Wyong Shire Council
Waste Control Guidelines

Version 0.2

Wyong Shire Council November 2015

1. INTRODUCTION

1.1 Objective - Minimise Waste

Waste has become a high profile issue at all levels of government as landfill sites become scarce and the environmental and economic costs of disposal rise.

The solutions to the waste problem have been summarised in what is called the waste management hierarchy and is depicted in Figure 1:

- waste avoidance and reduction;
- re-use;
- recycling;
- recover energy;
- treatment; and
- disposal to landfill (as a last resort).

All waste streams contain many resources that may be useful products for our communities. Recovering, recycling and using these as secondary resources are key elements in working towards Ecologically Sustainable Development.

A large proportion of waste can be reduced with action at its source. A further high percentage can be re-used and recycled if time is taken to source-separate, promote local markets and arrange for transportation.

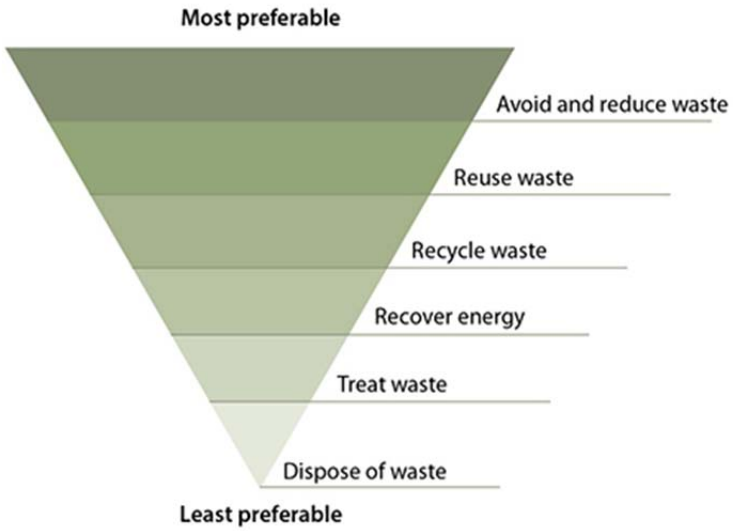


Figure 1: Waste Hierarchy

1.2 Government Responses to Waste Minimisation

1.2.1 NSW Government

The Waste Avoidance and Resource Recovery Act, 2001 became effective 8 October 2001. The objectives of the WARR Act are to encourage the most efficient use of resources, provide for the continual reduction in waste generation and minimise the consumption of natural resources and the final disposal of waste by encouraging the avoidance of waste and the reuse and recycling of waste.

The WARR Act requires the introduction of extended producer responsibility (EPR) provisions and for the NSW Environment Protection Authority (EPA) to develop a waste strategy which is to be based on continuous improvement and benchmarked against international best practice. The NSW Waste Avoidance and Resource Recovery Strategy 2014-2021 (WARR Strategy) includes targets for waste reduction, resource recovery and the diversion of waste from landfill disposal. The WARR provides a framework for minimising environmental harm from waste management and disposal, reducing waste and maximising conservation of our natural resources.

The WARR Strategy identified waste avoidance and resource recovery goals and targets in six key result areas. The targets for the Key Result Areas are detailed in Table 1 which can be identified as the following goals:

- Avoid and reduce waste generation;
- Increase recycling;
- Divert more waste from landfill
- Manage problem waste better
- Reduce litter; and
- Reduce illegal dumping.

Table 1: Broad Targets for each Key Result area

Key Result Area	Target
Avoid and reduce waste generation	By 2010-22 reduce the rate of waste generation per capita.
Increase recycling	By 2010-22 increase recycling rates for: • Municipal solid waste from 52% (in 2010-11) to 70% • Commercial and industrial Waste from 57% (in 2010-11) to 70% • Construction and demolition waste from 75% (in 2010-11) to 80%
Divert more waste from landfill	By 2021-22 increase the waste diverted from landfill from 63% (in 2010-11) to 75%
Manage problem waste better	By 2021-22 establish or upgrade 86 drop off facilities or services for managing household problem wastes statewide
Reduce Litter	By 2016-17, reduce the number of litter items by 40% compared with 2011-12 levels and continue to reduce litter items to 2021-22
Reduce illegal dumping	From 2013-14 implement the *NSW Dumping Strategy 2014-16* to reduce the incidence of illegal dumping statewide. As part of this strategy, by 2016-17: • Reduce the incidence of illegal dumping in Sydney and the Illawarra, Hunter and Central Coast regions by 30% compared to 2010-11 • Establish baseline data to allow target-setting in other parts of the state.

The *Protection of the Environment Operations (Waste) Regulation 2014* creates an integrated, streamlined system for 'waste tracking'. 'Waste tracking' is used across Australia to minimise the possibility that wastes will be transported or disposed of inappropriately. The new regulations have delivered a clear, practical and enforceable system to ensure the appropriate transport and disposal of high-risk wastes.

In addition, a major economic instrument to reduce waste in NSW is the Waste Levy. The waste levy is payable on all waste materials disposed of at landfill. In 2014/15 the levy was $108.81 per tonne and will increase annually for all Metropolitan Levy Areas of which Wyong is defined. It is expected that the levy will exceed $118 per tonne by 2018.

1.2.2 Local Government

Councils have a key dual role to play in waste management. Firstly, as a service provider - arranging for the collection of recyclable materials and waste, and secondly, as a regulator - of building and land use activity.

In this latter role Wyong Shire Council prepared *Control Plan 2013 (DCP) Chapter 3.1 – Controls for Site Waste Management* and these Waste Control Guidelines, which promote waste avoidance, reduction, re-use, recycling and (as a last resort) disposal to landfill. Design criteria for collection, storage and recycling areas and facilities are detailed within these Guidelines. The DCP requires the preparation of Waste Management Plans (WMP) for submission with any of the following applications:

- Construction and demolition development;
- state significant development; and
- designated development.

Note:

The New South Wales Department of Planning and Environment is the consent authority for state significant and designated development. Council will liaise with the Department of Planning and Environment to ensure that the interests of the people of Wyong Shire are protected in terms of appropriate waste management for such developments. The minimum requirement sought will be compliance with the provisions of DCP Chapter 3.1, for the preparation and submission of a Waste Management Plan with the application.

The provisions of the DCP apply only to development applications lodged under Part IV of the Environmental Planning and Assessment Act, 1979.

Where development or works proposed by Council are subject to assessment under Part V of the Act, waste management shall be considered integral to the design of the proposal and be documented within the Review of Environmental Factors (REF).

To ensure an orderly development control process, Council is committed to the regular review of the performance of the DCP and these associated Guidelines, and to their amendment if required. A systematic review of the document will be undertaken on a five yearly basis.

1.3 Purpose of these Guidelines

These guidelines have been prepared to assist applicants to prepare Waste Management Plans that comply with the requirements listed above.

These guidelines will also provide advice to applicants on how to avoid and minimise waste and how to improve existing facilities.

These guidelines will also set submission requirements and standards in relation to waste for subdivision, demolition, site preparation, construction and ongoing use of premises.

1.4 Key Features

These guidelines have four key features:

1. The provision of advice regarding the preparation of a waste management plan by applicants seeking development approval for subdivisions and demolition and construction of any building. The applicant is required to specify waste and recyclable materials generated by type and volume, and to nominate re-use and recycling potential for each waste type;
2. The provision of general advice for all applicants on matters such as source separation, subdivisions, demolition, construction, design and location of waste storage and recycling facilities;
3. The provision of specific advice for particular uses and activities such as multi-unit dwellings, shops, offices, restaurants clubs/hotels, hospitals and industry; and
4. The provision of detailed appendices providing a sample Waste Management Plan, advice on calculating waste generation rates, identifying hazardous waste, facility design, Council bin sizes and servicing requirements, and the preferred location and design of waste storage and handling facilities, a link to recycling contacts is provided on www.businessrecycling.com.au.

For further information or assistance please contact Wyong Shire Council's Customer Contact on telephone 02 4350 5555.

1.5 Glossary of Terms

For the purposes of these Guidelines the following terms have the meaning specified:

Class means the classification of a building as determined by the Building Code of Australia.

Clinical and related waste means:

1. clinical waste, or
2. cytotoxic waste, or
3. pharmaceutical, drug or medicine waste, or
4. sharps waste

***Clinical* waste** means any waste resulting from medical, nursing, dental, pharmaceutical, skin penetration or other related clinical activity, being waste that has the potential to cause injury, infection or offence, and includes waste containing human tissue (other than hair, teeth and nails), bulk body fluids or blood, visibly blood-stained body fluids, materials or equipment, laboratory specimens or cultures, animal tissue, carcasses or other waste from animals used for medical research. It does not include any such waste that has been treated by a method approved in writing by the Director-General of the Department of Health.

Collection Point means the usual (or agreed) point of the footpath/roadway, or on-site, where the contents of bins are loaded onto vehicles.

Collection Area means the location where waste or recycling is transferred from a building's storage containers to a collection vehicle for removal from the site. Collection Areas are generally only found in multi-unit developments.

Compostable material means vegetative material capable of being converted to humus or compost by a biological decay process.

Dwelling means a room or number of rooms occupied or used, or so constructed or adapted, as to be capable of being occupied or used, as a separate domicile.

Ecologically Sustainable Development has the definition as contained in S.6 (2) of the Protection of the Environment Administration Act, 1991. It involves the effective integration of environmental

and economic considerations in decision making processes through the application of concepts such as the precautionary principle, intergenerational equity, conservation of biological diversity and ecological integrity, and improved valuation, pricing and incentive mechanisms.

Garbage and recycling room means a room where waste and recycling receptacles are stored, awaiting removal from the premises.

Garbage chute means a duct in which deposited material descends from one level to another within the building due to gravity.

Garden organics means vegetative matter including trees, branches, shrubs, cuttings, lawn clippings and untreated timber and wood products.

Guidelines means this document.

Hazardous waste means any waste as defined as hazardous waste in accordance with Schedule 1, Part 3 of the Protection of the Environment Protection Act 1997. Hazardous Materials cannot be placed in standard waste and recycling bins and include waste items such as lead paint, coal tar, dangerous goods containers that have not been cleaned out or waste with a ph less than 2.0 or greater than 12.5.

Recyclable means capable of being reprocessed into usable material.

Sharp Waste means any waste collected from designated sharps waste containers used in the course of business, commercial or community service activities, being waste resulting from the use of sharps for human health care by health professionals and other health care providers, medical research or work on cadavers, veterinary care or veterinary research, skin penetration or the injection of drugs or other substances for medical or non-medical reasons. It does not include waste that has been treated on the site where it was generated to an approved standard

Storey means a habitable or occupied space within a building between one floor level and the next floor level above, or if there is no floor level above, the roof.

Trade waste means liquid waste arising from a commercial / industrial enterprise.

Volume reduction equipment means devices, which reduce the volume of waste or recyclable material including compressing devices such as compactors and bailers, and shredding, pulverising or crushing devices.

Waste means:

- Any substance (whether solid, liquid or gaseous) that is discharged, emitted or deposited in the environment in such volume, consistency or manner, so as to cause an alteration in the environment, or;
- Any discarded, rejected, unwanted, surplus or abandoned substance, or
- Any otherwise discarded, rejected, unwanted, surplus or abandoned substance intended for sale or for recycling, reprocessing, recovery or purification by a separate operation from that which produced the substance, or
- Any substance prescribed by regulation to be waste for the purpose of the Protection of the Environment Operations Act, 1997.

A substance is not precluded from not being waste for the purpose of the Protection of the Environment Operations Act, 1997 merely because it can be reprocessed, re-used or recycled.

Waste management plan means the completed waste plan in accordance with Appendix 1. The plan shall identify the volume and type of waste and recyclable material expected to be generated, stored and treated on site, and how the residual is to be disposed of during site development, construction and habitation. Information must also include location and design of waste storage and recycling areas.

Waste storage and recycling area means a designated area or a combination of designated areas within the boundary of a site for the storage waste and recycling bins. Waste storage areas maybe

covered but are not a designated room within a building. Waste storage and recycling areas are generally found in multi-unit developments.

LIST OF ABBREVIATIONS

BCA	***Building Code of Australia***
DA	***Development Application***
DCP	***Development Control Plan***
EPA	***Environmental Protection Authority***
MGB	***Mobile Garbage Bin***

2. WASTE MANAGEMENT PLANS

2.1 What is a Waste Management Plan?

A Waste Management Plan is a plan prepared in conjunction with a development application for demolition and subdivision and Construction Certificate application for a building to ensure that waste issues have been considered in the planning and design stage of the proposal and that appropriate measures will be put in place to minimise the generation of waste during the subdivision/demolition and construction stage as well as during the on- going use of the development. Waste measures should follow the waste hierarchy of waste avoidance, re-use and recycling and as a last resort, waste disposal at landfill.

A Waste Management Plan should provide the following information:

- the type and amount of waste / recyclable material to be generated during all relevant stages;
- how waste / recyclable material is to be stored and treated on-site;
- how residual waste / recyclable material is to be disposed of;
- the location, design and size of waste storage and recycling areas or rooms;
- truck access, should on-site servicing of bins be required; and
- how ongoing waste management will operate.

Note: A sample Waste Management Plan is provided in Appendix 1.

2.2 How are Waste Management Plans Assessed?

In assessing applications, details provided in the Waste Management Plan and on the site plan drawings will be checked for compliance with the performance criteria for the proposed use (e.g. Multi-unit housing, demolition, etc.), against the general aims and objectives of DCP 2013: Chapter 3.1 – Site Waste Management and these Guidelines.

2.3 How to Prepare a Waste Management Plan

Step 1 Read Table 2 (S. 2.4) to identify which section(s) of the Waste Management Plan should be completed and the information to be included on the site plan drawings.

Step 2 Read the Sections 3 - 9 of these Guidelines relevant to your specific proposal

Step 3 Read the sample Waste Management Plan within Appendix 1 to assist you with preparing your Waste Management Plan.

Step 4 Complete the relevant section(s) of the Waste Management Plan as identified in Step 1. For assistance or advice please contact Wyong Shire Council's Customer Contact on telephone (02) 4350 5555.

Step 5 Include relevant details as identified in Step 1 on your plan drawings.

Step 6 Submit both the completed Waste Management Plan and the site plan drawings together with your Construction Certificate application for approval to council.

2.3 What Information does Council Require?

A Waste Management Plan must be completed and included with your application. Relevant details of waste storage facility design and access must be shown on plan drawings submitted with your application. Should your specific development not be included in the following table please contact Council's Customer Contact: 4350 5555.

2.4 Requirements for Waste Management Plans

Table 2: Requirements for Waste Management Plans

Land Use or Activity Proposed	Is a Waste Management Plan required?	Specific details to be provided on plan drawings	Performance Criteria
Subdivision, demolition, or site preparation - including vegetation removal, excavation and major internal renovations	Yes Section 1 only	• on-site storage areas for storage of source separated waste and recyclable materials for re-use, recycling or disposal. • vehicular access to the site and on-site	• details of on-site storage areas for source separated waste and recyclable materials are provided. • waste disposal is minimised and waste avoidance, reuse and recycling maximised
Single dwellings, terraces, villa homes, Class 1a buildings	Yes Section 1 & 2 only	**Construction stage:** • on-site storage areas for storage of source separated waste and recyclable materials for re-use, recycling • vehicular access to the site and on-site **Post construction** • location of waste and recycling containers • provision for composting or worm farming facilities	• waste disposal is minimised and waste avoidance, re-use and recycling, particularly of construction material, is maximised • an accessible and usable waste and recyclable material storage area is provided on site that encourages the source separation of waste and recyclables (for construction stage and post construction)

Table 2: Requirements for Waste Management Plans (Cont.)

Land Use or Activity Proposed	Is a Waste Management Plan required?	Specific details to be provided on plan drawings	Performance Criteria
Multi-unit residential development (flats, town houses, villas)	Yes Section 1, 2, 3 and 4	**Construction Stage:** • on-site storage areas for storage of source separated waste and recyclable materials for re-use, recycling • vehicular access to the site and on-site **Post-construction:** • waste storage and recycling area(s) or garbage and recycling room(s) and design details e.g. floor plans, cross section, materials used etc. • a collection area, service lifts, chute system or volume reduction equipment (compactor), where appropriate and design details • access - collection vehicles including turning circles or turning areas	• waste disposal is minimised and waste avoidance, re-use and recycling, particularly of construction material is maximised • on-site source separation of waste and recyclable materials is facilitated • an accessible and usable waste storage & recycling area is provided for each unit or a communal storage area(s) is provided which is accessible to occupiers of all units • location and design of storage facilities complement the streetscape and do not impact on adjoining premises and the amenity of the units within the development • suitable access provided for collection vehicles • appropriate strategies are proposed to educate occupants to minimise contamination of recyclable material.

Table 2: Requirements for Waste Management Plans (Cont.)

Land Use or Activity Proposed	Is a Waste Management Plan required?	Specific details to be provided on plan drawings	Performance Criteria
Commercial and Retail development (shops, offices, food premises, hotels, motels, licensed clubs, hospitals, entertainment facilities, education establishments)	Yes Section 1, 2, 3 and 4	**Construction stage:** • on-site storage areas for storage of source separated waste and recyclable materials for re-use, recycling • vehicular access to the site and on-site **Post construction:** waste storage and recycling area(s) or garbage and recycling room(s) and design details e.g. floor plans, cross section, materials used etc. • A collection area, service lifts, chute system or volume reduction equipment (compactor), where appropriate and design details access for collection vehicles including turning circles or turning areas	• waste disposal is minimised and waste avoidance, re-use and recycling of construction material is maximised • on-site source separation of waste and recyclable materials is facilitated • appropriately designed and accessible waste storage and recycling area(s) and / or garbage and recycling room(s) is provided on-site • suitable access provided for collection vehicles • appropriate arrangements are in place for ongoing waste management

Table 2: Requirements for Waste Management Plans (Cont.)

Land Use or Activity Proposed	Is a Waste Management Plan required?	Specific details to be provided on plan drawings	Performance Criteria
Industry	Yes Section 1, 2,3 and 4	**Construction stage:** • on-site sorting and storage areas for re-use, recycling and disposal of material • vehicular access to the site and on-site **Post-construction:** • waste storage and recycling area(s) including design details e.g. floor plans, cross section, materials used etc. • design details of any volume reduction equipment (compactor), where appropriate • access for collection vehicles including turning circles or turning areas	• waste disposal is minimised and waste avoidance, re-use and recycling of construction material is maximised • on-site source separation of waste and recyclable materials is facilitated • sufficient space provided on-site for separation and storage of recyclables and waste • for multi-use and industrial units, an appropriately designed and accessible waste storage and recycling area is provided per unit or a communal storage area(s) is provided which is accessible from each unit. • suitable access provided for collection vehicles • appropriate arrangements are in place for on ongoing waste management

2.5 When is a Different or Additional Application Needed?

In most circumstances waste management is considered as part of the DA process. However, some waste related uses/activities require different or additional applications. These requirements are summarised in Table 3:

Table 3: Uses/Activities requiring Specific Applications

Proposed Activity	Application Required	Comment
Major waste management facilities	• "Designated Development" - Application to Council, supported by an EIS. • Application to the EPA for registration	Refer Environmental Guidelines – Solid Waste Landfills (1996) and Draft Environmental Guidelines – Solid Waste Landfills (2015)
Controlled waste activity / facility	Application to the EPA for Licence	
Placing waste on a State road including builders waste storage container	Application to Roads & Traffic Authority (RTA) for approval under the Roads Act	
Disposal of liquid trade waste into the sewer	Application to Council	
Discharge into any water body	Application to the EPA/Council	

If this applies to you, contact the authority listed in the above table.

3. SUBDIVISIONS AND / OR DEMOLITION OF BUILDINGS (Site Preparation)

3.1 Potential for Waste Minimisation

The demolition of buildings is the stage with the greatest potential for waste minimisation, particularly on the Central Coast where there are high levels of development.

The first issue that developers should consider is whether it is possible to re-use existing buildings, materials or parts thereof, for the proposed use.

The potential to incorporate existing trees / shrubs into the landscape plan should be a high priority consideration. Trees which are to be removed should be chipped on site and the material stored for use as mulch in landscaped areas.

Design that reduces excessive excavation of the site is to be encouraged.

With careful on-site sorting and storage and staging work programs it is possible to re-use many materials, either on-site or off-site.

Note: It is not acceptable to simply demolish the building and dispose of all material to landfill. *Instead a number of colour coded or clearly labelled bins on site or an ordered retrieval program should be used to reduce the need for waste disposal.*

Some examples of avoiding waste and recycling of materials are provided within Table 4 to help you in preparing your Waste Management Plan.

Table 4: Re-Use and Recycling Potential

Materials On-Site	Avoidance	Reuse	Recycling
Concrete	Retain existing driveways, paths, footings, slabs etc	Filling, levelling materials, road base	Take to a building material recycling / reprocessing facility. Those materials are generally accepted at a significantly reduced cost compared to land filling.
Bricks	Retain existing walls, buildings and fences	Cleaned and / or rendered over for re-use on-site or offsite	
Roof-tile	Retention of existing roofs or colour treatments / cleaning	Crushed, used fordrainage, landscaping and driveways, for re- use on-site or off- site	
Hardwood beams	Re-use or recycling on site.	Fencing, mulching	Take to processing facility at reduced cost
Other timber (untreated)	As above	Formwork, bridging, blocking and propping	
Garden Organics / Trees	As above	Mulching, composting, for reuse as landscaping / fertiliser	
Doors, windows, fittings	Design into new development	Relocated on-site or sold for use off- site	Take to a building material recycling / reprocessing facility
Synthetic & recycled rubber (e.g. Under carpets)	Protect / cover and re-use	Used for safety barriers, speed humps, sports surfaces	
Overburden	Avoid excess excavations	Stockpile top soil and re-use	Waste management facilitiesgenerally accept clean fill at reduced cost
Steel (e.g. Corrugated iron)			Metal recyclers

Where such materials cannot be recycled or re-used on-site there is a growing market for such product off-site. A link to local outlets (e.g. second hand building yards) is provided on Council's Waste & Recycling web page.

4. CONSTRUCTION STAGE

4.1 Potential for Waste Minimisation

Overseas studies show that up to 10% of timber delivered for residential construction is wasted, while a recent Australian pilot projects suggests that up to 30% of plasterboard could be wasted on certain projects. These produce unacceptable environmental and economic costs.

The following construction wastes are almost 100% recyclable if properly source separated and kept uncontaminated:

- Steel;
- non-ferrous metals;
- glass;
- paper;
- concrete; and
- cardboard packaging material.

It is important to note that waste separation may offer savings on the usual costs on disposing of mixed waste at landfills, and that savings may also be achieved at the construction stage by purchasing reusable and recycled-content materials or reusing materials salvaged from the subdivision / demolition stage.

The following measures should be considered at the construction stage:

- Purchasing policy, in particular considering measures such as;
  - ordering the right quantities of materials,
  - prefabrication of materials where possible
- Re-using formwork;
- Modular construction and basic designs to reduce the need for off-cuts;
- Minimising site disturbance, limiting unnecessary excavation;
- Careful source separation of off-cuts to facilitate re-use, resale or efficient recycling;
- The demolition of the building when its usable life has expired (e.g. can components be easily dismantled?);
- Choice of landscaping to reduce garden organics; and
- Co-ordination and sequencing of various trades.

5. ALL DEVELOPMENTS

(Multi-unit residential development, commercial and industry)

5.1 Contracts

The structure of waste collection and recycling contracts let by Wyong Shire Council plays an important role in ensuring efficient servicing, particularly of Multi-Unit Developments (MUD's). Indemnity and waste service flexibility are two important contract issues that should be considered in relation to deciding an appropriate better practice system for your development. It is important to talk to Council as early as possible to identify potential servicing issues.

5.2 Indemnity

Council may provide on-site collection where:

- There is insufficient space on the kerbside to temporarily place bins for waste collection
- Collection of waste from the kerbside would be unsafe
- Collection of waste from the kerbside would cause significant traffic disruptions
- Collection of waste from the kerbside would occur in an excessively restrictive area
- Council considers kerbside collection inappropriate

Council's Waste Collection Contractor, however, will not enter private property with their vehicles unless indemnity against liabilities, losses, damages and other costs arising from the onsite collection service has been provided by the owner.

In order to enable better practice waste management in Multi-Unit Developments*:*

Designers / developers:

- Decide the preferred waste management system to install having regard to the principles outlined in this guide

- Before submitting your development application, meet with council to discuss if on- site collection is required or allowed.

If on-site collection is required:

- Ensure design of facilities can safely accommodate on-site collection;
- Liaise with Council to find out if it can provide the on-site service; and
- Identify indemnity arrangements that would be needed to service the development

5.3 Service Flexibility

The design of the waste management system should accommodate services provided by Council. In many cases, particularly for medium to high-rise developments, the efficient provision of cost-effective garbage and recycling collection services for Multi-Unit Developments (MUDs) may require using an alternative service options such as bulk bins.

5.4 Collection Point

Location of garbage and recycling collection point

Consideration should be given to identifying a suitable waste collection point. Collection points where possible should not be located:

- Near intersections
- Near roundabouts or slow-points
- Along busy arterial roads
- In narrow lanes
- Near possible obstructions, including trees, overhanging building elements and overhead powerlines; or
- Where they pose a traffic hazard

The collection point(s) should enable collection operations to be carried out on a level surface away from gradients and vehicle ramps.

Where Mobile Garbage Bins (MGBs) will be used and collected from the kerb, there should be sufficient space on the street for them to be lined up neatly in (preferably) a single row along the kerb. Remember cars parked along the street and bins placed two or more rows deep are an obstacle for safe and efficient kerbside collection, as they require collection operators to get out of the collection vehicle and manually move bins to an appropriate position for collection. They also create amenity issues for residents, can impede pedestrian access and can be a traffic hazard for motorists.

Identifying a suitable collection point is particularly important for servicing sites where there are a large number of bins to be collected, there is limited direct access to the development (for example battle-axe block developments), or where the site has specialised servicing requirements due to equipment used to provide the waste service. For example, the collection point for bulk bins or bins containing compacted waste should be located such that the bins can be accessed with minimal manual handling required.

Developers should consider what alternatives are available for locating collection points, particularly for developments built on small blocks with steep gradients, to enable safe presentation and uplift of bins. Council's Waste Collection Contractor will not enter private property to make collections, or will only do so if an indemnity has been provided.

It is important to confirm potential arrangements for onsite collection with Council before assuming that it will be possible. Where an agreement for onsite collection is made, the onsite collection points should be located:

- So that collection vehicles do not interfere with the use of access driveways, loading bays or parking bays during collections
- Close to waste storage facilities to permit easy transfer of bins to the collection point, if relocation of bins is required.
- In a relatively flat area and on the same level as the collection vehicle (ie bins should not be placed for collection on elevated loading bays or nature strips/footpaths).
- In a position that provides collection vehicles safe access to the collection point and which has adequate clearance and manoeuvring space.
- So oncoming traffic can be clearly seen as the collection vehicle leaves the property.

5.5 Access to the Collection Point for the Waste Collection Contractor

Specific access requirements for collection vehicles will vary slightly site to site, depending upon the waste collection arrangements. In all cases, however, collectors need to be able to move bins from the collection point to the vehicle as quickly as possible, preferably with no manual handling, particularly if bulk bins are used.

Irrespective of the bin type used, the developer needs to ensure there is sufficient space for the collection vehicle to drive to the collection point, empty the bin and safely leave the collection point. Wherever possible, collection vehicle movement should be in a forward direction with no need to reverse.

The design aspects to take into account for vehicle access include:

- the presence of parked cars on access roads;
- heavy vehicle access and turning circle requirements (refer Appendices 6 and 7);
- collection vehicle overhang and possible interference with bins and street furniture; and
- clearance height for servicing, particularly when developments are serviced internally, or where an external collection point is near trees or overhead obstacles (refer Appendix 6).

In addition to the above design aspects, general access to the collection point should be considered in the development design and operation. Locked gates and security systems that prevent access to waste collection points can cause serious delays and problems in servicing if not well designed and/or waste collection operators are not provided with the required authority for access. Designers and developers should consider the likely ongoing operational arrangements for access to locked gate communities and how this needs to be incorporated in the design. Council's Collection Contractor will require a set of keys or remote control access to enter secured developments.

Remember, garbage and recycling collection will occur at different times thus access should not be restricted at any time.

5.5.1 On-site collection

If a collection vehicle is required to drive onto a private road or private property, the driveway and road need to be suitable for the collection vehicle in terms of strength, width, geometric design and height. The access points and collection area should be free from overhead obstacles and of an appropriate gradient. When making an on-site collection from within a building, the 'clearance height' should be clear of any air conditioning ducts, sprinklers or other potential obstructions.

Appropriate heavy vehicle standards should be incorporated into the development design, including those specified in acts, regulations, guidelines, and codes administered by Austroads, the NSW Roads and Maritime Services, NSW WorkCover and any local traffic requirements.

5.6 Noise

The main sources of noise associated with domestic waste collection are emptying glass into bins, emptying glass from bins into the collection vehicle and reversing alarms on collection vehicles.

Better practice principles that should be incorporated to reduce noise include:

- Locating bin bays and collection points far enough away from residents as to reduce the impact of noise during bin use and waste collection.
- Eliminating the need for collection vehicles to reverse.
- Chutes, if installed, should be well insulated to avoid noise disturbing neighbouring units. The noise associated with waste falling out the bottom of the chute and with compactors can also be problematic and should be dealt with.
- Select appropriate surfacing materials that will assist in minimising noise for pathways and driveways that bins will need to be wheeled over.
- Consider how material will be transferred into bins or static compactors at storage points.

5.7 Odour

Odour problems can be minimised by having well-ventilated waste storage areas.

For enclosed storage and service areas, the air flowing from interim storage areas and central garbage rooms should not exit close to units. Ventilation openings should be protected against flies and vermin and located as near the ceiling and floor as possible, but away from the windows of dwellings.

If a forced ventilation or air conditioning system is used (for enclosed storage areas):

- It should be in accordance with the ventilation requirements of the Building Code of Australia and Australian Standard 1668.2 The use of Ventilation and Air Conditioning in Buildings; and
- It should not be connected to the same ventilation system supplying air to the units

5.8 Visual Amenity

All waste management facilities (including storage areas) should be adequately screened, not readily visible from any public place and should blend in with the development (Refer Figure 2).

A poorly designed and poorly located bin storage area can detract from the overall development, encourage misuse of the facilities provided and affect recycling outcomes.

Remember to consult with council engineers, planners and waste managers regarding specific requirements for facility design and placement in accordance with Council's DCP 2013 Chapter 3.1 – Site Waste Management.

5.9 Signs and education

Ongoing education, in addition to having dedicated ongoing management services, is one of the most important factors in encouraging residents to continue to use services and systems as originally planned.

The importance of signs and education is two-fold: to inform residents why it is important to recycle (raise awareness and perceived importance of resource recovery and the environment), and secondly to provide clear instruction on how to recycle using the services provided. Both these factors influence people's attitude towards recycling.

Ensuring education is 'ongoing' is beneficial because it tackles the transient nature of residents and differences between council services.

Clearly and correctly label all garbage and recycling bins or receptacles. Make sure communal waste storage areas are well signposted, with signs instructing residents in the correct separation of garbage, recycling and organics. Also clearly identify any hazards or potential dangers associated with the waste facilities, including those from the use of any waste handling equipment.

It is recommended you also display information in communal areas that identifies who can be contacted to find out more about the recycling and/or other services in the development.

6 MULTI-UNIT RESIDENTIAL DEVELOPMENT

(Units, Townhouses, Villas)

6.1 Individual Unit Waste Storage and Recycling Areas

Development with sufficient street frontage and where practical to do so, shall provide each dwelling with its own waste and recycling bins, to be stored within the curtilage of the dwelling. Individual unit holders shall be responsible for the placement of the bins on the kerb on collection day. This would be the case for most small-scale town house and villa developments, dual occupancy and other residential buildings of a similar nature. (For larger scale residential developments, see Section 6.2.3 Communal Facilities – Storage of Bulk Waste Bins).

6.2 Communal Waste Storage Facilities

6.2.1 General

Communal waste storage facilities can be either:

- Waste Storage and recycling areas (common external areas for the storage of waste and recycling bins which are not part of a dwelling); or
- Waste Storage and recycling rooms (common areas for the storage of waste and recycling bins which are accommodated within a building but not within a dwelling).

Determining the best location for communal bin storage areas can be difficult. Garbage and recycling storage facilities should be located in positions that:

- Permit easy, direct and convenient access for the users of the facility
- Permit easy transfer of bins to the collection point if relocation of bins is required
- Permit easy, direct and convenient access for collection serviced providers
- Are well screened and do not reduce amenity
- Are secure and provide protection against potential vandalism

However, the aesthetics of the development, in particular its appearance from the street, must not be compromised. Design and construction of a bin storage area that integrates with the overall development and landscape plan should avoid this problem. Applicants should also refer to the design requirements within DCP 2013 Chapter 2.4 – Multiple Dwelling Residential Development. Separate waste storage and recycling shall be provided for mixed use developments.

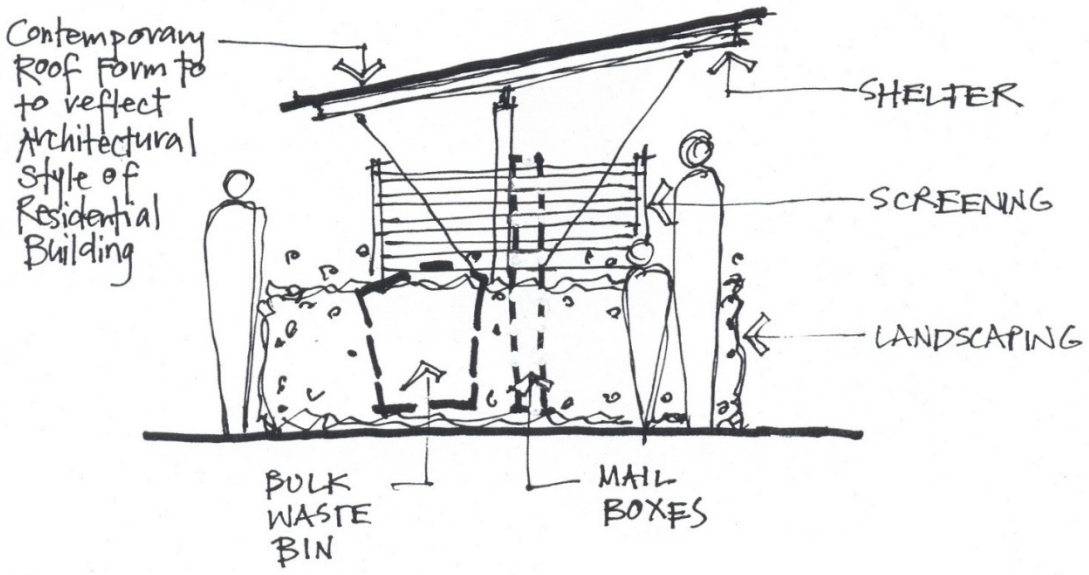


Figure 2: Example of Screening the Waste Storage Area

6.2.2 Storage of Mobile Garbage Bins (MGB)

Waste Storage and Recycling Areas and Rooms

A communal on-site storage and recycling area for MGBs, or a garbage and recycling room, must be provided for multi-unit developments or townhouses, where:

- the development is limited to no more than 12 units or townhouses; and
- it is not possible, or it is impractical, to store individual bins within the curtilage of each dwelling.

The waste storage and recycling area shall be of sufficient size to accommodate the number and types of waste MGBs and 240 litre recycling MGBs required, commensurate with the size of the development (refer to Appendix 4 for number and types of bins required and Appendix 5 for bin dimensions). Figures 3 and 4 provide an example of communal storage areas for MGBs.

On difficult or steep sites, sites with particular natural features (such as watercourses), sites with two street frontages, etc., it may be appropriate or necessary to have more than one waste storage and recycling area to minimise travel distances for residents. Information on location and construction details, size of the waste and recycling storage area and number of bins proposed shall be attached to the Waste Management Plan.

It shall be the responsibility of residents or a caretaker to wheel bins from waste storage and recycling area to the collection point at the kerb. Consideration should be given to manual handling requirements and slope.

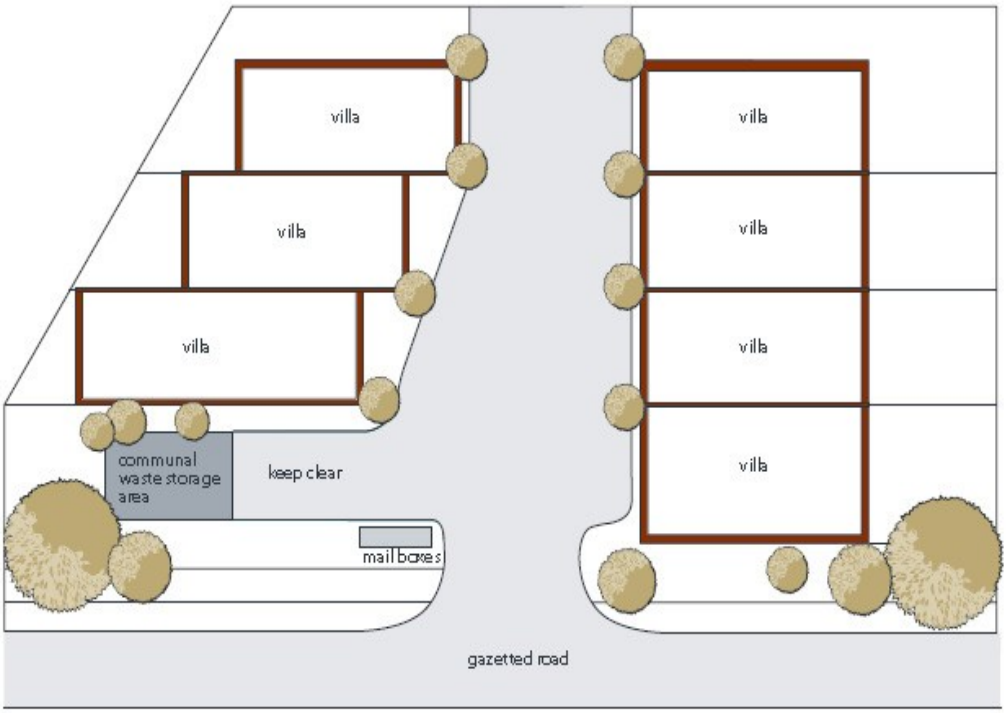


Figure 3: Example of Communal Storage Area for MGB's suitable for Villas

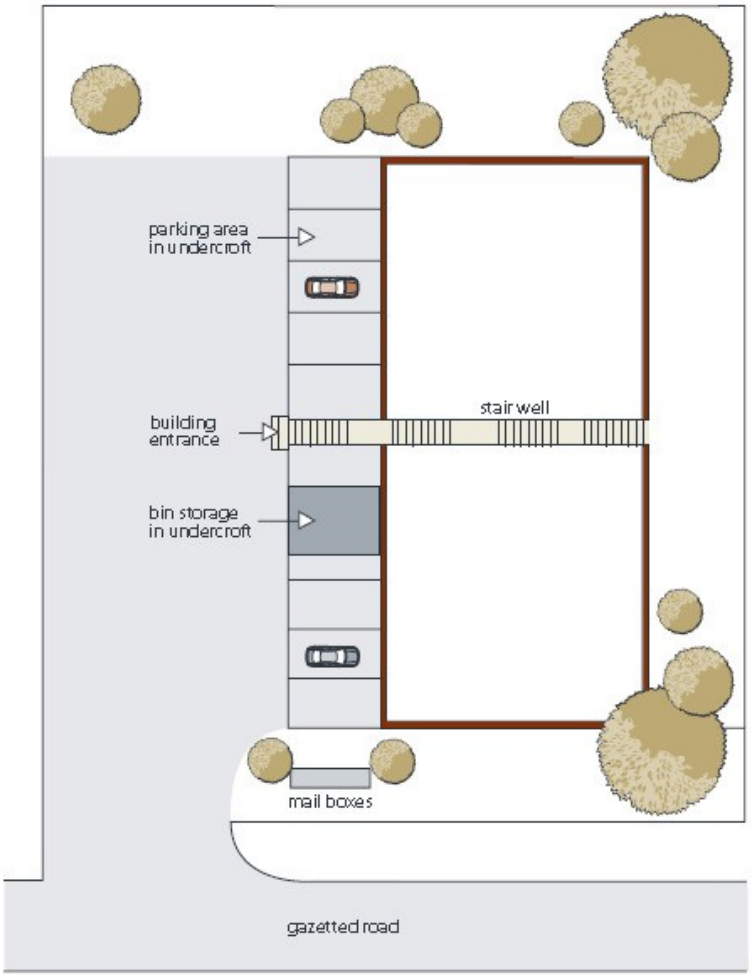


Figure 4: Example of Communal Storage Area for MGB's suitable for Low Rise Developments

6.2.3 Storage of Bulk Waste Bins

Waste Storage and Recycling Areas and Rooms

In the following circumstances a communal on-site waste storage and recycling area or room for bulk bins must be provided for multi-unit developments:

- where the size of the development exceeds 12 units or townhouses;
- where it is not possible or practical to store individual bins within the curtilage of each dwelling; and
- where the number of bins would not fit comfortably on the street frontage or would detrimentally affect residential amenity.

The Waste Storage and Recycling Area shall be of sufficient size to accommodate the number and types of bulk bins and 240 litre recycling MGBs required commensurate with the size of the development (refer to Appendix 4 for number and types of bins required and Appendix 5 for bin dimensions)

On difficult or steep sites, sites with particular natural features (such as watercourses), sites with two street frontages or particularly large developments it may be appropriate or necessary to have more than one waste storage and recycling area to minimise travel distances for residents and facilitate collection arrangements.

The Waste Storage and Recycling Area for bulk waste bins shall be located in the basement of the development or if located above ground must be appropriately screened. Information on the size, location and construction details and the number and types of bins proposed, shall be shown on the plans and attached to the waste management plan.

If garbage and recycling rooms are proposed in conjunction with waste storage areas it is necessary to indicate in the Waste Management Plan how waste and recyclables are to be transported from the garbage room to the storage area as advised in Appendix 7.

Adequate space shall be provided within the site to accommodate a rear-loading collection vehicle and to ensure that the vehicle is allowed to enter and exit in a safe manner. This may require the provision of a turning bay for trucks or provision of adequate turning circles. If turning circles are proposed they must comply with the turning circle for garbage trucks in Wyong Shire. A copy of this turning template is provided in Appendix 7.

Applicants shall provide information on turning circles in the waste management plan to demonstrate compliance. Pedestrian and traffic safety must be considered in the design of the storage and collection points for bins. It is essential that bulk bins be stored on a level area, as close to the entry of the development as practical to avoid service trucks having to enter or traverse the site to collect the waste. Wherever possible waste collection vehicle movement should be in a forward direction. Indemnity is required in situations where the collection truck is required to enter the site to perform on-site services. Figures 5, 6 and 7 provide an example of communal waste storage areas for bulk waste bins.

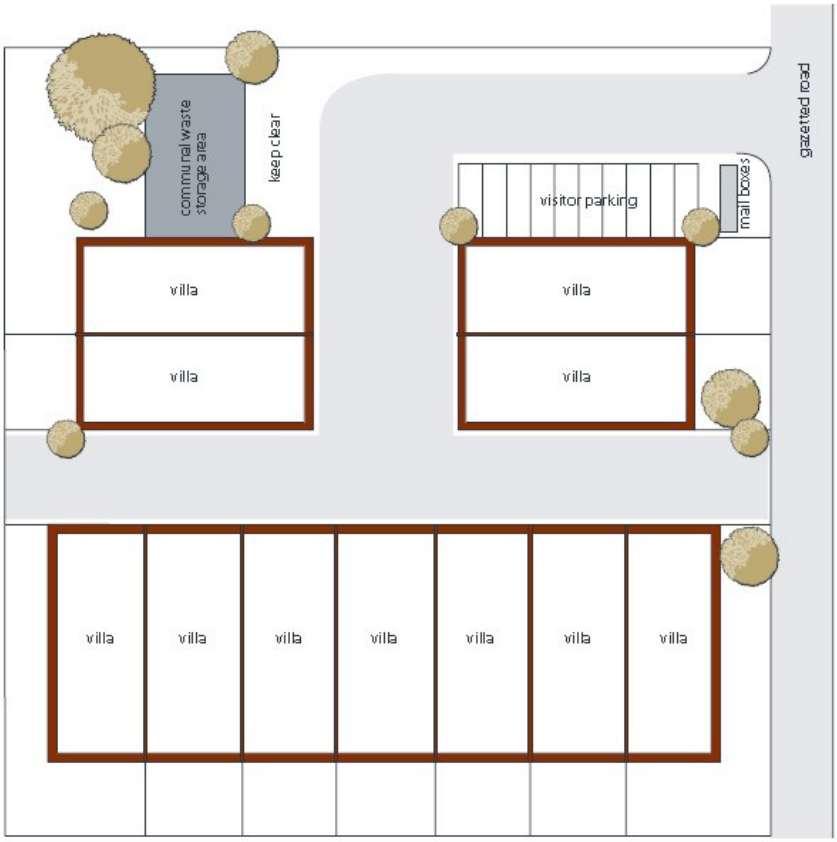


Figure 5: Example of Communal Storage Area for Bulk Bins suitable for Villas

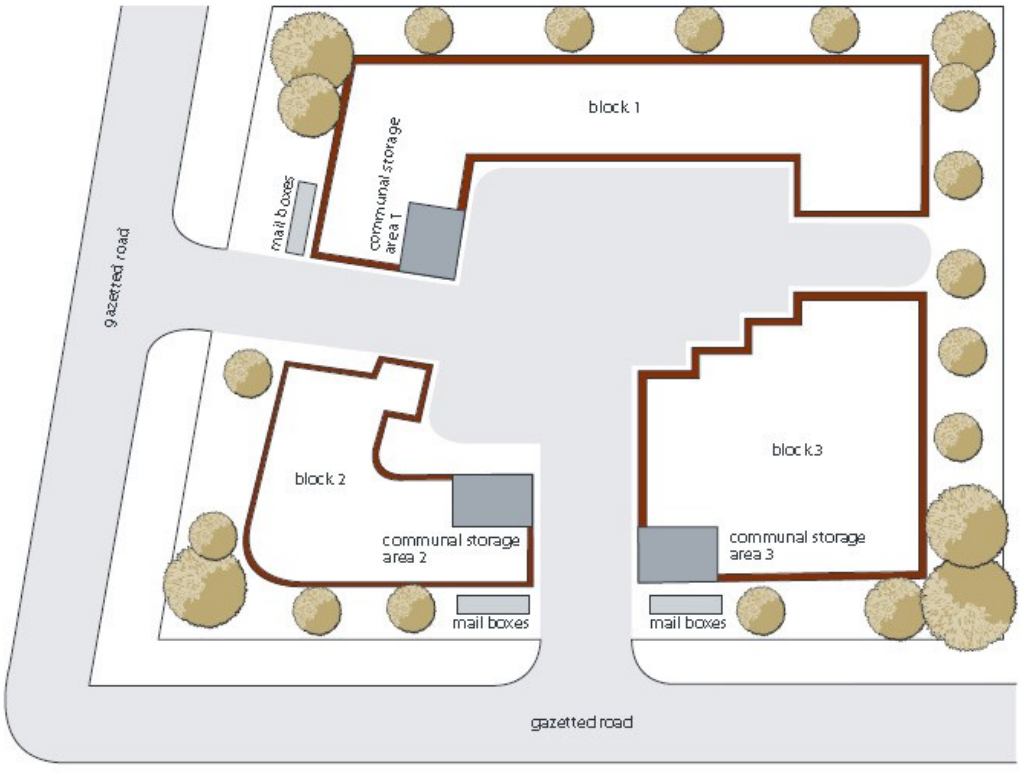


Figure 6: Example of Communal Storage Area for Bulk Bins suitable for Low Rise Developments

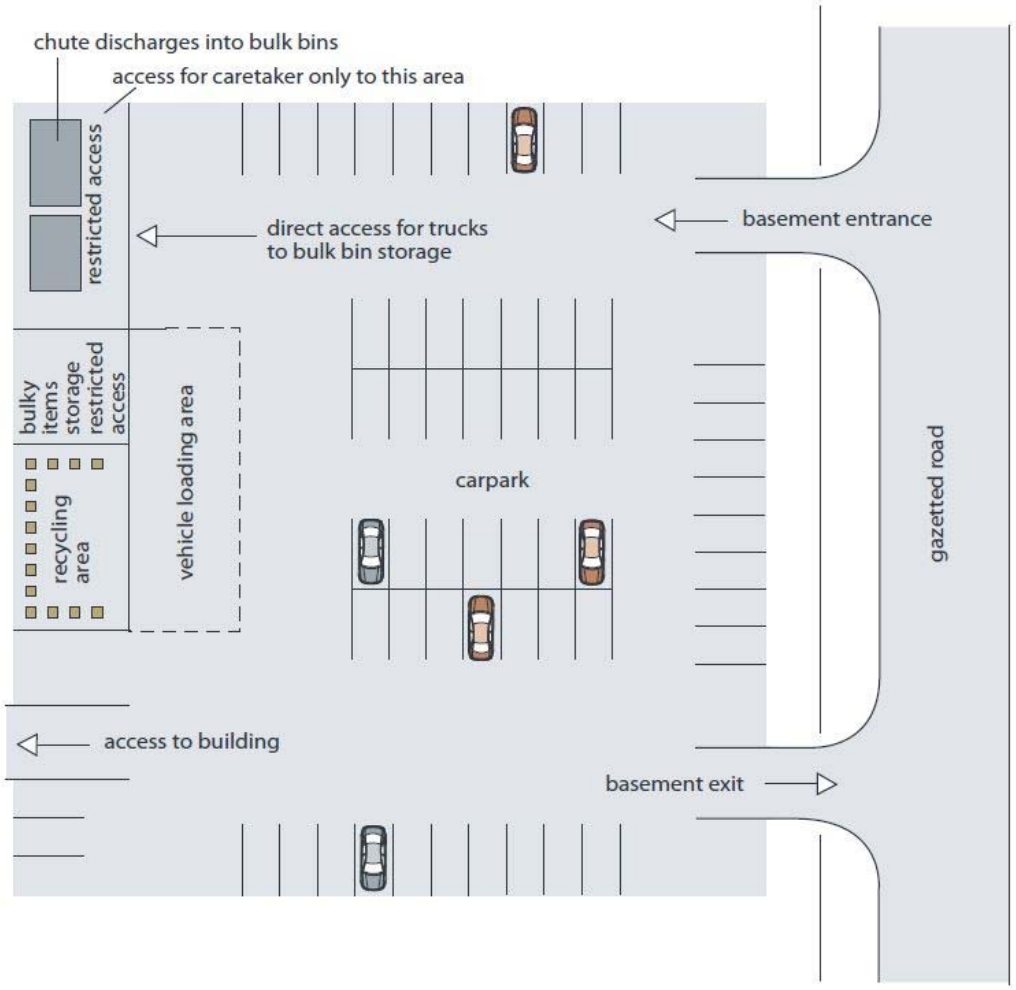


Figure 7: Example of Communal Storage Area for Bulk Bins suitable for Multi-Unit Developments

6.3 Multi-Storey Buildings

Garbage Chute Systems

Development exceeding three storeys must be provided with an acceptable method for transporting waste from each level to a garbage and recycling room. This could be a goods lift, a chute system (refer to Appendix 7 for further information), or some other means of providing direct and convenient internal access. Where garbage chutes are proposed, recycling rooms must be provided on each floor to accommodate sufficient 240 litre recycling bins to store at least one day's volume of recyclables. The recycling bins must be transported to the waste storage and recycling area daily or when full and replaced with empty recycling bins. Information must be provided on the design of the garbage chute, location, design and size of the recycling room(s) and how recyclables are transported to a waste storage and recycling area. Figure 8 show an example of an interim storage area and chute system.

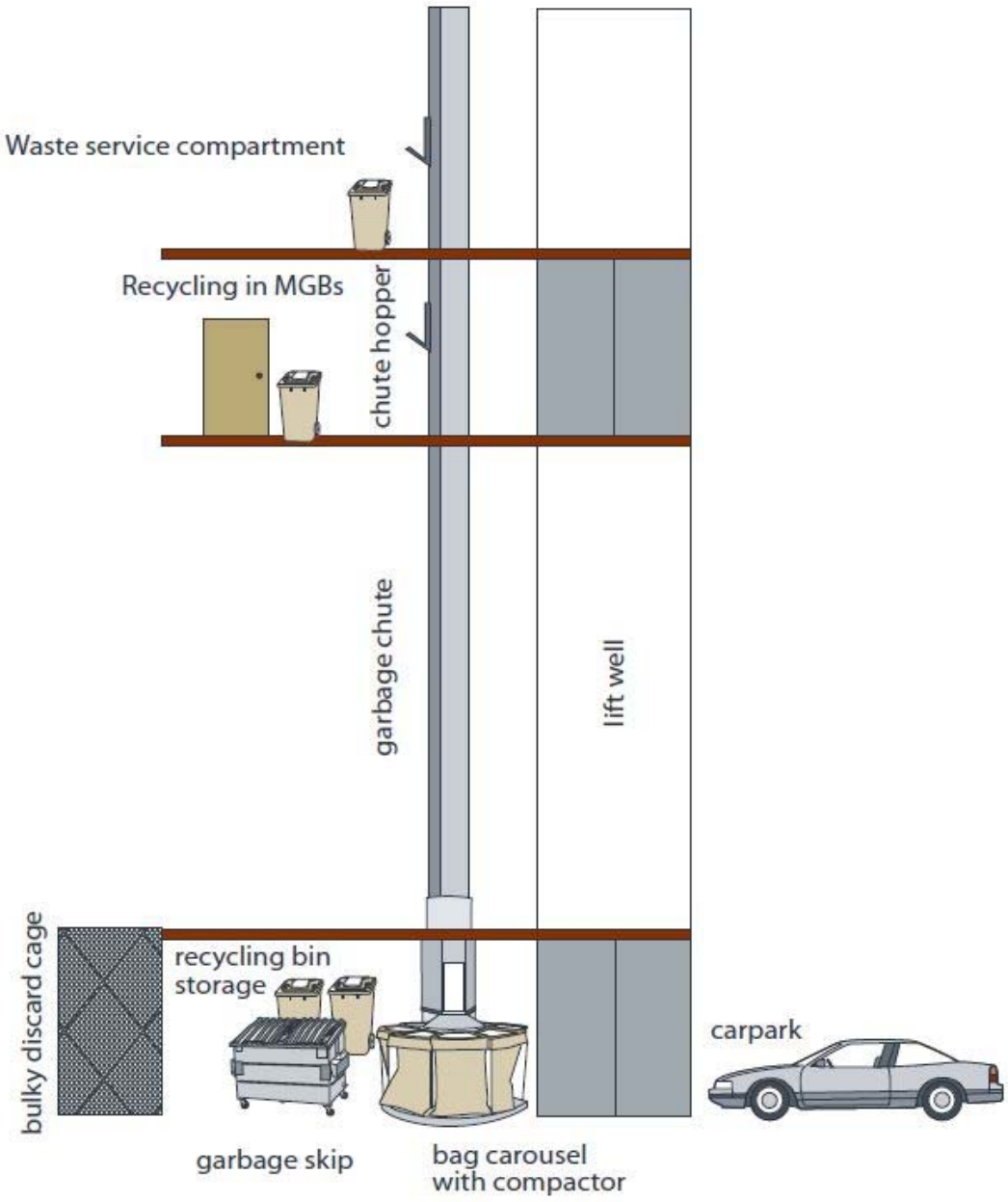


Figure 8: Example of Interim Storage Area and Chute System

Volume Reduction Equipment and Food Waste Disposal Units

Where it is considered necessary, compaction and other volume reduction equipment may be provided in the waste storage and recycling room. Such equipment could save space on site, where difficult design constraints occur. Waste reduction equipment should be considered for all buildings greater than 25 metres high. Volume reduction equipment must not be used for recyclables as removing contaminants from compacted recyclables is almost impossible and markets will reject compacted loads containing contaminants. Compaction equipment must be suitably soundproofed. In normal circumstances, there will not be a reduction in area requirements where such equipment is proposed. Council considers that area requirements should allow for possible changes in on-site waste management arrangements.

Note: The installation of food waste disposal units e.g. Insinkerators, are NOT permitted in Wyong Shire.

7. MIXED USE DEVELOPMENT

Mixed use developments incorporate residential dwellings and commercial establishments within the same development and would include, for example, shop-top housing.

Mixed use developments may be small, for example, two storeys, incorporating a residential unit on the top floor and commercial outlet on ground level, or they may be large, with one or more levels of commercial property beneath low-rise or larger medium to high-rise residential developments. Figure 9 provides an example of waste storage for mixed use developments.

7.1 Key problems

There are often serious problems with commercial tenants using the residential waste facilities (or vice versa) in mixed use developments, which can cause overloading of the waste management system, unhygienic conditions and disputes over payment for collection.

Better practice waste management in mixed use developments requires the complete separation of the residential and commercial waste facilities. Residential and commercial tenants should be actively discouraged from using each other's waste facilities.

Design garbage and recycling systems for the management of commercial wastes so they reduce potential adverse impacts on residential units within the development is encouraged.

7.2 Provision of services

Wyong Council is not required to provide waste services to commercial businesses, so they may elect to only service the residential dwelling component of mixed use developments. In this situation a private waste contractor would be required to remove the commercial waste, or a private waste contractor may be engaged to remove both the residential and commercial garbage and recycling.

It should be noted that if a private contractor were used to provide the garbage and recycling services, residents may still be required to pay a service availability charge to Council, as stipulated under section 146 of the Local Government Act 1993, in addition to the contractor's fee.

7.3 Commercial

The garbage and recycling systems installed in commercial developments will vary according the types and quantities of waste and recyclables generated.

Better practice waste management should be achieved by applying the general principles as outlined in Section 5 for commercial developments. Some indicative commercial waste generation rates are included in Appendix 2 as a guide.

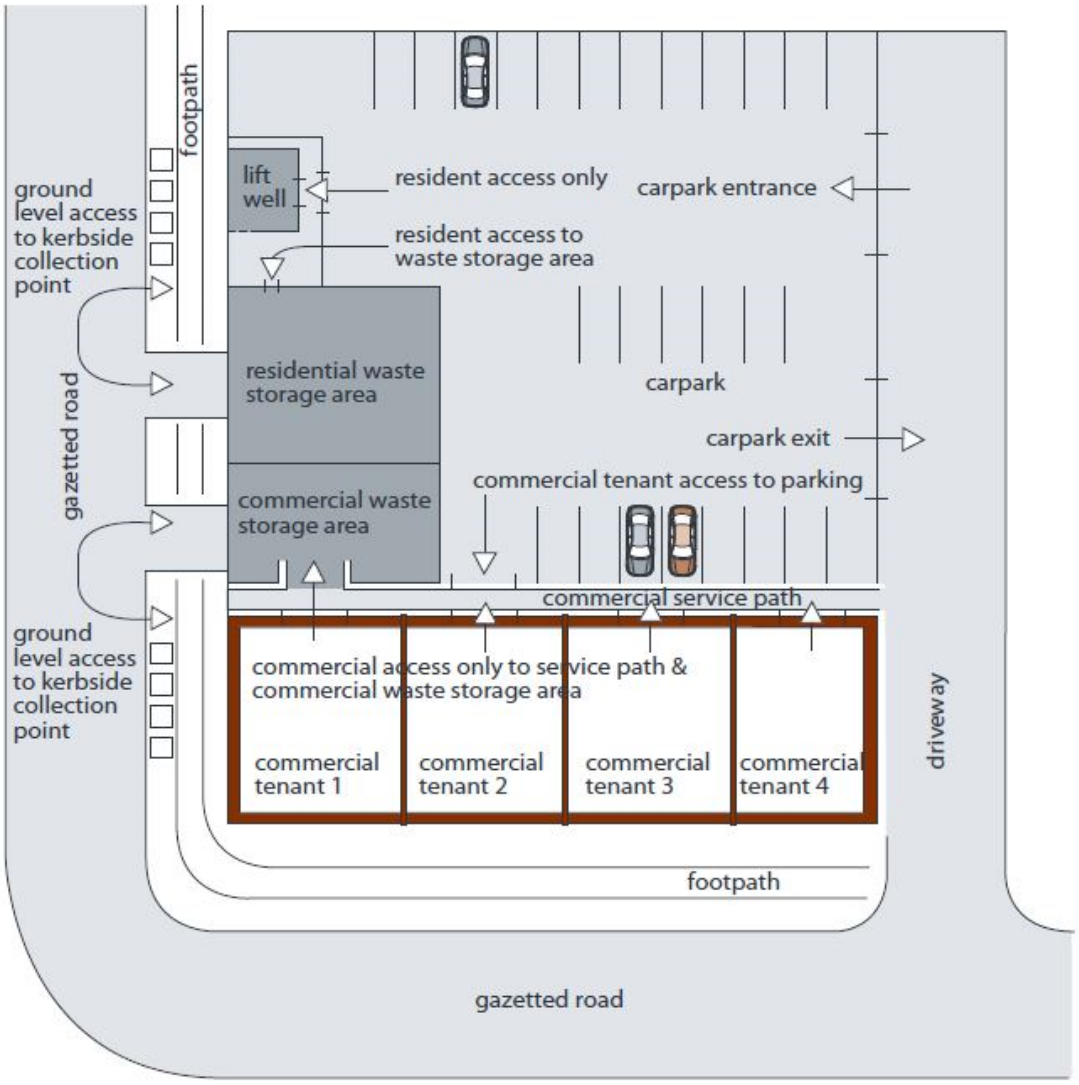


Figure 9: Example of waste storage in mixed use development

7.4 Waste Storage and Recycling Area

Waste Storage and Recycling Areas must be provided for commercial premises where it is not possible or impractical to store bins within the curtilage of each commercial unit. The waste storage and recycling area shall be of sufficient size to accommodate the number and types of waste bins (bulk bins and/or MGBs) and 240 litre recycling MGBs required commensurate with the size of the development (refer to Appendix 4 for number and types of bins required and refer to Appendix 5 for bin dimensions)

The size of the waste storage and recycling area shall be calculated on the basis of waste generation rates and proposed bin sizes. Calculation of waste generation rates should be based on industry standards. General advice on anticipated generation rates is provided in Appendix 2, as a cross check.

Information on the location and construction details and sizes and of the waste and recycling storage area and the number and types of bins proposed shall be attached to the Waste Management Plan.

Where it is proposed to service bins on-site, adequate space shall be provided within the site to accommodate a waste collection vehicle and to ensure that the vehicle is allowed to enter and exit in a safe manner. This may require the provision of a turning bay for trucks or provision of adequate turning circles. If turning circles are proposed, they must comply with the turning circle for appropriate garbage trucks. The Waste Management Plan must provide information on the turning circles proposed.

The use of volume reduction equipment may be appropriate where space is a problem. If volume reduction equipment is proposed details must be provided in the Waste Management Plan.

Separate waste storage and recycling areas shall be provided for mixed use developments.

7.5 Garbage Chute

Buildings containing more than three storeys shall be provided with an acceptable method for transporting waste from each level to a garbage and recycling room. This could be a goods lift, a chute system (refer to Appendix 7 for further information), or some other means of providing direct and convenient internal access. Where such facilities are utilised, space must be provided at each level for temporary storage of recyclables. Information shall be provided on the design of the garbage chute, location, design and size of the recycling room(s) and how recyclables are transported to a waste storage and recycling area.

Ongoing management is a significant issue and details are required in the Waste Management Plan.

7.6 Food Shops, Restaurants and Refrigerated Garbage Rooms

Special attention should be paid to food waste generation. Specialised containment should be provided and a regular and frequent collection service arranged to ensure that no impacts result form the activity.

7.7 Grease Arresters

Contact should be made with Wyong Water – Commercial Enterprise – Trade Waste unit to obtain trade waste requirements for the installation of grease arresters and liquid waste.

8. INDUSTRY

8.1 Waste Storage and Recycling Area

Waste Storage and Recycling Areas shall be required for commercial premises where it is not possible or impractical to store bins within the curtilage of each industrial unit.

The waste storage and recycling area shall be of sufficient size to accommodate the number and types of waste bins (bulk bins and/or MGBs) and 240 litre recycling MGBs required commensurate with the size of the development (refer to Appendix 4 for number and types of bins required and refer to Appendix 5 for bin dimensions).

The size of the waste storage and recycling area shall be calculated on the basis of waste generation rates and proposed bin sizes. Calculation of waste generation rates should be based on industry standards. General advice on anticipated generation rates is provided in Appendix 2.

Information on the location and construction details and sizes and of the waste and recycling storage area and the number and types of bins proposed shall be attached to the Waste Management Plan.

Where it is proposed to service bins on-site, adequate space shall be provided within the site to accommodate a waste collection vehicle and to ensure that the vehicle is allowed to enter and exit in a safe manner. This may require the provision of a turning bay for trucks or provision of adequate turning circles. If turning circles are proposed, they must comply with the turning circle for appropriate garbage trucks. The Waste Management Plan must provide information on the turning circles proposed.

The use of volume reduction equipment may be appropriate where space is a problem. If volume reduction equipment is proposed details must be provided in the Waste Management Plan.

Separate waste storage and recycling shall be provided for mix use developments.

The area(s) should be flexible in design so as to allow for future changes of use of the units.

9. PUBLIC EVENTS

An adequate number of waste and recycling bins shall be provided based on the number of visitors expected. Special Event litter bins and recycling bins can be provided by council's contractor at cost. For further information contact Council's Customer Service Centre on (02) 4350 5555. Strategies must be developed incorporating adequate signage to educate the public on the correct use of the recycling bins in order to minimise contamination of the recyclable material.

10. HAZARDOUS WASTE

Generation, storage and disposal of hazardous wastes (refer definition of hazardous waste) require particular attention. Hazardous waste must not be placed in household or commercial waste bins and special arrangements need to be made for its collection and disposal. Some hazardous waste generating activities are required to be licensed by the EPA. Types of hazardous waste are listed in Appendix 3.

For more information contact Wyong Shire Council on 4350 5555

Appendix 1 Sample Waste Management Plan

To facilitate waste minimisation, Council requires the preparation of a Waste Management Plan. To assist you in this process, this Appendix contains a completed sample Waste Management Plan, detailing the types of waste likely to be generated and potential waste solutions, and a blank Waste Management Plan form.

Completing the Waste Management Plan will assist you in identifying the type of waste that will be generated and also assists you in advising Council how you intend to re-use, recycle or dispose of the waste. Demolition and construction waste dockets are to be retained on site so that the location of the receiving facility for recycling or disposal can be confirmed by EPA or Council.

The information provided on the form (and your plans) will be assessed against the objectives of DCP 2013 Chapter 3.1 – Controls for Site Waste Management (e.g. to maximise re-use and minimise disposal) and the performance criteria for your particular use. The applicable sections of this form must be completed and submitted with all development applications for subdivision and demolition or any construction application to carry out activities requiring the approval of Council.

If the space is insufficient in the table please provide attachments.

Waste Management Plan

Wyong Shire Council

Property details

Address of Property: 452 River Road Wyong

Lot(s): 1111 DP(s): 123456

Applicant's details

Applicant's Name: JA Smith

Address: 123 River Road

Wyong Postcode: 2259

Telephone: (02)4343 1234 Mobile: 0412 345 678

Email:

Buildings and other structures currently on the site

Nil

Approximate age of structures

1: ____ ____ years

2: ____ ____

3: ____ ____

Brief description of proposal

New Two Storey Dwelling

Office Use Only

Application no ____ Receipt no ____

CCO name ____ Date ____ / ____ / ____

Section 1: Subdivision, Demolition Stage (Site preparation stage)

Materials on Site		Destination		
		Re-Use & Recycling		Disposal
Type of material	**Estimated Volume (m^3)**	***On-Site*** • Specify proposed re-use or onsite recycling methods • See Guidelines for suggestions	***Off-Site*** • Specify contractors and recycling outlet • See recycling Guide for outlets • See Guidelines for suggestions	• Specify contractor and land site • See Recycling Guide for contracts
Excavation material	20	Reuse part as on site fill. Stockpile to soil and re use for landscaping purposes		Remainder to landfill by waste contractor
Garden organics / Trees	10	Store on Site	To green waste facility for composting	Nil
Bricks	100		To concrete recycling facility	Nil
Concrete	Nil		To concrete recycling facility	
Timber (please specify)		Separated on site. Proportion to be used as formwork	Usable remainder to recycling for resale. Fencing sold for firewood	Unusable waste to landfill
Plasterboard			To recycling facility for crumbing and re-use	
Metals (please specify)	20		To metal recycler	
Asbestos (please specify)	Max 10 sq. m.	Must be removed by a qualified asbestos removalist		Remove to Waste Management Facility
Other (please specify) *Windows* *Doors etc.*			To Tender Centre for sale as 2nd hand building products	

Section 2: Construction Stage

Excess Materials on Site		Destination		
		Re-Use & Recycling		Disposal
Type of excess material	***Estimated Volume (m3)***	***On-Site*** • Specify proposed re-use or onsite recycling methods • See Guidelines for suggestions	***Off-Site*** • Specify contractors and recycling outlet • See recycling Guide for outlets • See Guidelines for suggestions	• Specify contractor and land site • See Recycling Guide for contracts
Excavation material		See Section 1 (Site Preparation)		
Garden organics / Trees		See Section 1 (Site Preparation)		
Bricks	2	Use as fill material behind retaining wall	Remainder to concrete recycling facility	
Concrete	5	Use as fil material behind retaining wall	Remainder to concrete recycling facility	
Timber (please specify)	3	Mulch for landscaping purposes Re-use as firewood	Untreated timber to composting facility	Treated timber to landfill
Plasterboard	2		To recycling facility for crumbing and re -use	
Metals (please specify)	0.5		To metal recycling facility	
Other (please specify) *Cardboard* *Plastics etc.*	2 1		To recycling facility	Unusable waste to landfill

Section 3: Use of Premises

Type of Waste to be Generated	Proposed On-Site Storage and Treatment Facilities	Destination
Please specify: *For example: glass, paper, food waste, organic wastes, off cuts, etc.*	*For example:* • *Waste storage & recycling area* • *Turning circles for trucks, provision of turning bays, proposed movement of collection vehicle through the site.* • *Garbage chute.* • *Compaction equipment*	*For example:* • *Recycling* • *Disposal* • *See Recycling guide for contracts* • *Specify contractor*
Household Recyclables – Plastics, Cardboard, Bottles, Cans	Place recyclables into yellow recycling bin	Place bin on kerb for collection by Council's Collection Contractor. Transport to materials recovery facility for sorting.
Household waste – Non-recyclable waste e.g. Nappies and wrappers	Place waste into red waste bin or bulk bin	Place bin on kerb for collection by Council's Collection Contractor. Transport to Buttonderry Waste Management Facility
Vegetation – Grass clippings Tree pruning	Place vegetation into green garden vegetation bin	Place bin on kerb for collection by Council's Collection Contractor. Transport to green waste processing facility

Section 4: Ongoing Management

This section provides the ability to supply additional information as to how waste is to be managed during the ongoing operation of the development.

Describe how you intend to ensure ongoing management of waste on-site (eg: lease conditions, caretaker / manager on site). For example:

1. Original proprietor to prepare a waste management system addressing waste collection, recycling and disposal for implementation. System to outline expectations and achievable objectives for sorting and separating waste and the on-site management of the waste area.
2. A formal information package to be presented to each new occupant for individual implementation.
3. Staff to be trained in the system with regular six monthly reviews.
4. Staff to oversee waste system to ensure the area is maintained in a tidy and clean condition and that waste bins are in position for collection on the scheduled dates.
5. All bins in waste area to be clearly marked indicating their use

A.1.2 Additional Information

Table 5: Additional information required

Issues	Information required
Waste and Recycling generation rate	Quantity of waste and recyclables generated per week for ongoing use of facility
Waste Storage and Recycling Area	Location, size, number of bulk bins, number of MGBs (waste and recycling)
Garbage and recycling rooms	Location, size, number of MGBs (waste and recycling), mode to transport to waste storage and recycling area
Garbage chute	Location, design details,
Compaction systems	Design and application details
On-site servicing	Turning circles for trucks, provision of turning bays, height of basement, proposed movement of collection vehicle through the site.

A.1.3 Waste Management Plan (Blank Form)

Waste Management Plan

Property details

Address of Property _____

_____

Lot(s) _____ DP(s) _____

Applicant's details

Applicant's Name _____

Address _____

_____ Postcode _____

Telephone ( ) _____ Mobile _____

Email _____

Buildings and other structures currently on the site

_____

_____

_____

_____

Approximate age of structures 1: _____ ____ years

2: _____ ____

3: _____ ____

Brief description of proposal

_____

_____

_____

_____

Office Use Only

Application no _____ Receipt no _____

CCO name _____ Date ___/___/___

Section 1: Subdivision, Demolition Stage (Site preparation stage)

Materials on Site		Destination		
Type of material	**Estimated Volume (m^3)**	***On-Site*** Specify proposed re-use or onsite recycling methods	***Off-Site*** Specify contractors and recycling outlet	***Disposal*** Specify contractor and land site
Excavation material				
Garden organics / Trees				
Bricks				
Concrete				
Timber (please specify)				
Plasterboard				
Metals (please specify)				
Asbestos (please specify)				
Other (please specify)				

Section 2: Construction Stage

Excess Materials on Site		Destination		
Type of excess material	**Estimated Volume (m3)**	***On-Site*** Specify proposed re-use or onsite recycling methods	***Off-Site*** Specify contractors and recycling outlet	***Disposal*** Specify contractor and land site
Excavation material				
Garden organics / Trees				
Bricks				
Concrete				
Timber (please specify)				
Plasterboard				
Metals (please specify)				
Other (please specify)				

Section 3: Use of Premises

Type of Waste to be Generated	*Proposed On-Site Storage and Treatment Facilities*	*Destination*
Please specify: *For example: glass, paper, food waste, organic wastes, off cuts, etc.*	*For example:* * *Waste storage & recycling area* * *Turning circles for trucks, provision of turning bays, proposed movement of collection vehicle through the site.* * *Garbage chute.* * *Compaction equipment*	*For example:* * *Recycling* * *Disposal* *See Recycling guide for contracts* *Specify contractor*

Appendix 2 Waste Generation Rates

Table 6: Typical Waste Generation Rates

Type of Premises	Waste Generation	Recyclable Material Generation
Backpackers accommodation	40L / occupant / week	20 litres / occupant / week
Boarding house, Guest house	60L / occupant / week	20 litres / occupant / week
Food Premises		
• Butcher	80L / 100 m^2 floor area / day	Discretionary
• Delicatessen	80L / 100m^2 floor area / day	Discretionary
• Fish Shop	80L/ 100m^2 floor area /day	Discretionary
• Greengrocer	240L / 100m^2 / day	120L / 100m^2/day
• Hairdresser	60L / 100m^2 floor area / day	Discretionary
• Restaurants	660L/100m^2 floor area /day	130L /100m^2 floor area/ day
• Supermarket	660L/100m^2 floor area / day	240L / 100m^2 day
• Takeaway	80L / 100m^2 floor area / day	Discretionary
Hotel	5L / bed / day 50L / 100m^2 bar area / day 660L/100m^2 dining area/ day	50L / 100m^2 bar area / day or dining areas / day
Licensed club	50L / 100m^2 bar area / day	50L / 100m^2 / bar area / day or dining area / day
Motel (without public restaurant)	5L / bed / day 660L/100m^2 dining area/ day	1L / bed / day
Offices	10L / 100m^2/day	10L / 100m^2/ day
Shops (non-food sales)less than 100m^2 – floor area	50L / 100m^2 floor area / day	25L / 100m^2 floor
Shop over 100m^2 floor area	50L / 100m^2 floor area/day	50L / 100m^2 floor area / day
Showrooms	40L / 100m^2 floor area /day	10L / 100m^2 floor area / day

Appendix 3 Hazardous Waste

According to Table 4 of the Environmental Guidelines: Assessment, Classification & Management of Liquid & Non-Liquid Wastes (EPA) the following materials are classified as hazardous:

1. **Any waste that meets the criteria for assessment as dangerous goods under the Australian Code for the transport of Dangerous Goods by Road and Rail, and categorised as one of the following:**
    a) explosives
    b) gasses (compressed, liquified or dissolved under pressure)
    c) flammable solids (excluding, organic waste and all physical forms of carbon such as activated carbon and graphite),
    d) flammable liquids
    e) substance liable to spontaneous combustion (excluding organic waste and all physical forms of carbon and graphite),
    f) substances which in contact with water emit flammable gases
    g) oxidising agents and organic peroxides
    h) toxic substances
    i) corrosive substances
2. **Pharmaceuticals and poisons being waste generated by activities carried out for business or other commercial purposes and that consist of pharmaceutical or other chemical substances specified in the Poisons List under the Poisons and Therapeutic Goods Act 1966).**
3. **Clinical waste**
4. **Cytotoxic waste**
5. **Sharps waste**
6. **Any radioactive waste, being waste that:**
    a) contains a substance that emits ionising radiation spontaneously, and
    b) consists of, or contains more than, the prescribed activity of any radioactive element listed in Schedule 1 to the Radiation Control Regulation 1993
7. **Any liquid radioactive waste, being waste that:**
    a) contains a substance that emits ionising radiation spontaneously, and
    b) has specific activity ratio or a total activity ratio (as determined in accordance with procedures set out in the Waste Guidelines) that is greater than one.
8. **Any declared chemical waste that:**
    a) is the subject of a chemical control order under the Environmentally Hazardous Chemicals Act 1985, and
    b) is not permitted to be disposed of to a landfill site because of such an order
9. **Quarantine waste.**

Hazardous Waste cannot be placed in the standard waste or recycling bins.

Appendix 4 Council's Bin Types and Servicing Requirements

Single residential dwellings and multi-unit development (up to 12 units) are provided with:

1. 140 litre waste bin with a red lid. This bin is serviced weekly.
2. 240 litre recycling bin with a yellow lid. This bin is serviced fortnightly.
3. 240 litre garden vegetation bin with a green lid. This bin is serviced fortnightly but on alternate weeks to the recycling bin.

See Figures 10 and 11 for dimensions for MGBs

Note: Single residential dwelling west of the Freeway (F3) are not entitled to the 240 litre garden vegetation bin.

Multi-unit residential developments (more than 12 units) are provided with:

1. Bulk bins (660 litre, 1100 litre or 1500 litre) for the storage of non-recyclable waste.

   Size and service frequency depends on unit numbers. Generally 140 litre capacity is allowed per unit. Adequate truck access must be available to service bulk bins.
2. 240 litre waste bins with a red lid. These bins are serviced weekly.
3. 240 litre recycling bins with a yellow lid. These bins are generally serviced fortnightly, but weekly servicing can be arranged.
4. 240 litre garden vegetation bins with a green lid. These bins are serviced fortnightly

Commercial and industrial building can be provided with:

1. Bulk bins (660 litre, 1100 litre or 1500 litre) for the storage of non-recyclable waste.

   Size and service frequency depends on unit numbers. Generally 140 litre capacity is allowed per unit. Adequate truck access must be available to service bulk bins.
2. 240 litre waste bins with a red lid. These bins are serviced weekly.
3. 240 litre recycling bins with a yellow lid. These bins are generally serviced fortnightly, but weekly servicing can be arranged.
4. 240 litre garden vegetation bins with a green lid. These bins are serviced fortnightly Bins must not be kept in front of the premises, unless an appropriately screened Waste Storage and Recycling Area is approved and provided.

Figures 12, 13 and 14 provide the dimensions of bulk waste bins.

Bins are to be placed at the collection point (20-50cm from the kerb of the street's pavement with handle closest to roadway), no earlier than the evening prior to the collection day.

Bins are to be removed from the public place by the property owner or occupier as soon as practicable after service, but no later than the evening of collection day.

Council generally does not collect waste from within the site. If on-site collection is essential (eg bulk bins are being utilised), Councils contractor will require indemnity against potential damage to access roads.

Table 7: Bulk bin requirements and service frequencies

Bulk bin requirements and service frequencies for Multi-unit Residential Development		
No. of Units	Bulk Bin Capacity (litre)	Services per Week
Up to 12 units or townhouses	Mobile Garbage Bins shall be used	
12	1 x 660	2
15	1 x 660	3
20	1 x 1100	2
25	1 x 1500	2
30	1 x 1100	3
35	1 x 1500	3

Note: For multi-unit residential developments with more than 35 units contact Council's Waste Management Section.

Note: Retirement Units are calculated at half the above rates or as considered appropriate by Council for the particular development.

Appendix 5 Bin Specifications and dimensions

240 Litre Mobile Bin

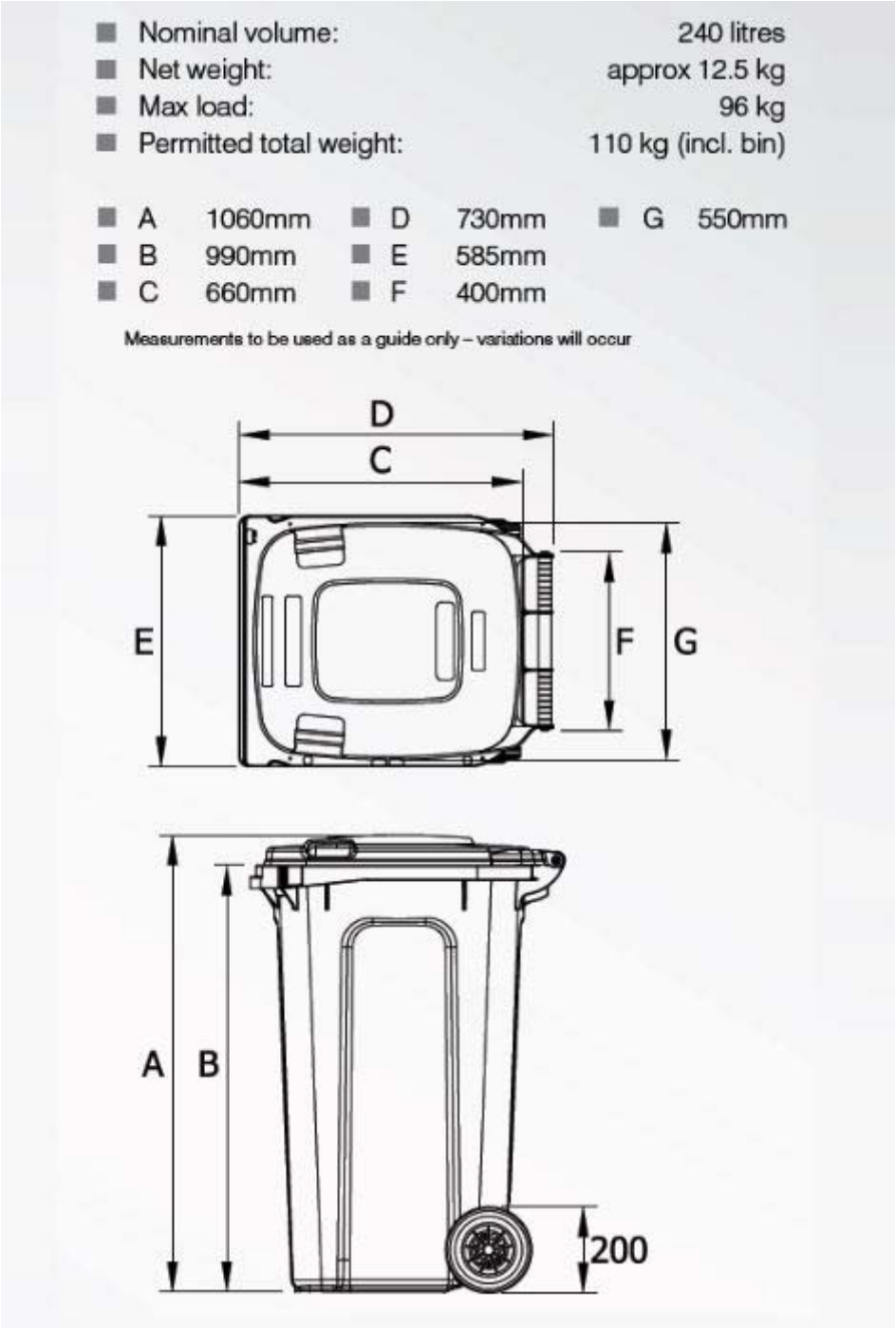


Figure 10: Dimension for 240 litre MGB. (Adapted from Sulo Brochure: www.sulo.com.au)

140 Litre Mobile Waste Bin

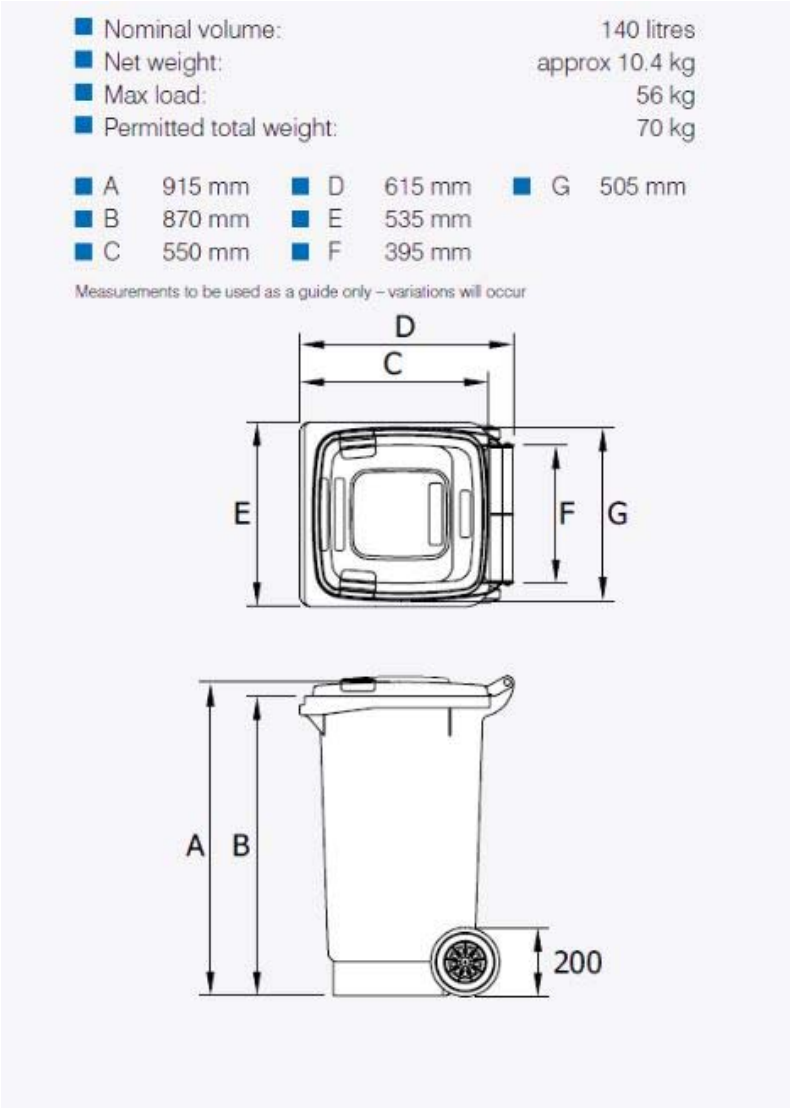


Figure 11: Dimension of 140 l waste bin (Adapted from Sulo Brochure: www.sulo.com.au)

660 Litre Bulk Bin

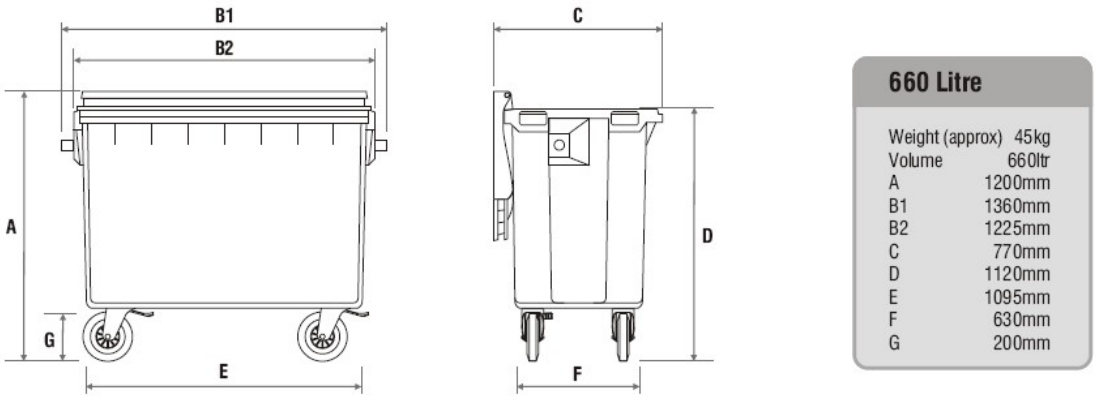


Figure 12: Dimensions of 660 litre bulk bin (www. Mastec.com.au)

1100 Litre Bulk Bin

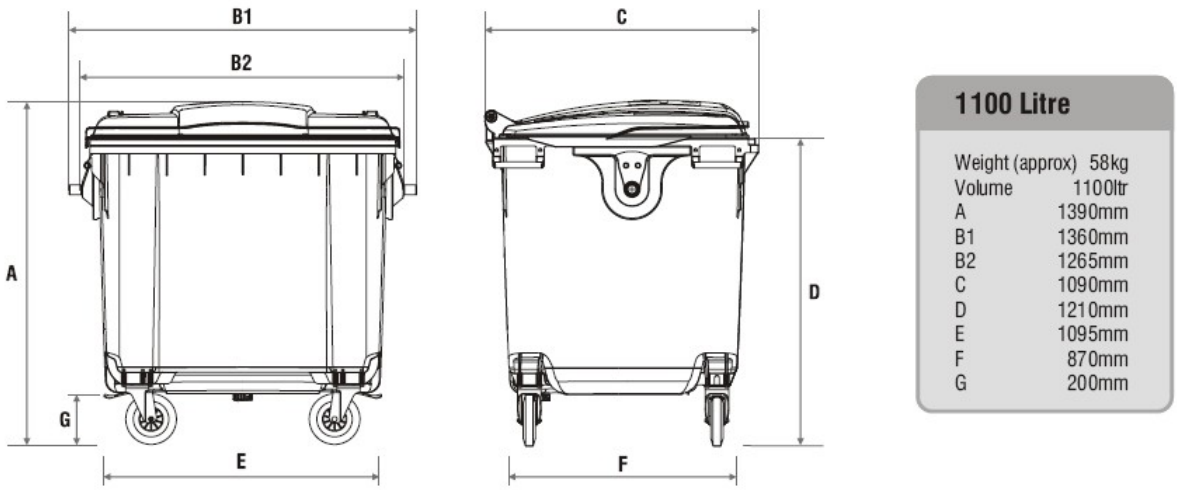


Figure 13: Dimensions of 1100 litre bulk bin (www.Mastec.com.au)

1500 Litre Bulk Bin

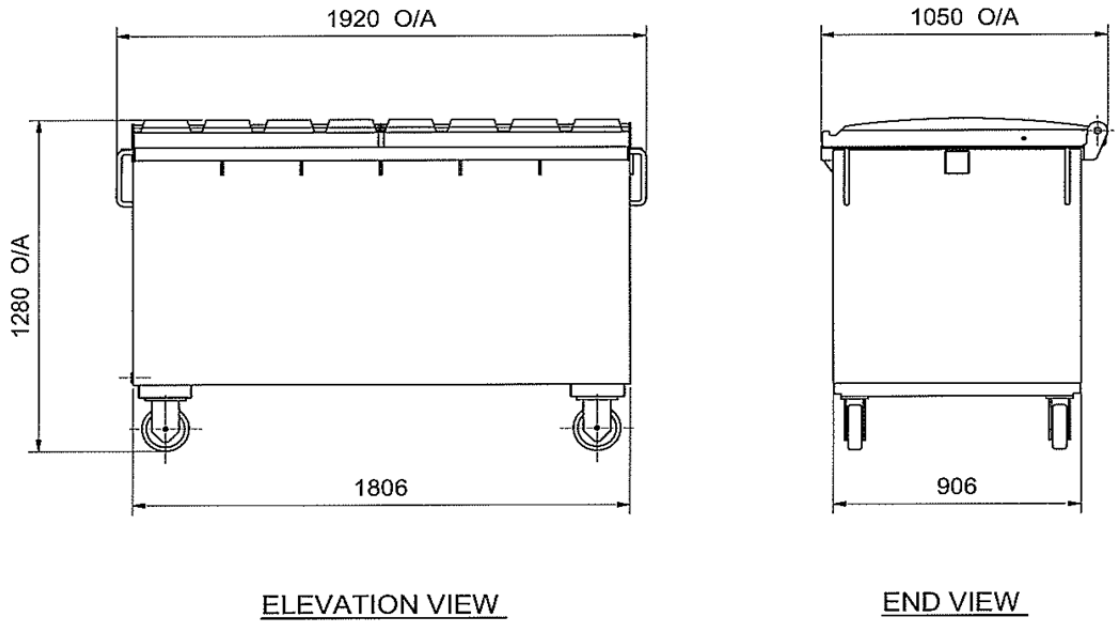


Figure 14: Dimensions for 1500 litre bulk bin (www.Mastec.com.au)

Bin Dimensions

Table 8: Summary of bin dimensions

	140 litre bin	240 litre bin	660 litre bulk bin	1.1 m^3 bulk bin	1.5 m^3 bulk bin
Width (m)	.535	.580	.630	.870	1.920
Length (m)	.640	.730	1.095	1.095	.906
Height (m)	.920	1.060	1.200	1.390	1.280

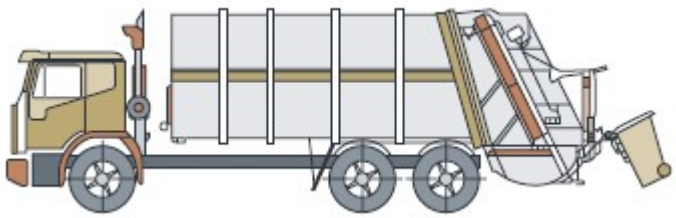
Appendix 6 Collection Vehicle Specifications

Table 9: Collection vehicle specification

Dimensions in millimetres	Waste Truck (side loader)	Recycling & Garden Vegetation Truck (side loader)	Bulk Bin Truck (rear loader)
Width	3200	3200	3200
Length	9460	9828	9599
Height	3546	3700	3257
Minimum height to service 240 litre MGB	3857	3857	n/a
Minimum height to service 1.1 m^3 bulk bin	n/a	n/a	3800
Min space (length) to service 1.1m^3 bulk bin	n/a	n/a	11600
Minimum height to service 1.5 m^3 bulk bin	n/a	n/a	3800
Minimum space (length) to service 1.5 m^3 bulk bin	n/a	n/a	11600
Turning Circle	20560	20560	21390

Collection Vehicles

Rear loading vehicle



Side Loading vehicle

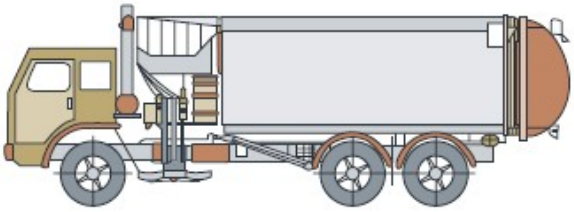


Figure 15: Types of Collection Vehicles

Appendix 7 Location and Design of Waste Storage and Handling Facilities

Waste storage and handling facilities can be:

- **Waste Storage and Recycling Areas**, where waste and recycling material are stored in the open and properly visually screened;
- **Garbage and Recycling Rooms**, within buildings for holding waste and recyclable material, (Compaction equipment can be provided);
- **Garbage Chute and Service Lift Systems,** for transporting waste in multi storey buildings; and
- **Collection Areas**, separate from storage areas, where waste is located immediately before collection.

Which facilities are used will depend upon the nature and size of the development. The facilities can also be used in combination. Figures 2-9 provide a number of examples.

A.7.1 General Principles

There are a number of general principles for the design and on-site location of waste management facilities.

Waste storage and handling facilities should:

- be conveniently located to enable easy access for on-site movement and collection;
- relate to other loading / unloading facilities;
- have sufficient space for the quantity of waste and recyclable materials generated and careful source separation of materials (e.g. recyclables);
- have sufficient space to comfortably contain any on-site treatment facilities (eg. Compaction equipment);
- have adequate weather protection where appropriate or required be enclosed or undercover;
- be secure and lockable, where appropriate;
- be well ventilated and drained to the sewer;
- be screened by landscaping or sympathetic materials, adding to the streetscape not detracting from it; and
- be clearly signposted to ensure appropriate use.

A.7.2 Location and Access

Perhaps the most obvious matter to consider for waste collection services is accessibility to the onsite waste storage and recycling area if servicing is required on site. Access to the waste storage and recycling area is required if bulk bins are proposed.

For commercial and industrial developments servicing of MGBs and bulk bins may occur on site depending on the collection contractor used and service arrangements entered into. If access onto the site is proposed, the following matters should be considered:

- the convenient placement of waste storage and recycling areas or garbage and recycling rooms;

- proposed sizes of collection vehicles that will enter the site;
- driveway widths and adequate height at entrance ways to basements etc;
- structural capability of driveway to carry fully loaded waste collection vehicles;
- turning circles, turning bays or three point turn arrangements so that vehicles enter and leave the site moving in a forward direction;
- on-site manoeuvrability, for all site users;
- ensuring legality of access. This could be by the creation of an easement. In some circumstances, private arrangements may be necessary for such on-site collection;
- The owners or beneficiaries of the access road are to provide Council with an indemnity, against any claims for damage to the access road in servicing the development.
- The access for vehicles collecting waste (where the vehicle has to turn on or off a roadway or turn within a property) the access must be designed in accordance with the AUSTROADS / STANDARDS AUSTRALIA 1995 PUBLICATION "Design Vehicles

  and Turning Path Templates". A sample turning circle for a Heavy Rigid Vehicle is show at Figure 16.

In all cases provision of communal waste storage and recycling areas or garbage rooms shall include consideration of the following:

- access for individual occupants; and
- proximity to site occupants and adjacent properties in terms of noise and odour control.

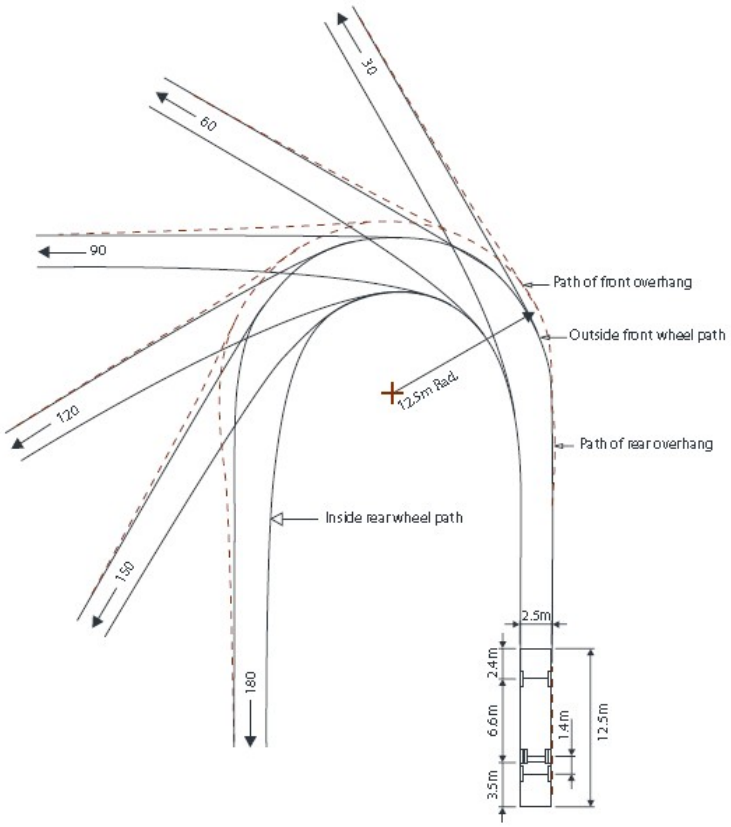


Figure 16: Turning Circle for Heavy Rigid Vehicle

A.7.3 Design of Waste Storage Areas

Requirements for Waste Storage and Recycling Areas:

Table 10: Waste Storage and Recycling Areas

Intent of Controls	Performance Criteria -the intent may be achieved where:	Standards-basedSolution
Adequate dimensions to accommodate waste and recyclables	The area is of adequate size Determine the number and size of bins required for the proposed development. Refer to Appendix 2 for waste generation rates and Appendix 4 for bin capacities for multi-unit developments. Calculate the floor area requirements. Allow sufficient space to manoeuver bins and for residents to be able to access bins comfortably.	Council standard bin sizes (refer to Appendix 5)
Aesthetically pleasing	Materials, design & landscaping complement the building & streetscape (Comply with DCP 2013: Chapter 2.4).	
Ready access to waste and recycling bins	The area is easily accessible by all occupants and sufficient space is provided to access all bins. If on-site servicing of bins is required then: • driveways are of adequate strength, width and design vehicle movement is in a forward direction • Bins can be serviced in a safe manner • entrance heights to basements allow access for collection vehicles	Maximum grade of driveway: 1:10 Minimum vertical clearance: 3.6 m Minimum width of driveway: 4 metres Minimum turning circle: 22 metres Designed in accordance with AS2890.1
Area does not impact on safety environment and residents' ambience	The area is located away from living / working space in buildings The area is weather protected The area is appropriately signposted e.g for recycling bins Manoeurability of all bins is easy with adequate space for ease of movement	Workcover Authority requirements

A.7.4 Design of Waste Storage and Recycling Rooms

Requirements for Waste Storage and Recycling Rooms:

Table 11 Waste Storage and Recycling Rooms

Intent of Controls	Performance Criteria -the intent may be achieved where:	Standards-based Solution
Adequate dimensions to accommodate garbage and recyclables.	The area is of adequate size. Determine the number and size of bins required for the proposed development. Refer to Appendix 2 for waste generation rates and Appendix 4 for bin capacities for multi-unit developments. Calculate the floor area requirements. Allow sufficient space to manoeuver bins and for residents to be able to access bins comfortably. For recycling rooms required in conjunction with garbage chutes, the area must be of sufficient size to store bins that hold at least 1 day's volume of recycling. Ceiling height is appropriate to type of service. Door width is sufficient for installation and maintenance of bins. Equipment is carefully installed including clear of walls and supported on plinths or legs.	2100 mm 820 mm minimum width (1800 for bulk bins) Plinths at least 75mm Legs 150 mm high
Ready access to waste and recycling bins	The room is easily accessible by all occupants and sufficient space is provided to access all bins. Bins can easily be manoeuvred to Waste Storage and Recycling area. If servicing of bins in the room is required then: • driveways are of adequate strength, width and design • vehicle movement is in a forward direction • bins can be serviced in a safe manner • entrance heights to basements allow access for collection vehicles	
Area does not impact on safety environment and residents' ambience	Adequate ventilation provided: • mechanical • natural Adequate water supply provided: • hot water for commercial uses • hose cocks protected	BCA Openings 5% of floor area and positioned to provide cross-floor ventilation. Recessed into the

Intent of Controls	Performance Criteria -the intent may be achieved where:	Standards-based Solution
	• hose available The room is well drained to a floor waste connected to the sewer. Floors, walls and ceiling are of impervoius material. Entry of Vermin is prevented. Adequate separation from walls where containers area is provided.	wall. Floor waste is located beneath hose cock or in close proximity to it. Steel trowel finished concrete floor (Min. 75 mm thick) and cement rendered walls. Ceilings to be durable and smooth. Doors to be self-closing and close fitting. Bump rail 50mm clear of walls
Safety	Doors are durable and door must be able to be opened from inside by a single handed action without the use of a key. • manoeuvrability of full bins is easy; • adequate space and ease of movement • the room is appropriately signposted e.g for recycling bins Adequate lighting, controllable from outside and inside, is provided.	Solid core doors Workcover Authority requirements. BCA. Flat surface over which bins are manoeuvred BCA, Workcover Authority requirements.

A.7.5 Design of Garbage Chute systems and Service Lifts

Development exceeding three storeys must be provided with one or more garbage chute systems or a passenger lift. A service room needs to be provided on each floor of the development to allow access to the garbage chute. Chutes should not open onto any habitable or public space. Hopper doors must have an effective self-sealing system. Where garbage chutes are proposed, the recycling rooms shall be provided on each floor to accommodate sufficient 240 litre recycling bins to store at least one day's volume of recyclables. It is acceptable to combine the service room for the chute system and the recycling room.

The recycling bins shall be transported to the waste storage and recycling area daily or when full and replaced with empty recycling bins. Information shall be provided within the application on the design of the garbage chute, location, design and size of the garbage and recycling room(s) and how recyclables are transported to a waste storage and recycling area.

Chutes are only suitable to transfer garbage and are not suitable to transfer recyclables. The drop generally results in the damage or even destruction of the recyclable material, particularly glass and

cardboard could easily become stuck in the chute and cause a fire hazard.

Chutes should be designed to reduce noise and fire risks associated with their use. The key features of a garbage chute and recycling system are shown in Figure 8.

A.7.6 Requirements for Waste Chute System:

Table 12: Garbage Chute Systems

Intent of Controls	**Performance Criteria** **The intent may be achieved where:**	**Standards-based Solution**
Ensure suitable design & materials	Chutes are cylindrical and have appropriate capacity for volume of materials. Internal overlaps follow direction of flow. Chutes, hoppers, service openings & service compartments are of appropriate, smooth faced, durable, impervious, non-corrosive, distortion & fire resistant material. There are minimal numbers of seamless joints and chutes have no bends in main shaft.	At least 500mm diameter
Unimpaired flow directly to facilities in garbage room	Distances to hopper are not too long Hoppers are of appropriate size and flush with chute. Hopper doors must have self-sealing system Size of service openings relates to diameter of chute	Not exceeding 1000mm Area not less than 60% size of chute
Ventilation	Chutes are effectively ventilated.	Ventilation in accordance with BCA
Health & Safety	Chutes and hoppers are contained in a service compartment or room, so as not to open directly into a habitable area. Cut-off door at or near the base of chute to allow container movement and work on facilities such as compactors is provided. Note: this can double as a fire damper Appropriate system for cleaning & maintenance of chute and hoppers is provided	brushes, sanitisers& water supply point at the top of chute
Safe to load	Service openings are of adequate height from floor level	850mm to 1000mm, from the floor to the lowest edge of the opening
Fire Separation	Chutes shall be fire separated as required by the BCA. Chutes should be fully enclosed in a fire-rated shaft, constructed of an approved material and fitted with sprinklers	BCA