room/s or area/s. There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage room/s or area/s.
- Every development must include a designated general waste/recycling storage area or room/s as well as designated storage areas for industrial waste streams (designed in accordance with specific waste laws/protocols).
- Depending upon the size and type of the development, it might need to include separate waste/recycling storage room/area for each tenancy and/or larger waste producing areas.
- All tenants must keep written evidence on site of a valid contract with a licensed waste contractor for the regular collection and disposal of all the waste streams and recyclables which are generated on site.
- Between collection periods, all waste/recyclable materials generated on site must be kept in enclosed bins with securely fitted lids so the contents are not able to leak or overflow. Bins must be stored in the designated waste/recycling storage room/s or area/s.
- Arrangements must be in place in all parts of the development for the separation of recyclable materials from general waste and for the movement of recyclable materials and general waste to the main waste/recycling storage room/area.

- The waste/recycling storage room/areas must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated between collections.
- The type and volume of containers used to hold waste and recyclable materials must be compatible with the collection practices of the nominated waste contractor.
- Waste management storage rooms/areas must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.
- A waste/recycling cupboard must be provided for each and every kitchen area in the development. Each waste/recycling cupboard must be of sufficient size to hold a minimum of a single day's waste and to hold separate containers for general waste and recyclable materials.
- Premises that discharge trade wastewater must do so only in accordance with a written agreement from the local sewer authority. Trade wastewater may be defined as "any liquid, and any substance contained in it, which may be produced at the premises in an industrial and commercial activity, but does not include domestic wastewater (e.g. from hand-basins, showers and toilets)."
- Arrangements must be in place regarding the regular maintenance and cleaning of waste management facilities. Tenants and cleaners must be aware of their obligations in regards to these matters.
- Production, storage and disposal of hazardous wastes (such as contaminated or toxic material or products) require particular attention. The appropriate laws and protocols should be observed.

## 24.5 APPENDICES

Appendix A: Site Waste Minimisation and Management Plan Template

*-Demolition stage*
*-Construction stage*
*-Ongoing operation*

Appendix B: Waste/Recycling Generation Rates

**References:**

1. MODEL WASTE NOT DCP CHAPTER 2008;
A Site Waste Minimisation and Management Chapter for Consolidated Development Control Plans, Department of Environment and Climate Change (2008).

2. Better Practice Guide for Waste Management in Multi-Unit Dwellings, Department of Environment and Climate Change (2008).

The Better Practice Guide for Waste Management in Multi-Unit Dwellings gives detailed information about waste recycling/storage rooms and facilities. The Guide was substantially reviewed in 2007 and is available on the NSW Office of Environment & Heritage website (www.environment.nsw.gov.au). Further updates will be published as further information from social research and waste stream audits becomes available.

***Notes:***

1. *Relevant drawings are to be submitted to scale, clearly indicating the location of and provisions for the storage and collection of waste and recyclables during demolition, construction and ongoing operation.*

2. *Muswellbrook Shire Council operates a waste management facility at Common Road, Muswellbrook and a transfer station at Rosemount Road, Denman. Contact details and information regarding waste streams received at the depots can be obtained from Council's website at www.muswellbrook.nsw.gov.au.*

3. *Information regarding the waste collection zone map and timetable can be downloaded from Council's website on www.muswellbrook.nsw.gov.au*

## Appendix A: Site Waste Minimisation and Management Plan Template

| **Applicant and Project Details** | |
|---|---|
| **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 | |
| *Declaration:*<br>*I acknowledge that this development achieves the waste objectives set out in the DCP. 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, Environment Protection Authority or WorkCover NSW.* | |
| Name | |
| Signature | |
| Date | |

## DEMOLITION STAGE

| Materials on site | | Destination | | |
|---|---|---|---|---|
| | | REUSE AND RECYCLING | | DISPOSAL |
| **Type of Material** | **Estimated Volume ($M^3$ or Kg)** | **ONSITE** * specify proposed onsite reuse or recycling methods | **OFFSITE** * specify proposed offsite reuse or recycling methods | **FACILITY** * specify contractor and landfill/ disposal site |
| Bricks | | | | |
| Concrete | | | | |
| Excavation material | | | | |
| Fencing | | | | |
| Fixtures & Fittings | | | | |
| Floor coverings | | | | |
| Furniture | | | | |
| Glass | | | | |
| Green waste | | | | |
| Metals | | | | |
| Paving/tiles | | | | |
| Plasterboard | | | | |
| Roadbase/ aggregate | | | | |
| Roof Tiles | | | | |
| Timber | | | | |
| Hazardous/ special waste | | | | |
| Other – please specify | | | | |
| Other – please specify | | | | |

## CONSTRUCTION STAGE

| Materials on site | | Destination | | |
|---|---|---|---|---|
| | | REUSE AND RECYCLING | | DISPOSAL |
| **Type of Material** | **Estimated Volume ($M^3$ or Kg)** | **ONSITE** * specify proposed onsite reuse or recycling methods | **OFFSITE** * specify proposed offsite reuse or recycling methods | **FACILITY** * specify contractor and landfill/ disposal site |
| Bricks | | | | |
| Concrete | | | | |
| Roof Tiles | | | | |
| Timber | | | | |
| Plasterboard | | | | |
| Metals | | | | |
| Glass | | | | |
| Excavation material | | | | |
| Green waste | | | | |
| Fencing | | | | |
| Paving/tiles | | | | |
| Roadbase/ aggregate | | | | |
| Packaging | | | | |
| Containers | | | | |
| Paper/ cardboards | | | | |
| Hazardous/ special waste | | | | |
| Other – please specify | | | | |
| Other – please specify | | | | |

## ONGOING OPERATION (Residential, Multi Unit, Commercial, Mixed Use & Industrial)

| TYPES OF WASTE LIKELY TO BE GENERATED | ESTIMATED VOLUME PER WEEK (Max) | PROPOSED ONSITE STORAGE AND/ OR PROCESSING | DESTINATION – RECYCLING OR DISPOSAL SITE |
|---|---|---|---|
| *Example:* Glass, paper, organic, food waste | *Example:* Weight, $m^3$, litres | *Example:* Waste storage and recycling area, onsite composting, compaction | *Example:* Recycling, landfill |
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## Appendix B: Waste/Recycling Generation Rates

### Construction Waste

'Rule of Thumb' for renovations and small home building

- Timber 5-7% of material ordered
- Plasterboard 5-20% of material ordered
- Concrete 3-5% of material ordered
- Bricks 5-10% of material ordered
- Tiles 2-5% of material ordered

Source*: Waste Planning Guide for Development Application, Inner Sydney Waste Board, 1998*

### Ongoing Operation

| Premises type | Waste generation | Recyclable material generation |
|---|---|---|
| Backpackers' Hostel | 40L/occupant space/week | 20L/occupant space/week |
| Boarding House, Guest House | 60L/occupant space/week | 20L/occupant space/week |
| Food premises:<br>Butcher<br>Delicatessen<br>Fish Shop<br>Greengrocer<br>Restaurant, Café<br>Supermarket<br>Takeaway food shop | 80L/100m$^2$ floor area/day<br>80L/100m$^2$ floor area/day<br>80L/100m$^2$ floor area/day<br>240L/100m$^2$ floor area/day<br>10L/1.5m$^2$ floor area/day<br>240L/100m$^2$ floor area/day<br>80L/100m$^2$ floor area/day | Variable<br>Variable<br>Variable<br>120L/100m$^2$ floor area/day<br>2L/1.5m$^2$ floor area/day<br>240L/100m$^2$ floor area/day<br>Variable |
| Hairdresser, Beauty Salon | 60L/100m$^2$ floor area/week | Variable |
| Hotel, Licensed Club, Motel | 5L/bed space/day<br>50L/100m$^2$ bar area/day<br>10L/1.5m$^2$ dining area/day | 1L/bed space/day<br>50L/100m$^2$ bar area/day<br>50L/100m$^2$ dining area/day |
| Offices | 10L/100m$^2$ floor area/day | 10L/100m$^2$ floor area/day |
| Shop less than 100m$^2$ floor area<br>Shop greater than 100m$^2$ floor area | 50L/100m$^2$ floor area/day<br>50L/100m$^2$ floor area/day | 25L/100m$^2$ floor area/day<br>50L/100m$^2$ floor area/day |
| Showroom | 40L/100m$^2$ floor area/day | 10L/100m$^2$ floor area/day |
| Multi-Unit Dwellings[1] | 80L/unit/week | 40L/unit/week |

Sources: Adapted from *Waverley Council Code for the Storage and Handling of Waste.*
[1] Appendix A, *Better Practice Guide For Waste Management In Multi-Unit Dwellings*