

SECTION A15 WASTE MINIMISATION AND
MANAGEMENT

DRAFT

version 1.0

Version	Effective	Prepared	Description	Authorised
1.0	February 2012	W Knight	Draft	A Faulkner
1.1	April 2012	W Knight	Draft	A Faulkner

Acknowledgement

The material in this Section of the DCP is based on the Model Waste Not DCP Chapter 2008 produced by the Department of Environment & Climate Change (Office of Environment and Heritage). Tweed Shire Council has made all reasonable efforts to ensure that the contents of this chapter are factual and free of error, omission or inaccurate information. The Tweed Shire Council shall not be liable for any damage or loss that may occur in relation to any person taking or not taking action on the basis of this document.

PART A - INTRODUCTION	1
1.0 Purpose.....	1
2.0 Objectives	1
3.0 Types of Development Covered.....	1
4.0 The Development Approval Process.....	2
5.0 The Responsible Authority.....	2
6.0 Use and Interpretation of this Section of the DCP.....	2
PART B - Submission/Application Requirements	5
1.0 Documentation to be submitted to comply with the requirements of this Section of the DCP	5
2.0 Waste Management Plan.....	5
3.0 Submission of a WMP	5
PART C - Assessment Criteria/Controls for All Development	7
1.0 Demolition of Buildings or Structures	7
2.0 Construction of Buildings or Structures.....	10
PART D - Development-Specific Assessment Criteria/Controls	11
1.0 Single Dwellings, Semi-Detached and Dual Occupancy.....	11
2.0 Multi-Unit Dwellings (Town Houses, Flats and Villas)	12
3.0 Commercial Developments and Change of Use (Shops, Offices, Food Premises, Hotels, Motels, Licensed Clubs, Education Establishments, Entertainment Facilities and Hospitals).....	15
4.0 Mixed Use Developments (Residential/Non-Residential).....	17
5.0 Industrial	18
Appendix A: Waste Management Plan Template.....	21
Appendix B: Waste/Recycling Generation Rates	28
Appendix C: Bin Sizes – Tweed Shire Council	29
Appendix D: Waste Recycling/Storage Rooms in Multi-Unit Dwellings	30
Appendix E: Garbage Truck Dimensions for Residential Waste Collection.....	31
Appendix F: Garbage Chutes	33
Appendix G: Commercial/Industrial Waste and Recycling Storage Areas.....	35

PART A - INTRODUCTION

As landfill sites become scarce and the environmental and economic costs of waste disposal rise, there is an increasing need for society to manage the increasingly large volumes of waste we generate.

1.0 Purpose

This Section of the DCP aims to minimise the generation of construction/demolition waste and facilitate effective ongoing waste management practices consistent with the principles of Ecologically Sustainable Development (ESD).

2.0 Objectives

The objectives of this Section of the Development Control Plan (DCP) include:

a) Waste minimisation

- To minimise resource requirements and construction waste through reuse and recycling and the efficient selection and use of resources.
- To minimise demolition waste by promoting adaptability in building design and focussing upon end-of-life deconstruction.
- To encourage building designs, construction and demolition techniques which minimise waste generation.
- To maximise reuse and recycling of household waste and industrial/commercial waste.

b) Waste management

- To assist applicants in planning for sustainable waste management, through the preparation of a Waste Management Plan.
- To assist applicants to develop systems for waste management that ensure waste is transported and disposed of in a lawful manner.
- 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.

3.0 Types of Development Covered

This Section of the DCP applies to the following types of development that may only be carried out with development consent or a complying development certificate.

- demolition
- construction
- change in use

4.0 The Development Approval Process

Development that Requires Consent

When determining a development application under Section 79C of the *Environmental Planning and Assessment Act, 1979* (as amended) (The Act), Council must consider the contents of this Section of the DCP.

Complying Development

The Council or an accredited certifier must have regard to the provisions of this Section of the DCP in issuing a complying development certificate.

Exempt and Complying Development

Preparation of a Waste Management Plan (WMP) is not required for exempt development as defined by the State Environmental Planning Policy (Exempt and Complying Development Codes), however applicants are encouraged to manage any related waste generation in accordance with the objectives herein.

Departures from the Controls of this Section of the DCP

Council may approve variations to the provisions herein in accordance with the principles of merit-based assessment.

Any request for variation to the provisions must be in writing and comprise part of the application. The request shall clearly demonstrate that:

- the aims and objectives are met, and
- compliance with the relevant provisions is unreasonable or unnecessary in the circumstances of the case.

5.0 The Responsible Authority

Council or an accredited certifier (as defined under the *Environmental Planning and Assessment Amendment Act, 1979*) is responsible for enforcing the observance of the provisions of this Section of the DCP.

6.0 Use and Interpretation of this Section of the DCP

6.1 Abbreviations

A list of abbreviations has been adopted. The relevant abbreviations are detailed below.

BCA	Building Code of Australia
CC	Construction Certificate
DA	Development Application
DCP	Development Control Plan
EPA	Environment Protection Authority
ESD	Ecologically Sustainable Development
OEH	Office of Environment and Heritage
SEE	Statement of Environmental Effects
The Act	<i>Environmental Planning and Assessment Act, 1979</i> (as amended)
TSC	Tweed Shire Council
WMP	Waste Management Plan

6.2 Summary Guide to Using This Section of the DCP

This Section of the DCP shall be generally used as follows:

1. Read Section 1 – Introduction

This section provides aims and objectives of waste minimisation and management associated with local development and the application of the Section of the DCP.

2. Read Section 2 – Submission Requirements

This section provides specific advice in respect of information to accompany submission of a Development Application (DA) and highlights the requirements of a Waste Management Plan.

3. Read Section 3 and 4 – Assessment Criteria/Controls

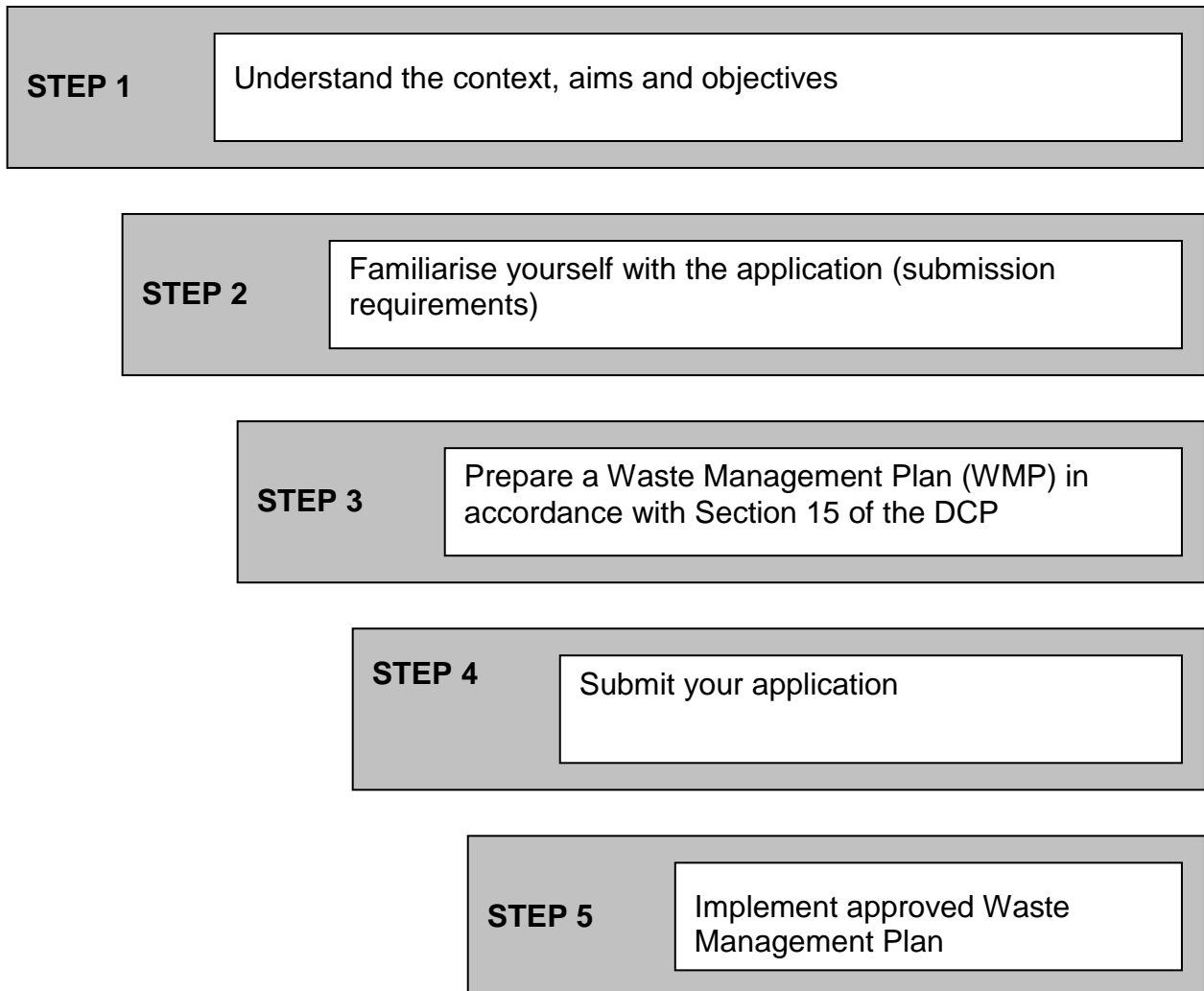
These sections detail the criteria/controls Council will consider in assessing the adequacy of the Waste Management Plan, in addressing the principles of sustainable waste management. Section 3 details general criteria and controls for all demolition and all constructions, while Section 4 adds additional criteria and controls for specific types of construction.

4. Read the Appendices — Further Information

This section provides useful information in interpreting this Section of the DCP, understanding the waste minimisation and management environment and documenting the central submission requirement – a Waste Management Plan.

6.3 Steps in the Preparation and Submission of an Application

The actions involved in preparing and submitting a development application, which satisfactorily addresses waste minimisation and management obligations are summarised in the following chart.



PART B - Submission/Application Requirements

1.0 Documentation to be submitted to comply with the requirements of this Section of the DCP

All applications for development, including demolition, construction and the ongoing use of a site/premise, must be accompanied by a Statement of Environmental Effects (SEE). This Statement is to include a WMP as the central document of compliance with this Section of the DCP's requirements.

In addition to submission of a WMP (as part of the SEE), the waste management facilities proposed as part of the development, shall be clearly illustrated on the plans of the proposed development, accompanying the development application (DA).

2.0 Waste Management Plan

A Waste Management Plan (WMP) outlines measures used to minimise and manage waste generated during:

- demolition
- construction
- ongoing use of the site/premises.

In doing so, the WMP nominates:

- volume and type of waste and recyclables to be generated
- storage and treatment of waste and recyclables onsite
- disposal of residual waste and recyclables
- operational procedures for ongoing waste management once the development is complete.

NOTE: Appendix A provides a template for the compilation of a WMP.

3.0 Submission of a WMP

3.1 Development Generally

A WMP 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 WMPs for larger and more complex developments.

Maximum waste minimisation and management benefits are achieved when the WMP is considered from the earliest stages of the development. It is for this reason that a WMP is required with the earliest approval application.

3.2 Complying Development

A Waste Management Plan (WMP) is required for development identified as Complying Development in accordance with Council's adopted Complying Development criteria or the State Environmental Planning Policy (Exempt and Complying Development Codes). Waste minimisation and management must be carried out in accordance with an approved WMP.

Dockets must be retained onsite to show to where any construction and/or demolition waste has been transported.

3.3 Exempt Development

A WMP is not required in association with Exempt Development carried out in accordance with the State Environmental Planning Policy (Exempt and Complying Development Codes)

3.4 Waste/Recycling Generation Rates

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 WMP. Tweed Shire Council requires the following minimum residential waste and recycling volumes:

1. Single storey dwelling

- Waste (Red).....140L per week (required)
- Recycling (Yellow).....240L per fortnight (required)
- Greenwaste (Green).....240L per fortnight (optional)

2. Multi-Unit Dwelling/Townhouse

(a) Option 1

- Waste (Red).....140L per week (required)
- Recycling (Yellow)240L per fortnight (required)
- Greenwaste (Green)240L per fortnight (optional)

(b) Option 2

- Shared bins with following provided for every two townhouses
- Waste (Red)240L per week (required)
- Recycling (Yellow) 240L per week (required)
- Greenwaste (Green)240L per fortnight (optional)

3. Multi Unit Complex (large scale unit block)

- Waste (Red)80L per unit per week (required)
- Recycling (Yellow)40L per unit per week (required)
- Greenwaste (Green)240L per fortnight (optional)

NOTE:

- *Where townhouses and multi-unit complexes have bulk bins, they are required to provide sufficient space to meet the minimum weekly litres for waste and recycling*
- *Greenwaste bins are optional and available to all styles of residential buildings within the current designated greenwaste collection service area.*
- *Waste bin sizes available in 80L, 140L and 240L.*

PART C - Assessment Criteria/Controls for All Development

1.0 Demolition of Buildings or Structures

1.1 General

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.

1.2 Aim

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

1.3 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.

1.4 Controls/Requirements

- A completed Waste Management Plan (WMP) shall accompany development applications seeking consent for demolition. The WMP must demonstrate that the proposed development will:
 1. Pursue adaptive reuse opportunities of buildings/structures.
 2. Identify all waste likely to result from the demolition, and opportunities for reuse of materials. *Refer to Figure 1.*
 3. Facilitate reuse/recycling by using the process of 'deconstruction', where various materials are carefully dismantled and sorted.
 4. Reuse or recycle salvaged materials onsite where possible.
 5. 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).
 6. Provide separate collection bins or areas for the storage of residual waste.
 7. Clearly 'signpost' the purpose and content of the bins and storage areas.
- When implementing the WMP the applicant must ensure:
 1. Footpaths, public reserves, street gutters are not used as places to store demolition waste or materials of any kind without Council approval.

2. Any material moved offsite is transported in accordance with the requirements of the *Protection of the Environment Operations Act (1997)*.
3. Waste is only transported to a place that can lawfully be used as a waste facility.
4. 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.
5. Evidence such as weighbridge docketts and invoices for waste disposal or recycling services are retained.
6. **Note:** Materials that have an existing reuse or recycling market should not be disposed of in a landfill. **Figure 1** provides a list of some potential reuse/recycling options.

Material	Reuse/recycling potential
Concrete	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 (<i>may require engineers certification</i>)
Roof Tiles	Can be cleaned and reused or crushed for use in landscaping and driveways (<i>may require engineers certification</i>)
Untreated Timber	Reused as floorboards, fencing, furniture, mulched or sent to second hand timber suppliers
Treated Timber	Reused as formwork, bridging, blocking and propping, or sent to second hand timber suppliers
Doors, Windows, Fittings	Sent to second hand suppliers
Glass	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 (<i>may require engineers certification</i>)
Significant Trees	Relocated either onsite or offsite
Overburden	Power screened and used as topsoil
Greenwaste Waste	Mulched, composted
Carpet	Can be sent to recyclers or reused in landscaping
Plasterboard	Removal for recycling, return to supplier

Figure 1: Examples of demolition materials and potential reuse/recycling opportunities (based on the *Combined Sydney Regional Organisation of Councils Model DCP 1997*)

2.0 Construction of Buildings or Structures

2.1 General

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

2.2 Aim

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

2.3 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.
- Optimise adaptive reuse opportunities of existing building/structures.

2.4 Controls/Requirements

- A Waste Management Plan (WMP) must be submitted with development applications seeking consent for construction of buildings or structures. The WMP must:
 1. Identify potential reuse/recycling opportunities of excess construction materials.
 2. Allocate an area for the storage of materials for use, recycling and disposal (considering slope, drainage, location of waterways, stormwater outlets and vegetation).
 3. Demonstrate that suitable contractors have been arranged for the transport, processing and disposal of waste and recycling. *NOTE: Ensure that all contractors are aware of the legal requirements for disposing of waste and they have a waste transport licence with Tweed Shire Council.*
 4. Identify separate collection bins and/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.
- Minimise site disturbance and limit unnecessary excavation.
- Ensure that all waste is transported to a landfill facility or suitable premises that is legally permitted to receive that waste.

NOTE: It is a requirement that all records demonstrating lawful disposal of waste are retained and made readily accessible for inspection by regulatory authorities such as Council, OEH or WorkCover NSW.

PART D - Development-Specific Assessment Criteria/Controls

1.0 Single Dwellings, Semi-Detached and Dual Occupancy

1.1 General

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.

1.2 Aim

To encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

1.3 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.

1.4 Controls/Requirements

- A completed Waste Management Plan (WMP) shall accompany the application. Plans submitted with the development application and WMP must show:
 1. The location of an indoor waste/recycling cupboard (or other appropriate storage space) for each dwelling.
 2. The location of an onsite waste/recycling storage area for each dwelling, that is of sufficient size to accommodate Council's waste, recycling and greenwaste waste bins. Indicative bin sizes are shown in **Appendix C Indicative Bin Sizes**.
 3. An identified kerbside collection point for the collection and emptying of Council's waste, recycling and greenwaste 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.
- There should be sufficient space within the kitchen (or an alternate location) for the interim storage of waste and recyclables.

- The placement of bins for collection at the nominated collection point should ensure adequate traffic and pedestrian safety is maintained.

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.

2.0 Multi-Unit Dwellings (Town Houses, Residential Flat Buildings and Villas)

2.1 General

Multi-Unit Dwellings face 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* should be used to assist in the design of multi-unit dwelling waste management systems.

2.2 Aim

To encourage source separation of waste, reuse, and recycling by ensuring appropriate storage and collection facilities for waste, and quality design of waste facilities.

2.3 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 onsite storage and removal services.

2.4 Controls/Requirements

- A completed Waste Management Plan (WMP) shall accompany the development application. Plans submitted with a development application must include:
 1. The location of indoor waste/recycling cupboard(s) (or other appropriate storage space) for each dwelling.
 2. 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 greenwaste waste bins.
 3. The location of any garbage chute(s) and interim storage facilities for

recyclable materials.

4. The location of any service rooms (for accessing a garbage chute) on each floor of the building.
 5. The location of any waste compaction equipment.
 6. An identified collection point for the collection and emptying of Council's waste, recycling and greenwaste waste bins.
 7. The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).
 8. The on-site path of travel for collection vehicles (if collection is to occur on-site), taking into account accessibility, width, height and grade.
 9. Details of specific arrangements with regard to owners' corporations and responsibility for the management of waste and recyclable materials generated on the site. NOTE: Arrangements must be in place in regards to the management, maintenance and cleaning of all waste/recycling management facilities.
- The following minimum collection and storage facilities shall be provided:
 - i. 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.
 - ii. Residential flat buildings must include communal waste/recycling storage facilities in the form of a waste/recycling storage room (or rooms) designed in accordance with **Appendix D Waste Recycling/Storage Rooms in Multi-Unit Dwellings** and the *Better Practice Guide for Waste Management in Multi-Unit Dwellings*.
 - iii. 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 (or rooms) designed in accordance with **Appendix D Waste Recycling/Storage Rooms in Multi-Unit Dwellings** and the *Better Practice Guide for Waste Management in Multi-Unit Dwellings*.
 - iv. The waste/recycling storage area(s) or room(s) must be of a size that can comfortably accommodate and manoeuvre separate garbage, recycling and greenwaste waste containers at the rate of Council provision.
 - v. 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:
 - a. 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.

- b. There must be an unobstructed and Continuous Accessible Path of Travel (as per the National Construction Code) from the waste/recycling storage area(s) or room(s) to:
- the entry to any Adaptable Housing (as per *Australian Standard 4299 Adaptable Housing*)
 - the principal entrance to each residential flat building
 - the point at which bins are collected/emptied.

NOTE: 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).

- c. Each service room and storage area must be located for convenient access by users and must be well ventilated and well lit.
- d. Where site characteristics, number of bins and length of street frontage allow, bins may be collected from a kerbside location. In instances where kerbside bin collection is not appropriate, bins must be collected onsite. Bins that are collected onsite are to be collected either from their usual storage point or from an onsite temporary holding area located inside the property boundary and close to a property entrance.
- e. 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 (of dimensions detailed at **Appendix E Garbage Truck Dimensions for Residential Waste Collection**). 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.

- f. 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*.
- g. 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.
- h. 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.

- i. Residents should have access to a cold water supply for the cleaning of bins and the waste storage areas. Storage areas should be constructed and designed to be weather proof and easy to clean, with wastewater discharged to sewer.
- j. The design and location of waste storage areas/facilities should be such that they compliment the design of both the development and the surrounding streetscape.
- k. 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.
- l. Garbage chutes must be designed in accordance with **Appendix F Garbage Chutes**, 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.

3.0 Commercial Developments and Change of Use (Shops, Offices, Food Premises, Hotels, Motels, Licensed Clubs, Education Establishments, Entertainment Facilities and Hospitals)

3.1 General

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 Waste Management Section of the DCP.*

3.2 Aim

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.

3.3 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 onsite storage, and removal services.

3.4 Controls/Requirements

A completed Waste Management Plan (WMP) must be submitted with development applications seeking consent for commercial developments and change of use. Plans submitted with the WMP must include:

- i. The location of the designated waste and recycling storage room(s) or areas, sized to meet the waste and recycling needs of all tenants.
 - ii. 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.
 - iii. An identified collection point for the collection and emptying of waste, recycling and greenwaste waste bins.
 - iv. The path of travel for moving bins from the storage area to the identified collection point (if collection is to occur away from the storage area).
 - v. The on-site path of travel for collection vehicles (if collection is to occur on-site).
- The Waste Management Plan must address and demonstrate that the following criteria and outcomes will be achieved:
 - a. 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).
 - b. Every development must include a designated waste/recycling storage area or room(s) (designed in accordance with **Appendix G Commercial/Industrial Waste and Recycling Storage Areas**).
 - c. 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.
 - d. All commercial tenants must keep written evidence onsite of a valid contract with a licensed waste contractor for the regular collection and disposal of the waste and recyclables that are generated onsite.
 - e. Between collection periods, all waste/recyclable materials generated onsite must be kept in enclosed bins with securely fitting 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).
 - f. 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.

- g. The waste/recycling storage room/area must be able to accommodate bins that are of sufficient volume to contain the quantity of waste generated (at the rate described in **Appendix B Waste/Recycling Generation Rates**) between collections.
- h. 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.
- i. Waste management facilities must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.
- j. 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.
- k. 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.
- l. 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.
- m. 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.
- n. Any garbage chutes must be designed in accordance with the requirements of **Appendix F Garbage Chutes**, 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.

4.0 Mixed Use Developments (Residential/Non-Residential)

4.1 General

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.

4.2 Aim

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.

4.3 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 onsite storage, and removal services.

4.4 Controls/Requirements

- A completed Waste Management Plan (WMP) shall accompany the application. The WMP shall demonstrate compliance with:
 1. The controls at Section 4.2.4 Multi-Unit Dwellings apply to the residential component of mixed-use development.
 2. The controls at Section 4.3.4 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.

5.0 Industrial

5.1 General

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 of the DCP. 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 waste.

5.2 Aim

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.

5.3 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 onsite storage, and removal services.

5.4 Controls/Requirements

- A completed Waste Management Plan (WMP) shall accompany the application. Plans submitted with the WMP must include:
 1. The location of designated waste and recycling storage room(s) or areas sized to meet the waste and recycling needs of all tenants.
 2. The onsite path of travel for collection vehicles.
- The Waste Management Plan must address and demonstrate that the following criteria and outcomes will be achieved:
 - a. 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*.
 - b. 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).
 - c. Every development must include a designated general waste/recycling storage area or room(s) (designed in accordance with **Appendix G Commercial/Industrial Waste and Recycling Storage Areas**), as well as designated storage areas for industrial waste streams (designed in accordance with specific waste laws/protocols).

- d. 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.
- e. All tenants must keep written evidence onsite 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 onsite.
- f. Between collection periods, all waste/recyclable materials generated onsite 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).
- g. Arrangements must be in place in all parts of the development for the separation of recyclable materials from general waste. Arrangements must be in place in all parts of the development for the movement of recyclable materials and general waste to the main waste/recycling storage room/area.
- h. 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.
- i. 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.
- j. Waste management storage rooms/areas must be suitably enclosed, covered and maintained so as to prevent polluted wastewater runoff from entering the stormwater system.
- k. 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.
- l. 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.
- m. Production, storage and disposal of hazardous wastes (such as contaminated or toxic material or products) require particular attention. The occupier of the premises must comply with any appropriate laws and protocols relating to hazardous waste(s).

Appendix A: Waste Management Plan Template

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	
<p><i>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, OEH or WorkCover NSW.</i></p>	
Name	
Signature	
Date	

Demolition (All Types of Developments)**Address of development:**

Refer to Part C.1.3 for objectives regarding demolition waste (page 7)

	Reuse	Recycling	Disposal	
Type of waste generated	Estimate Volume (m³) or Weight (t)	Estimate Volume (m³) or Weight (t)	Estimate 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)				
Greenwaste organics				
Containers (cans, plastic, glass)				
Paper/cardboard				
Residual waste				
Hazardous/special waste e.g. asbestos (specify)				
Other (specify)				

Construction (All Types of Developments)**Address of development:**

 Refer to Part C.2.3 for objectives regarding construction (page 10)

	Reuse	Recycling	Disposal	
Type of waste generated	Estimate Volume (m³) or Weight (t)	Estimate Volume (m³) or Weight (t)	Estimate 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				
Tiles				
Metal (specify)				
Glass				
Plasterboard (off cuts)				
Fixtures and fittings				
Floor coverings				
Packaging (used pallets, pallet wrap)				
Greenwaste organics				
Containers (cans, plastic, glass)				
Paper/cardboard				
Residual waste				
Hazardous/special waste (specify)				

Ongoing Operation (Residential, Multi Unit, Commercial, Mixed Use and Industrial)

Address of development:

Show the total volume of waste expected to be generated by the development and the associated waste storage requirements.

	Co-mingled Recyclables	Other (i.e paper/Cardboard)	Greenwaste waste	Residual waste *	Other
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)					

* Current “non-recyclable” waste generation rates typically include food waste that might be further separated for composting.

Plans and Drawings (All Developments)

The following checklists are designed to help ensure WMPs are accompanied by sufficient information to allow assessment of the application.

Demolition

Refer to Part C.1 for specific objectives and measures (page 7).

Do the site plans detail/indicate:

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

Construction

Refer to Part C.2 for specific objectives and measures (page 10).

Do the site plans detail/indicate:

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

Ongoing Operation

Refer to Part D for specific objectives and measures (page 11).

Do the site plans detail/indicate:

	Tick Yes
Space	
Size and location(s) of waste storage areas	
Recycling bins placed next to waste bins	
Space provided for access to and the manoeuvring of bins/equipment	
Any additional facilities	
Access	
Access route(s) to deposit waste in storage room/area	
Access route(s) to collect waste from storage room/area	
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	
Amenity	
Aesthetic design of waste storage areas	
Signage – type and location	
Construction details of storage rooms/areas (including floor, walls, doors, ceiling design, sewer connection, lighting, ventilation, security, wash down provisions etc)	

Appendix B: Waste/Recycling Generation Rates

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: Butcher Delicatessen Fish Shop Greengrocer Restaurant, Café Supermarket Takeaway food shop	80L/100m ² floor area/day 80L/100m ² floor area/day 80L/100m ² floor area/day 240L/100m ² floor area/day 10L/1.5m ² floor area/day 240L/100m ² floor area/day 80L/100m ² floor area/day	Variable Variable Variable 120L/100m ² floor area/day 2L/1.5m ² floor area/day 240L/100m ² floor area/day Variable
Hairdresser, Beauty Salon	60L/100m ² floor area/week	Variable
Hotel, Licensed Club, Motel	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
Offices	10L/100m ² floor area/day	10L/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
Showroom	40L/100m ² floor area/day	10L/100m ² floor area/day
Multi-Unit Dwellings ¹	80L/unit/week	40L/unit/week

Source: ¹ Appendix A, *Better Practice Guide For Waste Management In Multi-Unit Dwellings 2007*

Appendix C: Bin Sizes – Tweed Shire Council

Bin type	Height	Depth	Width
80 Litre Bin	910mm	550mm	475mm
120 Litre Bin	910mm	550mm	475mm
140 Litre Bin	910mm	600mm	530mm
240 Litre Bin	1050mm	720mm	580mm
360 Litre Bin (Recycling only)	1050mm	910mm	665mm
Size 1 Bulk Bin (1m ³)	1053mm	1020mm	2032mm
Size 2 Bulk Bin (2m ³)	1108mm	1200mm	2040mm
Size 3 Bulk Bin (3m ³)	1590mm	1536mm	1806mm

NOTE: Dimensions correct at time of printing, check with Council for most recent figures.

Appendix D: Waste Recycling/Storage Rooms in Multi-Unit Dwellings

Building Code of Australia

Waste/recycling storage rooms must be constructed in accordance with the requirements of the *Building Code of Australia (BCA)*.

Location and Appearance

- Waste/recycling storage rooms must be integrated into the design of the overall development. It is preferable that such rooms be located behind the front building line. Wherever possible, the room should be in a basement location within the main building envelope (rather than a separate stand-alone structure). Materials and finishes visible from outside should be similar in style and quality to the external materials used in the rest of the development.
- Waste/recycling storage rooms must be located and designed in a manner that reduces adverse impacts upon the inhabitants of any dwellings on the site and upon neighbouring properties. The location and design of the room should minimise adverse impacts associated with:
 - the proximity of the room to any dwellings
 - the visibility of the room
 - noise generated by any equipment located within the room
 - noise generated by the movement of bins into and out of the room
 - noise generated by collection vehicles accessing the site; and
 - odours emanating from the room.

Size

- Waste/recycling storage rooms must be of adequate size to comfortably accommodate all waste and recycling bins associated with the development.

Layout

The gradient of waste/recycling storage room floors and the gradient of any associated access ramps must be sufficiently level so that access for the purpose of emptying containers can occur in accordance with WorkCover NSW Occupational Health and Safety requirements.

Within waste/recycling storage rooms, containers used for the storage of recyclable materials should be kept separate from (but close to) general waste containers — so that the potential for contamination of recyclable materials is minimised.

Appendix E: Garbage Truck Dimensions for Residential Waste Collection

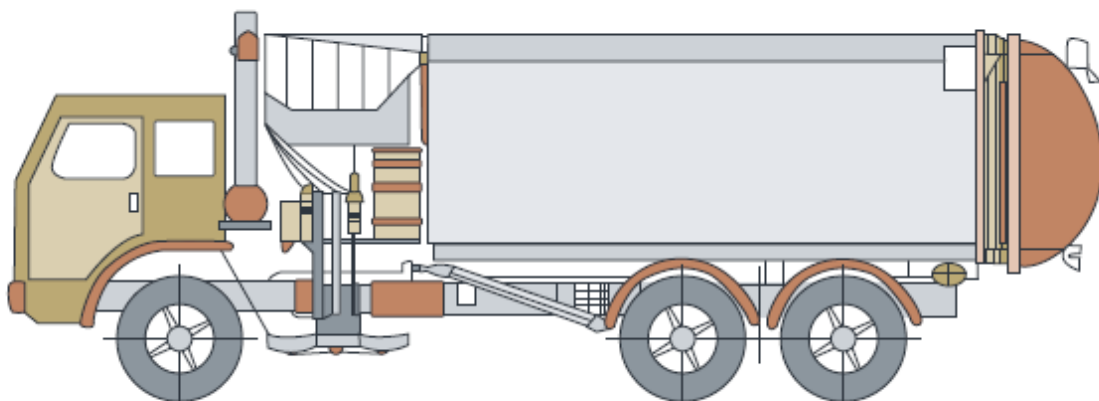
Developments that require Council garbage trucks to enter the site for the collection of residential waste must be designed to accommodate on-site truck movement.

Requirements regarding vehicle turning circles and driveway width/gradient are contained in *Australian Standard 2890.2 2002/Planning Facilities — off street commercial vehicles*.

It is recommended that an applicant speak with Council's Waste Management Unit in regards to the design of development proposals that involve garbage trucks entering the site. Services will not be provided where there are undue risks.

Typical Side Lift Council Garbage Truck used for Domestic Waste Collection (Wheelie Bin Service Truck)

Length overall	9.5 metres
Width overall	2.5 metres
Operational height	4.3 metres
Travel height	4.3 metres
Weight (vehicle and load)	22.5 tonnes
Weight (vehicle only)	12.6 tonnes
Turning Circle	21.5 metres

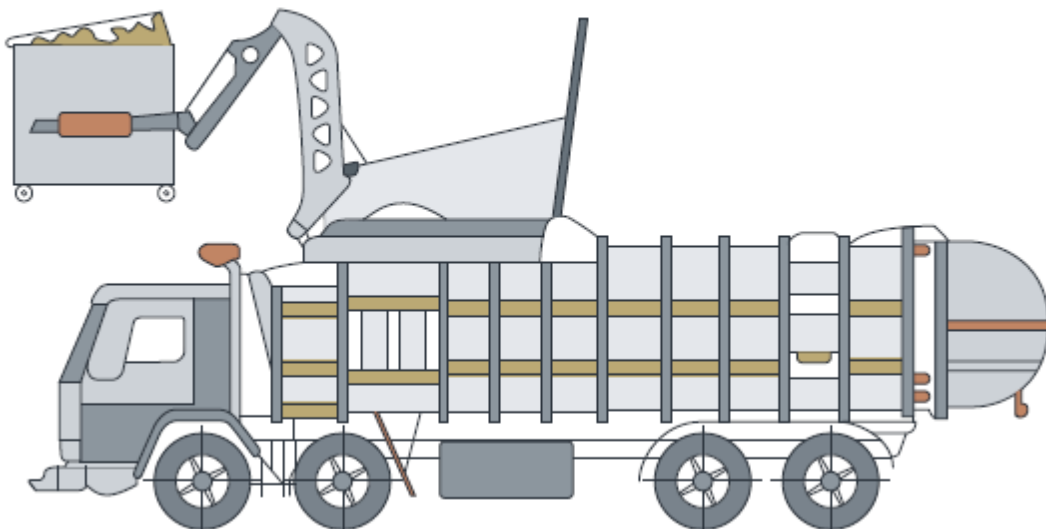


Source of diagram: *Better Practice Guide for Waste Management in Multi-Unit Dwellings*, DECC 2008.

Typical Front Lift Council Garbage Truck used for Domestic Waste Collection (Bulk Bin Service Truck)

Length overall	12.3 metres
Width overall	2.5 metres
Operational height	5.7 metres
Travel height	3.6 metres
Weight (vehicle and load)	27 tonnes
Weight (vehicle only)	17.1 tonnes
Turning Circle	21.5 metres

Front-lift loading collection vehicle



Appendix F: Garbage Chutes

Garbage chute design

- Garbage chutes must be constructed in accordance with the requirements of the *Building Code of Australia (BCA)*.
- 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 any bends (or sections of reduced diameter) in the main shaft of the chute.
- Internal overlaps in the chute must follow the direction of waste flow.
- Chutes must deposit rubbish directly into a bin or compactor located within a waste/recycling storage room.
- 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 of the chute is withdrawn or being replaced.
- The upper end of a chute should extend above the roofline of the building.
- The upper end of a chute should be weather protected in a manner that doesn't impede the upward movement of air out of the chute.

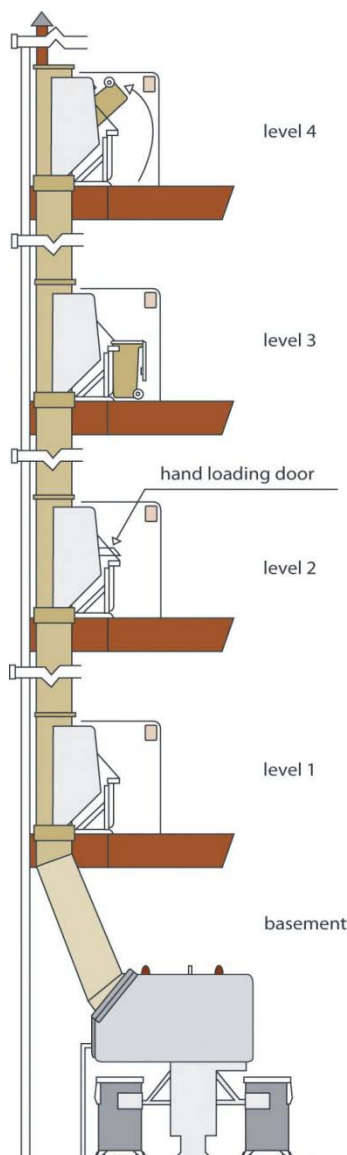
Garbage chute service room design

- 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 main chute are to be no more than 1m long.
- Each service room must include containers for the storage of recyclable materials. 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 that can be deposited into the garbage chute and the types of materials which should be deposited into recycling bins.

Management

- Garbage chutes are not to be used for the disposal of recyclable materials. 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 any associated service rooms, service openings and charging devices.
- Arrangements must be in place for the regular transferral of recyclable materials (which are stored in service rooms) to the main waste/recycling storage room.



Example of a garbage chute system.

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

Appendix G: Commercial/Industrial Waste and Recycling Storage Areas

Building Code of Australia

- Waste/recycling storage areas must be constructed in accordance with the requirements of the Building Code of Australia (BCA).

Location and appearance

- Waste/recycling storage areas must be integrated into the design of the overall development. Materials and finishes that are visible from outside should be similar in style and quality to the external materials used in the rest of the development.
- Waste/recycling storage areas must be located and designed in a manner that reduces adverse impacts upon neighbouring properties and the streetscape. The location and design of the areas should minimise adverse impacts associated with:
 - the proximity of the area to dwellings
 - the visibility of the area
 - noise generated by any equipment located within the area
 - noise generated by collection vehicles accessing the site; and
 - odours emanating from the area.

Size

- Waste/recycling storage areas must be of adequate size to comfortably accommodate all waste and recycling bins associated with the development.
- Waste/recycling storage areas must be able to accommodate separate general waste bins and recycling bins which are of sufficient volume to contain the quantity of waste generated (at the rate described in **Appendix B**) between collections.

Layout

- The gradient of waste/recycling storage area floors and the gradient of any associated access ramps must be sufficiently level so that access for the purpose of emptying containers can occur in accordance with WorkCover NSW Occupational Health and Safety requirements.
- Within waste/recycling storage areas, containers used for the storage of recyclable materials should be kept separate from (but close to) general waste containers — so that the potential for contamination of recyclable materials is minimised.

Access: waste/recycling collection

- The development must be designed to allow access by collection vehicles used by the nominated waste contractor. Wherever possible, the site must be configured to allow collection vehicles to enter and exit the site in a forward direction and so collection vehicles do not impede general access to, from and within the site. Access driveways to be used by collection vehicles must be of sufficient strength to support such vehicles.
- Servicing arrangements for the emptying of bins must be compatible with the operation of any other loading/unloading facilities onsite.

- Access for the purpose of emptying waste/recycling storage containers must be able to occur in accordance with WorkCover NSW Occupational Health and Safety requirements.

Access: general

- In commercial development, public buildings and industrial development, there must be convenient access from each tenancy to the waste/recycling storage area(s). There must be step-free access between the point at which bins are collected/emptied and the waste/recycling storage area(s).
- Arrangements must be in place so that the waste/recycling storage area is not accessible to the general public.
- Vermin must be prevented from entering the waste/recycling storage area.

Surfaces

- Waste/recycling storage areas must have a smooth, durable floor and must be enclosed with durable walls/fences that extend to the height of any containers kept within.

Doors/gates

- Doors/gates to waste/recycling storage areas must be durable. There must be a sign adjacent to the door/gate that indicates that the door/gate is to remain closed when not in use. All doors/gates are to be openable from both inside and outside the storage area and must be wide enough to allow for the easy passage of waste/recycling containers.

Services

- Waste/recycling storage areas must be serviced by hot and cold water provided through a centralised mixing valve. The hose cock must be protected from the waste containers and must be located in a position that is easily accessible when the area is filled with waste containers.
- The floor must be graded so that any water is directed to a sewer authority (Tweed Shire Council) approved drainage connection located upon the site.

Signage

- Waste/recycling storage areas must include signage that clearly describes the types of materials that can be deposited into recycling bins and general garbage bins.

Management

- Arrangements must be in place for the regular maintenance and cleaning of waste/recycling storage areas. Waste/recycling containers must only be washed in an area which drains to a sewer authority (Tweed Shire Council) approved drainage connection.
- The *Better Practice Guide for Waste Management in Multi-Unit Dwellings* gives detailed information about waste/recycling storage rooms & facilities. The Guide was reviewed in 2007 and is available on the OEH website (www.environment.nsw.gov.au).



Customer Service | 1300 292 872 | (02) 6670 2400

tsc@tweed.nsw.gov.au
www.tweed.nsw.gov.au

Fax (02) 6670 2429
POBox 816
Murwillumbah NSW2484