



DA Guidelines  
**Resource and Waste  
Management Planning**



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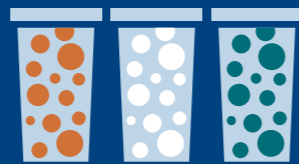


# Introduction

All Development Applications submitted to Central Coast Council for approval must demonstrate that the resources and waste generated through the **Site Preparation, Construction, and Occupancy** stages of the development will be managed in a way that:



creates safety



is efficient



protects amenity



builds a  
Circular Economy



## Purpose

An appropriate Resource and Waste Management Plan (RWMP) must be submitted for all Development Applications (DAs) requiring consent (including residential, industrial, commercial, leisure and accommodation proposals).

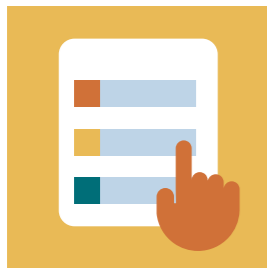
**It is a requirement under the Central Coast Council Development Control Plan (DCP) that the RWMP satisfies the requirements and objectives contained in these DA Guidelines for Resource and Waste Management Planning (the Guidelines) and be approved and supported by the Assessing Officer.**

These Guidelines take an outcomes focused approach and include limited prescriptive requirements. It is the responsibility of the applicant to demonstrate how the Resource and Waste Management proposal meets the outcomes set out in these Guidelines.

This approach allows applicants to have flexibility and the opportunity to use innovative solutions to satisfy the Guideline requirements whilst also meeting the needs of future residents and promoting a Circular Economy.

Accurate, site specific details in relation to Site Preparation, Construction, and Occupancy as applicable must be provided within the required RWMP submission. Additional details may be requested subject to the complexity, scale, and nature of a proposal.

The RWMP submission must include as a minimum:



**A completed RWMP Form**



**A Resource and Waste Management site plan for each relevant development stage**



**Attached supporting evidence to demonstrate that the requirements set out in these Guidelines have been met**

These Guidelines provide guidance to applicants on:

- ✓ **How to prepare a RWMP submission**
- ✓ **How to develop the RWMP for each development stage**
- ✓ **Information to include in the submission**
- ✓ **The technical requirements**

Applicants must demonstrate good planning for Resource and Waste Management across each relevant development stage. Following these Guidelines will enable applications to be efficiently reviewed and processed through the RWMP assessment process.

## Context

### Council's Waste Resource Management Strategy

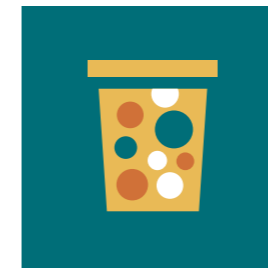
The *Central Coast Waste Resource Management Strategy 2020-2030* sets a clear vision in line with the State strategy to "Promote the Central Coast as a creative environment for developing a local circular economy that values the recovery of resources and advocates prevention of waste."

In 1920, Frederick Talbot in his book 'Millions from Waste' wrote that "Waste is merely raw material in the wrong place". More than a century later, consultation on the *Central Coast Waste Resource Management Strategy 2020-2030* showed that better management of our resources and materials is still a priority for our community. The Central Coast community was very clear in its views about the goals and issues around managing resources and waste with almost 90% of surveyed residents rating reducing waste to landfill as 'very important'.



These Guidelines are underpinned by the modern view of that same philosophy from 100 years ago – "waste is a resource to be managed and not a problem to be rid of". Throughout these Guidelines the terms 'materials and waste' and 'resource and waste' have been used in place of 'waste' to emphasise that not all discarded items need to end up in landfill.

Council's overarching strategy priorities:



**Reduce the waste generated on the Central Coast**



**Increase recycling options available on the Central Coast**



**Reduce waste landfilled on the Central Coast**



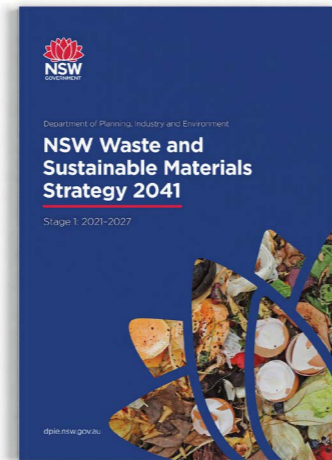
**Explore funding opportunities to facilitate waste avoidance and diversion**

These overarching priorities are oriented around four objectives:

- **Drive waste avoidance**
- **Deliver a step change in diversion from landfill and build a Circular Economy**
- **Strengthen triple bottom line outcomes**
- **Enhance street and open space appeal**

To achieve Council's Strategy objectives and the State targets, Council and the community will need to significantly increase landfill diversion and resource recovery of household (municipal), commercial and industrial, and construction and demolition waste.

Appropriate Resource and Waste Planning for new developments plays a key role for the Central Coast as increasing building density in our urban centres influences the design and amenity impact of waste services. Council must ensure that new facilities and infrastructure are planned to meet the needs of our future communities, with a Circular Economy approach built in, and onsite resource and waste collection servicing as standard to enhance street appeal.



### Transitioning to a Circular Economy

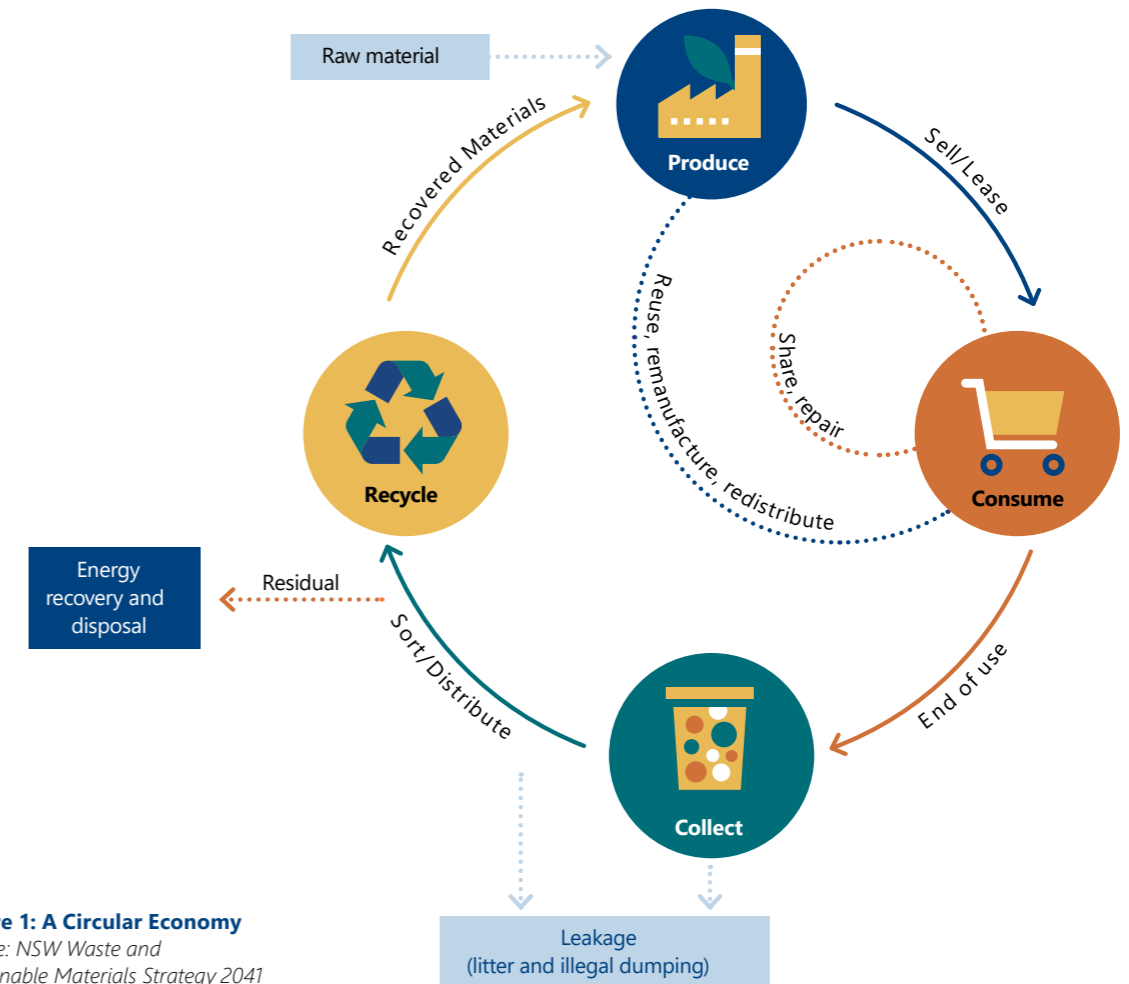
The *New South Wales (NSW) Waste and Sustainable Materials Strategy 2041* (the NSW Strategy) sets the context for Resource and Waste Management in NSW over the coming years with a focus on transitioning to a Circular Economy.

A Circular Economy is an economic system aimed at minimising waste and promoting the continual reuse of resources. The Circular Economy aims to keep products, equipment, and infrastructure in use for longer, thus improving the productivity of these resources.

Materials are cycled through the economy as shown in Figure 1 and recovered materials reduce the need for raw material inputs.

Waste materials should become input for other processes as shown in the circular diagram (Figure 1). In contrast to the traditional 'take, make, dispose' linear economy, Circular Economy is based on three key principles:

- design out waste and pollution
- keep products and materials in use
- regenerate natural systems



**Figure 1: A Circular Economy**  
Source: NSW Waste and Sustainable Materials Strategy 2041

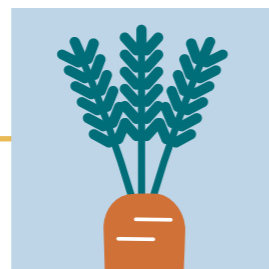
### The NSW Strategy sets key targets for Resource and Waste Management in the region which are fundamental to keeping products and materials in use and regenerating natural systems:



**Reduce total waste generated by 10% per person**



**Have an 80% average recovery rate from all waste streams**



**Halve the amount of organic waste sent to landfill**

**By 2030**

### Eco Destination Certification

The Central Coast Council obtained ECO Destination certification in 2022, establishing the region as a premier destination for sustainable and nature-based tourism. Council must continue to provide visitors to the region with an experience of good material and waste collection, separation, reduction, and reuse wherever they stay, eat, and interact.

### Local planning controls

This guidance document supports the Central Coast Local Environmental Plan 2022 (LEP) and Central Coast Development Control Plan 2022 (DCP).

The LEP is the primary legal planning document for guiding land use and planning decisions made by Council. The LEP allows Council to manage the way in which land is used to shape our local communities.

The DCP supports the LEP and provides detailed planning and design guidance. The DCP guides Council staff, developers and landowners in the necessary requirements and provides guidance for development. Chapter 2.14 'Site Waste Management' sets out the Resource and Waste Management controls.



### Good work design

'Good work' is healthy and safe work where the hazards and risks are eliminated or minimised so far as is reasonably practicable. Waste management systems must be designed in accordance with workplace health and safety (WHS) requirements, in particular safe design. Safe Work Australia defines safe design as:

**“The integration of control measures early in the design process to eliminate or, if this is not reasonably practicable, minimise risks to health and safety throughout the lifecycle of the product being designed.**

**Buildings, structures, machinery and equipment, tools and vehicles all need safe design to protect the people who use them from getting sick or injured.”**

Safe design must be considered and incorporated into the design of all Resource and Waste Management systems. This starts at the concept phase when the applicant is deciding and identifying:

- design and intended purpose
- materials

- how it will be built
- how it will be maintained and operated
- how it will be demolished, dismantled and disposed of
- legislation, codes of practice and standards it will need to comply with

The Safe Work Australia Principles of *Good Work Design Work Health and Safety Handbook* outlines the 10 principles of good work design which should be applied to the design of all Resource and Waste Management structures and plans as well as all work, work processes and systems relating to the management of resources and waste across all development stages.

The *NSW Work Health and Safety Act 2011 & Work Health and Safety Regulation 2017* establishes the WHS laws that are designed to protect the health, safety, and welfare of all workers at work. The regulation sets out the requirements for specific hazards and risks, such as noise, machinery, and manual handling.

### Resource and Waste Planning in NSW

The NSW Government has published helpful guidance documents for the planning of waste systems in new developments. These Guidelines draw extensively from the Environmental Protection Authority (EPA) Better Practice Guides below and should be referred to by the applicant wherever further clarification is required.

The *NSW EPA Better Practice Guide for Resource Recovery in Residential Developments 2019* (available on the NSW EPA website) is designed to support developers, architects, urban designers, building designers and other professionals to incorporate better practice in the design, establishment, and ongoing management of Resource and Waste Management systems in residential developments.

The *NSW EPA Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012* (available on the NSW EPA website) provides advice to help architects, developers, Council staff, and building managers to incorporate better waste management practice into the design, establishment, operation, and ongoing management of waste services in commercial and industrial developments.

The *NSW State Environmental Planning Policy No 65 Design Quality of Residential Flat Development 2017* sets out nine 'Design quality principles', many of which should be applied to the design of Resource and Waste Management systems including:

#### Principle 4: Sustainability

Good design combines positive environmental, social, and economic outcomes. Good sustainable design includes recycling and reuse of materials and waste and use of sustainable materials.

#### Principle 6: Amenity

Good design positively influences internal and external amenity for residents and neighbours. Achieving good amenity contributes to positive living environments and resident wellbeing.

#### Principle 7: Safety

Good design optimises safety and security within the development and the public domain. It provides for quality public and private spaces that are clearly defined and fit for the intended purpose. A positive relationship between public and private spaces is achieved through clearly defined secure access points and well-lit and visible areas that are easily maintained and appropriate to the location and purpose.



## Required outcomes

Council has established, as a minimum, the following four required outcomes for Resource and Waste Management Planning.

The applicant must demonstrate that the RWMP submission has addressed each of the following four outcomes to the required standards and satisfaction of the Assessing Officer.



### Create safety

The generation, transfer, consolidation, and collection of materials and waste all pose health and safety risks. The implementation of good materials and waste management planning can reduce these health and safety risks for the users.

All management of materials and waste must comply with WHS regulation requirements and the transport of materials and waste, consolidation areas, collection points, and collection vehicle access must be designed to occur in a way that eliminates and minimises risk.

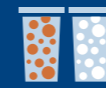


### Protect amenity

Protecting amenity can assist in framing resource recovery in a positive manner and improve the user experience when managing all materials and waste.

All material and waste management systems must be designed to minimise disturbances at all development stages to both the occupier and the surrounding community, including visual unsightliness, noise, odour, dust and debris, and impacts from transfer vehicle movements.

Developments must also consider urban design and landscaping with the design of the waste area. A good Resource and Waste Management system will minimise these disturbances to protect the amenity of the streetscape and within the site itself through clean and organised areas.



### Deliver efficiency

Materials and waste that are collected for offsite recovery or disposal must be consolidated effectively and collected at an appropriate frequency to avoid unnecessary offsite vehicle movements.

Delivering efficiency in design with improved resource management onsite will assist in minimising the number of transport vehicles required on the road and the associated costs. However, efficiency of material and waste consolidation should not adversely impact the ability to recycle the materials and waste if mixed with other waste types, with the materials to be stored and collected separately as required.

For the Occupancy stage, the Resource and Waste Management system will have a significant impact on behaviours by occupants when disposing of their materials and waste. A well designed system will support occupants to recycle correctly and as often as possible to reduce contamination, avoid material losses to landfill, and additional maintenance and cleaning.



### Build a Circular Economy

Good management of materials and waste generated by a development starts with enabling and encouraging waste avoidance, followed by improving resource recovery and reducing the amount of waste sent to landfill. Planning, designing, and providing facilities that support and encourage waste avoidance and resource recovery will assist in building a Circular Economy.

Building a Circular Economy will assist in meeting targets set by Council, the State and nationally for improved resource recovery and reduction of waste to landfill. Clear expectations by Council have been set for the minimum standard of resource recovery to be achieved to ensure that the region is delivering on the targets set by the State.

Building suitable and user-friendly resource and waste infrastructure facilitates improved behaviour change and participation outcomes. A well designed and constructed development or building will both reduce the generation of waste in its Construction, and allow generations of occupants to engage with, and participate in, achieving Circular Economy objectives.

# How to use these Guidelines

These Guidelines are designed to support **developers, designers, architects, consultants, planners, and builders**, to develop comprehensive **Resource and Waste Management Plans** that are required to be submitted and approved as part of the Development Application and approval process for each new development on the Central Coast.





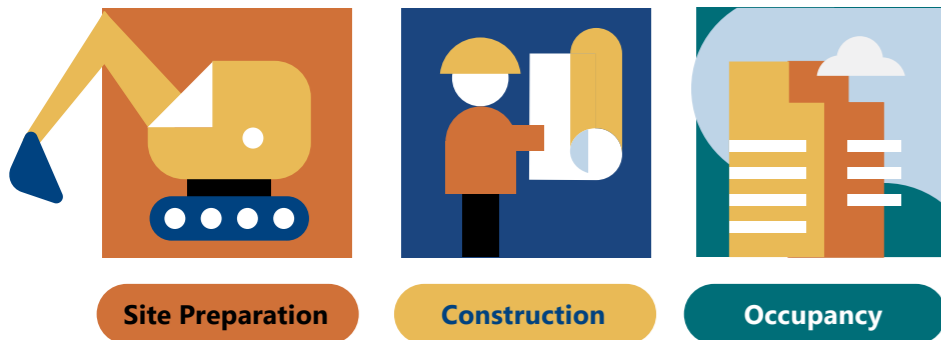
## Development stages

Resource and Waste Management Planning must be considered in three stages, each of which requires a distinct RWMP.

Each stage is likely to generate different materials that require a considered approach to ensure they are managed in line with Council's required outcomes.

The three distinct RWMPs are known as:

- Site Preparation (SP-RWMP) – including demolition
- Construction (C-RWMP)
- Occupancy (O-RWMP)



### Key information

The RWMP submission must address and provide as a minimum at each stage:

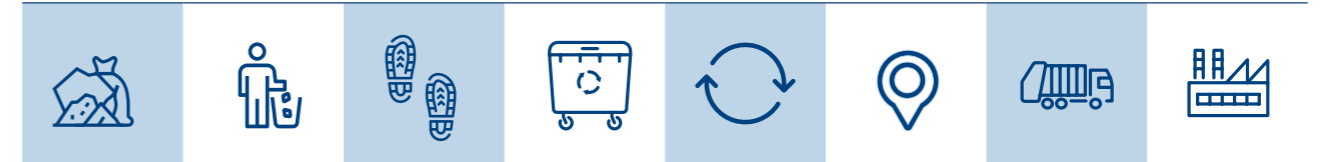
- ✓ The location, types, and amounts of materials and waste that will be generated.
- ✓ Travel paths of materials and waste to be transferred within the site.
- ✓ Design and details of materials and waste storage, and consolidation areas.
- ✓ Detail of any onsite reuse of materials.
- ✓ Design and details of collection point arrangements (including contractor and material destination).
- ✓ Vehicle access path for all collection vehicles.

Each development stage will require a different approach to Resource and Waste Management and thus each stage requires an independent RWMP.

Some developments may require only one or all stages to be completed depending on the activities proposed or included in the Development Application.

## Resource and Waste Management Planning touchpoints

Council has defined eight touchpoints that assist applicants to design good RWM systems.



Each RWMP must address each relevant touchpoint to clearly demonstrate how all materials and waste generated will be managed in line with the requirements set out in these Guidelines.

Every relevant touchpoint must be designed to create safety, deliver efficiency, protect amenity, and build a Circular Economy.

Good design and planning of each touchpoint will:









- ✓ Reduce hazards to create safety
- ✓ Avoid disturbance to protect amenity
- ✓ Avoid unnecessary movements to deliver efficient material and waste management
- ✓ Encourage waste avoidance and resource recovery to build a Circular Economy

In considering these touchpoints, it should be noted that:

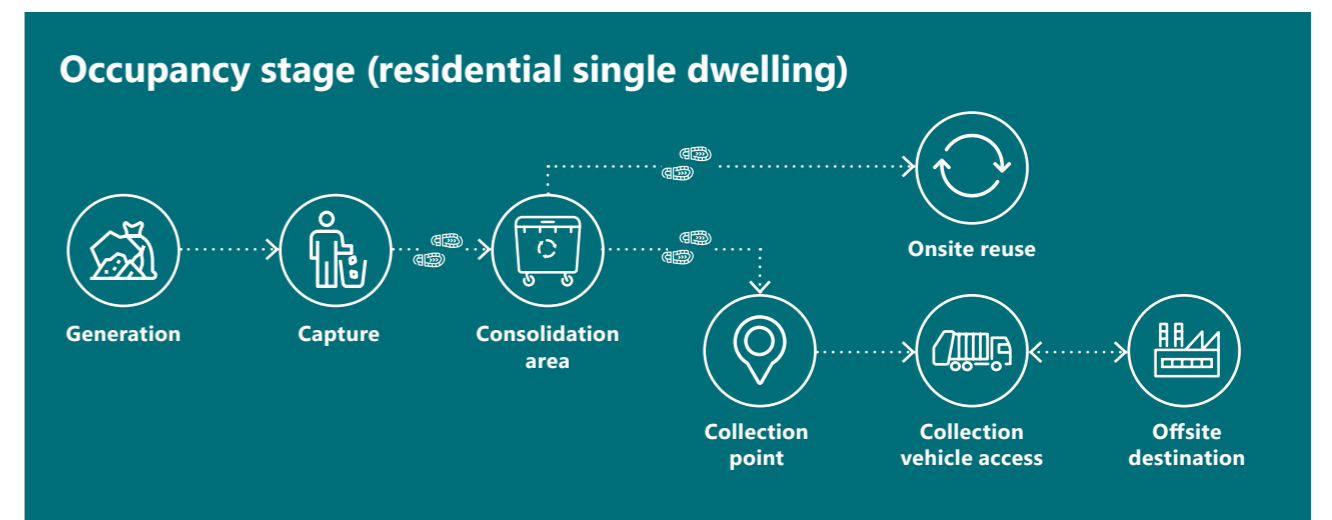
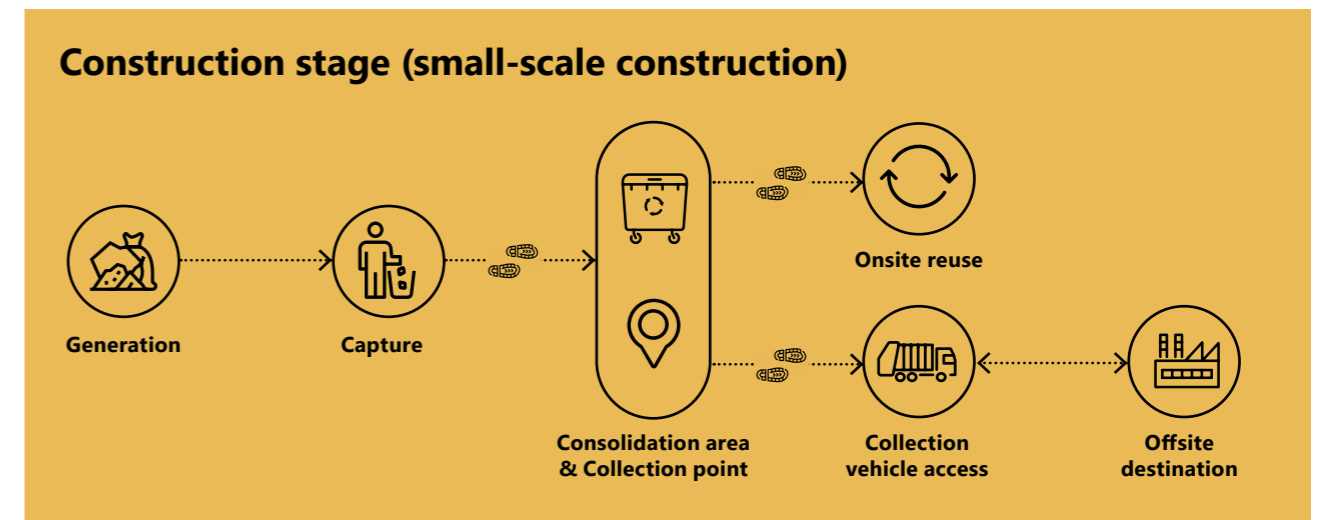
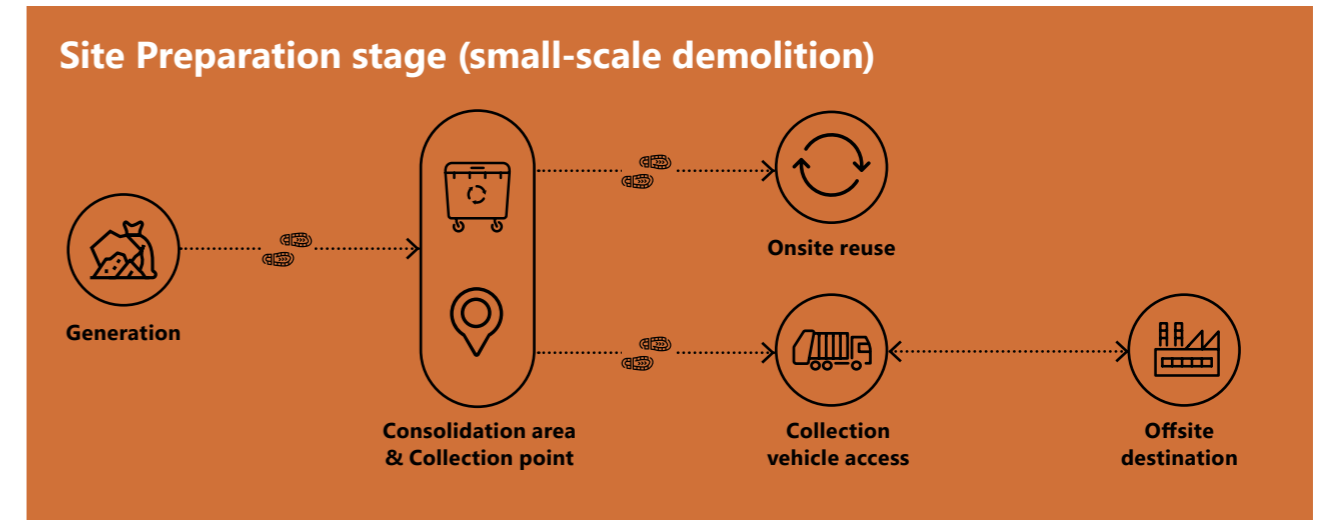
- The touchpoints are applicable to ALL development stages and development types
- Not all touchpoints will be required for every material or waste stream
- Some RWM systems may require more than one of a specific touchpoint (e.g. three consolidation areas)



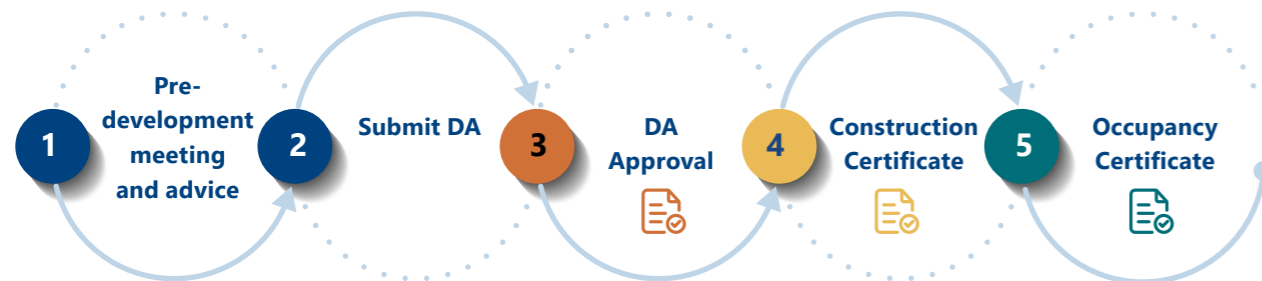
## The touchpoints

<b>Generation</b>		The creation of materials and waste.
<b>Capture</b>		Materials and waste generated across the site are 'captured' into the Resource and Waste Management system commonly through a series of smaller locations/bins which are dispersed across the site.
<b>Transfer</b>		Materials and waste are transported/transferred from one location to another. Often this is the movement of material from smaller capture locations/bins into larger consolidation areas/bins or from the consolidation area to the collection point. More than one transfer will often be required, particularly in larger developments.
<b>Consolidation</b>		For materials and waste to be efficiently managed they are commonly consolidated into larger bins (or stockpiles) which are often located within a designated collection area.
<b>Onsite reuse</b>		Materials that are destined to be reused onsite will exit the waste management system when they have been applied to their designated and appropriate use.
<b>Collection point</b>		Materials and waste that are destined to be taken offsite for recovery or disposal are commonly presented for a short time at a designated collection point for the collection vehicle to access.
<b>Collection vehicle access</b>		The resource and waste collection vehicles must be provided an appropriate route to access the collection point and depart.
<b>Offsite destination</b>		The location or facility where the material will be recovered, or waste disposed of.

## Typical touchpoint journeys



## Assessment and approval process



### Pre-development advice

A pre-development meeting can be arranged with Council, where detailed advice can be sought on technical matters including Resource and Waste Management planning. Any development with challenges meeting the requirements set out in these Guidelines should make use of the pre-development advice process to present their solution and seek advice from Council prior to the DA submission.

### Submission of Development Application

The RWMP submission must be included within the DA application and must provide sufficient detail for each relevant stage of the development (Site Preparation, Construction, and Occupancy) as laid out in these Guidelines. The RWMP Form is separated into sections to enable the applicant to articulate the different aspects of Resource and Waste Management at each development stage. All relevant sections must be completed for the DA to be assessed.

The complete RWMP submission will be assessed by Council through the development assessment process and must be approved and supported by the Assessing Officer for the development approval to be granted.

Council will assess the RWMP submission to make sure it includes the following:

- A clear Resource and Waste Management system for each relevant development stage which addresses all materials generated
- All Resource and Waste Management systems address and support Council's requirements and deliver on required outcomes:
  - Create safety
  - Protect amenity
  - Deliver efficiency
  - Build a Circular Economy

Importantly, sufficient details of the Occupancy RWMP must be provided to demonstrate that the proposed development has been designed to accommodate good materials and waste management systems across the entire life of the development.

### Construction Certificate

A Construction Certificate will not be issued without an approved Site Preparation stage RWMP and/or an approved Construction stage RWMP (as required). Council may require an updated SP-RWMP and/or C-RWMP to be submitted prior to issue of the Construction Certificate.

### Occupation Certificate

The Occupancy Certificate will not be issued without an approved Occupancy stage RWMP. Council may require an updated O-RWMP to be submitted prior to issue of the Occupancy Certificate.

## The Resource and Waste Management Plan submission

The RWMP submission will be assessed by Council to determine the adequacy of the waste management provisions for each stage of the development. The RWMP submission must address all relevant requirements outlined in these Guidelines. An inadequate or incomplete RWMP can delay development approval decisions.

### Who should prepare the RWMP submission?

For all developments with a Construction value less than \$5 million the RWMP submission can be prepared by the applicant. Where the Construction value is greater than \$5 million, the RWMP submission must be prepared by a suitably qualified waste consultant.

### What should a RWMP include?

The Resource and Waste Management Plan Form is provided in [Appendix A](#). This Form must be completed and submitted with appropriate site plans and supporting evidence attached.

The Form is set out in five parts:

- Part A: Overview of development
- Part B: Site Preparation RWMP
- Part C: Construction RWMP
- Part D: Occupancy RWMP
- Part E: Declaration

A distinct Resource and Waste Management system must be clearly presented for each relevant development stage in Parts B, C, and D of the Form. For each development stage this must include:

#### The completed Form (Part B, C, or D)

The Form must be fully completed and include clear referencing to details, included in attached site plans and supporting evidence.

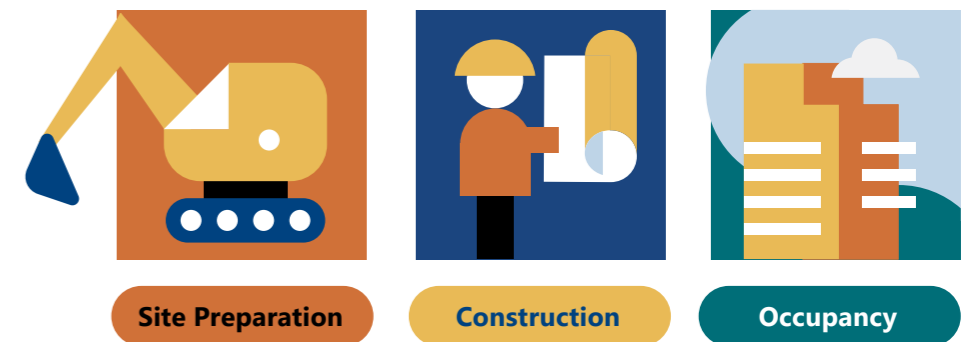
#### Site plans

If referencing separate submitted plans, location details, and plan references must be included.

#### Supporting evidence

This must be appropriately referenced and identified.

Requirements of the RWMP for each stage are outlined in the following sections:



### Supporting guidance

Further technical guidance to support the preparation of a RWMP submission is included in the Appendices. Wherever further detail is required, the applicant should refer to the NSW EPA Better Practice Guides (available on the NSW EPA website):




- *Better Practice Guide for Resource Recovery in Residential Developments 2019.*
- *Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012.*

## The Resource and Waste Management Plan submission guide

These steps are presented as a general guide for completing the RWMP Form (the Form) and compiling the submission. The Form can be downloaded from Council's website or via the link included in Appendix A.

### Step 1 Complete Part A

Provide general details of the development and identify the relevant development stages and sections that must be included in the submission:

	Site Preparation RWMP	Form Part B	Guidance
	Construction RWMP	Form Part C	Guidance
	Occupancy RWMP	Form Part D	Guidance



### Step 2 Create a RWMP for each respective development stage

Review the relevant guidance and requirements detailed in these Guidelines and the Form:

#### Generation

Identify and substantiate every material and waste that will be generated and determine the quantity of each.

#### Destination

For each material and waste, determine its destination. Input this information into the 'Recycling details' (as applicable) and the 'System overview' table. Common destinations include onsite reuse, collection for offsite recovery, and collection for offsite disposal.

#### Journey

For each material and waste, map out and explain the journey from generation to destination through the relevant touchpoints as presented in the 'Typical touchpoint journey diagrams'. Input this information in the 'System overview' table and onsite plan(s). This should clearly demonstrate the design, management, and logistics planning details for each relevant touchpoint and material stream to show that the system will function well and meets Council's requirements as set out in these Guidelines. Prepare and provide supporting evidence.

#### Complete risk assessment

Identify the hazards that exist within the RWM system and detail the mitigation control measures that will be put in place. Complete the 'Risk assessment' table.

#### Meet required outcomes (Form Part D only)

Demonstrate that required outcomes have been met using the touchpoints framework. Fill in details on the Form or clearly reference evidence in supporting documentation.

#### Site plan(s)

Present the RWM system on a site plan (or plans). Ensure the plan(s) includes the required minimum information as set out in the site plan checklist.

#### Complete the Form and prepare supporting evidence

Complete relevant part of the Form. The RWMP Form provides a framework for providing required information to Council in a clear and well-presented format.

- Where supporting evidence is attached, this must be specifically referenced in the Form with sufficient details to enable Council to understand the purpose and relevance of the attached information.
- Where any field in the Form does not provide adequate space to provide all details, the applicant must provide the full information in supporting evidence with a specific reference included on the Form.
- For example, the RWM 'System overview' tables can be reproduced, filled out, and attached with a note on the Form indicating the location of the table within the supporting evidence attached.

### Step 3 Compile the RWMP submission

Include the completed Form, site plan(s) and supporting evidence in a clear and organised format. Ensure that specific references are included to enable Council to easily understand the Resource and Waste Management system and see that all requirements have been met.

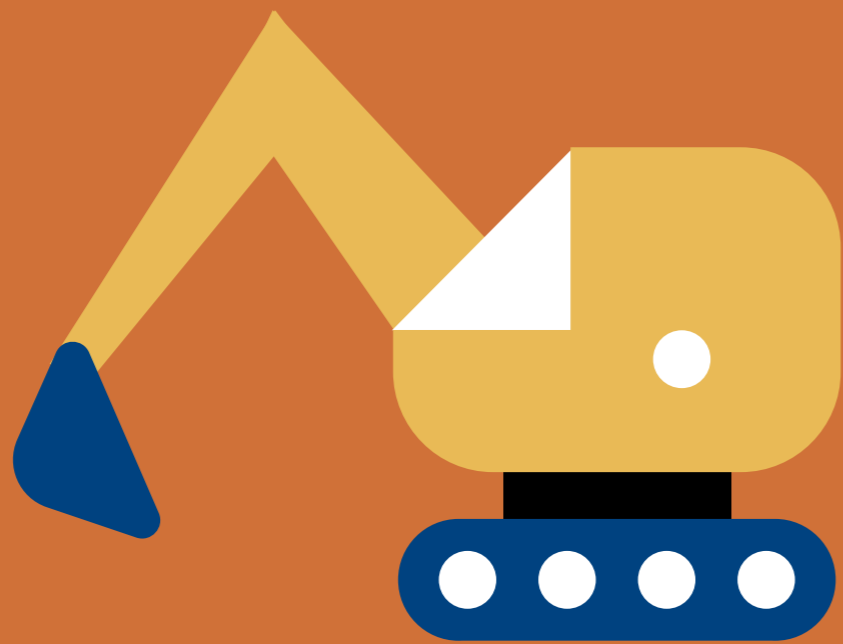
### Step 4 Complete Part E: Declaration

Complete the 'Lawful disposal of waste declaration' and 'General declaration' with the name and signature of the applicant and date signed.

The declaration should be thoroughly reviewed before completing and signing to ensure that all items are addressed in the submission. An incomplete, poorly thought out or unclear Resource and Waste Management Plan submission will be rejected.

# Site Preparation

This section details Council's requirements for a Site Preparation RWMP (SP-RWMP).



## Site Preparation RWMP guide

Any Development Application that includes preparatory works such as subdivision, clearing, excavation, or demolition must prepare a SP-RWMP in line with the requirements outlined in this section.

The SP-RWMP must demonstrate that RWM systems will meet Council's required outcomes:



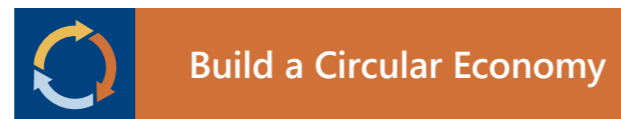
All management of materials and waste must comply with all WHS regulation requirements. The transport of materials and waste, consolidation areas, collection points, and collection vehicle access must be designed to create safety.



Materials and waste that are collected for offsite recovery or disposal must be consolidated effectively and collected at an appropriate frequency to avoid unnecessary vehicle movements.



All material and waste management systems must be designed to minimise disturbances to the surrounding community, including visual unsightliness, noise, odour, and dust.



The Site Preparation stage has a high resource recovery potential because the materials generated through excavation and demolition can be either reused onsite in the new development or sent for offsite recovery at a construction and demolition waste processing facility. Therefore, all SP-RWMPs should demonstrate an overall 80% recovery rate. Provisions for effective source separation of material while it is onsite, must be detailed in the SP-RWMP.

**All Resource and Waste Management must be conducted lawfully and in compliance with all waste legislation and regulation.**



### How to develop the Site Preparation RWMP

Use the touchpoints framework to develop the SP-RWMP. For a step-by-step guide, refer to the [RWMP submission guide](#).

In any instance that Part B of the Form does not provide sufficient space for completion of the required details, the applicant should address the item in supporting documentation and include a specific reference in the Form to direct the Assessing Officer to the relevant information.

The SP-RWMP must include:

- The RWMP Form Part B completed with the information specified below
- A SP-RWMP or site plan (drawing)
- Supporting evidence



### General information

Complete the following fields to provide an overview of the Site Preparation activities.

Form field	Information required
Description of Site Preparation works:	Size of site. Description of works, structures to be demolished, clearing, and/or excavation. Anticipated duration of works.
Demolition or works contractor:	Name and contact details (including website) of contractor.
Workers Compensation Insurance details:	Insurer name, policy number, and limit of liability.
Asbestos management details:	Amount of asbestos containing material known to be at the site. Name and licence details of asbestos removalist. Name, operator, location, and licence number of asbestos disposal facility.
Hazardous waste management details (including soils):	Name and licence details of hazardous waste transporter. Suitable or compliant waste assessment report where required. Name, location and licence number of hazardous waste disposal or treatment facility.
General waste management facilities details:	Name, operator, location, and licence number of all general waste disposal or processing facilities.
Resource recovery facilities details:	Name, operator, location, and licence number of all licenced resource recovery facilities.

### Site Preparation declaration

Confirm that all asbestos and hazardous waste generated through Site Preparation will be managed appropriately.

- ✔ Tick yes to declare that all asbestos will be managed in accordance with the provisions of the *NSW Work Health and Safety Regulation 2022*.
- ✔ Tick yes to declare that all hazardous waste will be managed and tracked in accordance with the provisions of the *NSW Protection of the Environment Operations (Waste) Regulation 2014*.

### Typical Site Preparation touchpoint journey example

A typical touchpoint journey is provided as an example for the applicant to understand the touchpoints framework.

### Materials (and waste) generation

The quantity of all materials and waste generated must be detailed in this table. For any materials where the total quantity is less than 10m<sup>3</sup> a tick can be placed in the first column and no further detail is required. For all other materials and waste, the quantity of material must be detailed, the management option selected (tick), and the total quantity that will be diverted from landfill provided.

The total percentage diversion of waste from landfill should be calculated using this formula and must be 80% or greater.

$$\text{Total diversion from landfill (\%)} = \frac{\Sigma \text{ material diverted}}{\Sigma \text{ material generated}} \times 100$$

### Recycling details

Complete the table. Each material to be recovered must be listed and the principal offsite recycler details provided as well as the market for the recovered resources.

### System overview

Complete the table (directly or in supporting evidence) to demonstrate how each material and waste stream will journey from generation to its destination. Each material and waste stream must be identified and an overview of its management provided. See the example provided below.

### Risk assessment

The risk assessment must be completed to identify all risks presented by the RWM system and demonstrate the mitigation control measures that will be implemented to manage these risks.











### Site plan checklist

Provide site plan(s) and ensure they clearly indicate the items detailed in the checklist.

### Supporting evidence

Provide a list of supporting evidence and details of the purpose of each.

### Site Preparation system overview table example

									
Material or waste stream	Quantity	Capture and Consolidation area	Internal transfer	Onsite reuse	Transfer to collection	Collection point	Collection vehicle access	Offsite destination	Recovery rate
<b>Touchpoint and required information</b>									
Type of material or waste.	Total estimated quantity generated in m <sup>3</sup> .	Location and dimensions of bins and/or stockpiles.	Method of transport of material/waste within the site.	Reuse purpose and total quantity to be reused.	Method of transport of material/waste to collection point. Only applicable to material/waste that must be presented at a collection point.	Collection frequency and service provider.	Collection vehicle type and path of access for the collection vehicle.	Recovery or disposal site name.	Percentage of material or waste that will be recovered.
<b>Examples</b>									
Bricks.	10m <sup>3</sup> produced from demolition of garden wall.	2m <sup>3</sup> mixed C&D* skip bin located at the north-western corner of the site.	Excavator.	Not applicable.	Not applicable.	The 2m <sup>3</sup> mixed C&D* skip bin will be serviced on demand five times by Bob's Recycling Transport.	The skip bin collection vehicle will enter the site from Robins Street and drive 20m across the level cleared site to the skip bin. An empty skip bin will be dropped off and the full skip bin collected. The vehicle will turn onsite and exit the site forwards.	The material will be taken to the "Waste Not" C&D* resource recovery facility for recycling.	"Waste Not" estimates that 95% will be recovered.

\*C&D refers to construction and demolition

## Site Preparation requirements

### Create safety

1. Onsite reuse of materials (subject to planning approvals) should be considered for waste materials that are not hazardous to human health or safety and in accordance with the *NSW Protection of the Environment Operations Act 1997* and associated regulations.
2. The collection point must be within the site and safely accessible by all collection vehicles.
3. Any asbestos-contaminated material must be managed and transported in line with asbestos-safe work procedures and disposed of at an appropriately licensed facility.
4. All hazardous waste generated must be tracked, transported, and disposed of as per the requirements under *Part 4 of the NSW Protection of the Environment Operations (Waste) Regulation 2014*.
5. General solid waste (putrescible and non-putrescible) and recoverable materials must be received by appropriately licensed disposal and resource recovery facilities.

### Protect amenity

6. The management of materials and waste onsite must minimise odour, noise, vibration, and dust impacts.
7. All bins must be stored away from public access and view.
8. The collection of materials and waste must occur at appropriate times to minimise noise disturbances to any nearby residential areas.

### Deliver efficiency

9. Materials must be sorted onsite for separate recycling collection e.g. the use of separate skip bins for wood and concrete. If this is not possible, sorting and recycling offsite for mixed materials from Site Preparation is required. If the ability to recycle a material is adversely affected by being mixed with other waste types, the material is to be stored and collected separately. Justification for combined waste and resource disposal to landfill should be included where resource recovery is not undertaken or possible.

### Build a Circular Economy

10. Disposal of waste to landfill must be minimised by avoidance and reduction practices and onsite reuse of materials or offsite reuse or recycling. Any materials landfilled must be identified and an explanation as to why landfill was selected as disposal method over resource recovery.
11. An overall 80% recovery rate of materials and waste should be achieved or explained as to why this may not be possible.

## Site Preparation resources

The resources provided below are intended to support applicants in developing their SP-RWMP and are not requirements.

### Common Site Preparation materials

- Asbestos
- Bricks
- Concrete
- Excavation material
- Contaminated soils
- Floor coverings
- Fixtures & fittings
- Garden organics and trees
- Glass
- Hazardous waste
- Metals (ferrous)
- Metals (non-ferrous)
- Mixed recycling
- Plasterboard
- Roof tiles
- Tiles
- Timber (clean)
- Timber (treated)
- Residual waste

### Conversion table for common materials\*

Material	Density for conversion
Bricks	800kg/m <sup>3</sup>
Concrete	800kg/m <sup>3</sup>
Metals	140kg/m <sup>3</sup>
Timber	200kg/m <sup>3</sup>

\* Source: Encycle Consulting (2013) *A study into commercial & industrial (C&I) waste and recycling in Australia by industry division.*





# Construction

This section details Council's requirements for a Construction RWMP (C-RWMP).



## Construction RWMP guide

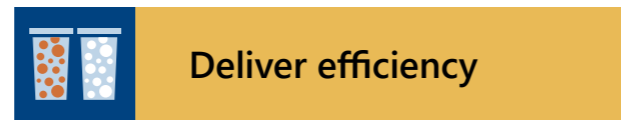
Any Development Application that includes Construction works must prepare a C-RWMP in line with the requirements outlined in this section.

The C-RWMP must demonstrate that RWM systems will meet Council's required outcomes:



### Create safety

All management of materials and waste must comply with all WHS regulation and good design requirements. The transport of materials and waste, consolidation areas, collection point, and collection vehicle access must be designed to create safety.



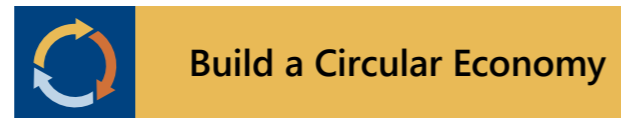
### Deliver efficiency

Materials and waste that are collected for offsite recovery or disposal must be consolidated effectively and collected at an appropriate frequency to avoid unnecessary vehicle movements.



### Protect amenity

All material and waste management systems must be designed to minimise disturbances to the surrounding community, including visual unsightliness, noise, odour, and dust.



### Build a Circular Economy

The Construction stage has a high resource recovery potential because the materials generated through Construction can often be reused onsite or easily recycled at an offsite construction and demolition waste processing facility. Therefore, all C-RWMPs must demonstrate an achievement of an overall 80% recovery rate. Provisions for effective source separation of material while it is onsite must be detailed in the C-RWMP.



## How to develop the Construction RWMP

Use the touchpoints framework to develop the C-RWMP. For a step-by-step guide, refer to the [RWMP submission guide](#).

In any instance that Part C of the Form does not provide sufficient space for completion of the required details, the applicant should address the item in supporting documentation and include a specific reference in the Form to direct the Assessing Officer to the relevant information.

The C-RWMP must include:

- The RWMP Form Part C completed with the information specified below
- A C-RWMP or site plan (drawing)
- Supporting evidence



## General information

Complete the following fields to provide an overview of the Construction activities.

Form field	Information required
Description of Construction works:	Existing site structures. Description of all structures to be constructed and methods to be used. Anticipated duration of works.
Construction works contractor details:	Name and contact details (including website) of main contractor(s) or Principal Contractor.
Workers Compensation Insurance details:	Insurer name, policy number, and limit of liability.
Hazardous waste management details:	Name and licence details of hazardous waste transporter. Name, location, and licence number of hazardous waste disposal facility.
General waste management facilities details:	Name, operator, location, and licence number of all general disposal facilities.
Resource recovery facilities details:	Name, operator, location, and licence number of all licenced resource recovery facilities.

### Construction declaration

Confirm that all hazardous waste generated through Construction will be managed appropriately.

- ✓ Tick yes to declare that all hazardous waste will be managed and tracked in accordance with the provisions of the *NSW Protection of the Environment Operations (Waste) Regulation 2014*.

### Typical Construction touchpoint journey example

A typical touchpoint journey is provided as an example for the applicant to understand the touchpoints framework.

### Materials (and waste) generation

The quantity of all materials and waste generated must be detailed in this table. For any materials where the total quantity is less than 10m<sup>3</sup> a tick can be placed in the first column and no further detail is required. For all other materials and waste, the quantity of material must be detailed, the management option selected (tick) and the total quantity that will be diverted from landfill provided.

The total percentage diversion of waste from landfill should be calculated using this formula and must be 80% or greater.

$$\text{Total diversion from landfill (\%)} = \frac{\Sigma \text{ material diverted}}{\Sigma \text{ material generated}} \times 100$$

### Recycling details

Complete the table. Each material to be recovered must be listed and the principal offsite recycler details provided as well as the market for the recovered resources.

### Risk assessment

The risk assessment must be completed to identify all risks presented by the RWM system and demonstrate the mitigation control measures that will be implemented to manage these risks.

### System overview

Complete the table (directly or in supporting evidence) to demonstrate how each material and waste stream will journey from generation to its destination. Each material and waste stream must be identified, and an overview of its management provided. See the example provided below.










### Site plan checklist

Provide site plan(s) and ensure they clearly indicate the items detailed in the checklist.

### Supporting evidence

Provide a list of supporting evidence and details of the purpose of each.

### Construction System overview table example

 Material or waste stream	 Quantity	 Capture	 Internal transfer	 Consolidated area	 Onsite reuse	 Transfer to collection	 Collection point	 Collection vehicle access	 Offsite destination	 Recovery rate
Touchpoint and required information										
Type of material or waste.	Total estimated quantity generated m <sup>3</sup> .	Location and volume of any capture bins or stockpiles.	Method of transport within the site.	Location and dimensions of bins or stockpiles.	Reuse purpose and total quantity to be reused. Only applicable for material that will be reused onsite.	For any bins that must be moved to a collection point for collection, describe how the bin will be transported. Where material is collected directly from the consolidation area, fill out as 'not applicable'.	Collection frequency and service provider. Only applicable to material/waste that is to be taken offsite.	Collection vehicle type and collection vehicle and path of access.	Recovery or disposal site name.	Percentage of material or waste that will be recovered.
<b>Examples</b>										
Tile offcuts.	0.2m <sup>3</sup> .	None.	Tiles will be transported by wheelbarrow to a stockpile.	Damaged tiles will be transported by wheelbarrow to one of the five 1100L general waste bins.  Undamaged tiles will be consolidated from across the site to stockpile in the eastern shed building.	Undamaged tiles/offcuts will be used onsite where possible. Approximately 5m <sup>2</sup> of tiles.	The 1100L general waste bins will be wheeled 15m to a collection point within the site at the Smith Street entrance.	The general waste bin will be serviced weekly by Trevor's Waste Transport.	A front lift collection vehicle will enter the site at Smith Street and drive 5m to access the bin. The bins will be emptied and the vehicle will turn onsite and exit the site forwards.	The waste will be taken to the Redwood Landfill for disposal as no ceramics recycling facility exists within 50km.	0%  Small amounts will be recovered from utilising offcuts within site.

## Construction requirements

### Create safety

1. Onsite reuse of materials is allowed for waste materials that are not hazardous to human health or safety.
2. The collection point must be within the site and safely accessible by all collection vehicles.
3. All hazardous waste generated must be tracked, transported, and disposed of as per the requirements under Part 4 of the *NSW Protection of the Environment Operations (Waste) Regulation 2014*.
4. General solid waste (putrescible and non-putrescible) and recoverable materials must be received by appropriately licensed disposal and resource recovery facilities.

### Protect amenity

5. The management of materials and waste onsite must minimise odour, noise, vibration, and dust impacts.
6. All bins must be stored away from public access and view.
7. The collection of materials and waste must occur at appropriate times to minimise noise disturbances to any nearby residential areas.

### Deliver efficiency

8. Materials must be sorted onsite for separate recycling collection. If this is not possible, sorting and recycling offsite for mixed materials from Construction is required. If the ability to recycle a material is adversely affected by being mixed with other waste types, the material is to be stored and collected separately.

### Build a Circular Economy

9. Methods to avoid and reduce Construction waste generation should be considered. See suggested measures on the following page.
10. Disposal of waste to landfill must be minimised by avoidance and reduction practices and onsite reuse of materials or offsite reuse or recycling. Any materials landfilled must be identified and explanation as to why landfill was selected as disposal method over resource recovery.
11. An overall 80% recovery rate of materials should be achieved or explained as to why this may not be possible.



## Supporting resources

The resources provided below are intended to support applicants in developing their C-RWMP and are not requirements.

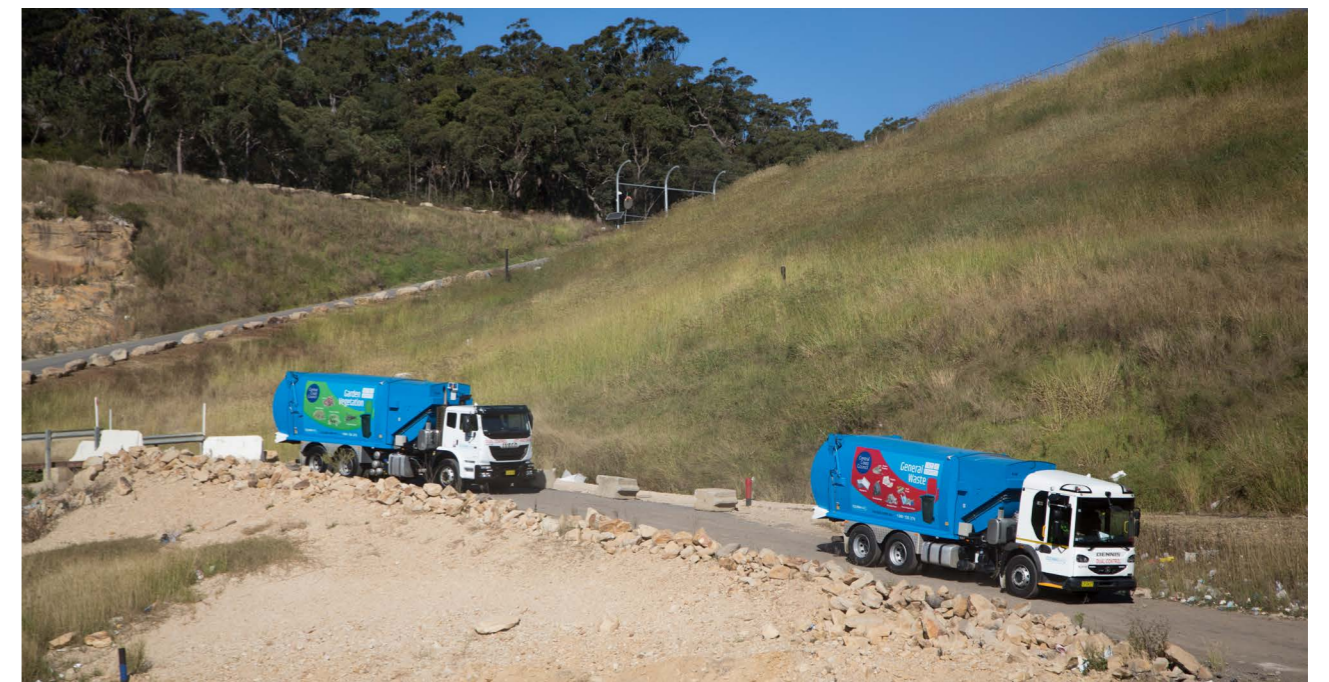
### Suggested measures to reduce Construction waste generation

Waste avoidance and material recovery can offer savings on landfill disposal costs (including the waste levy). Savings can also be achieved through designing out waste in the Construction stage through the following measures:

- Procuring the right quantities of materials
- Procuring prefabricated materials
- Reusing formwork
- Using a modular Construction approach and basic designs to reduce the need for off-cuts
- Minimising site disturbance to limiting unnecessary excavation
- Careful source separation of off-cuts to facilitate onsite reuse
- Co-ordination and sequencing of various trades

### Common Construction materials

- Asbestos
- Bricks
- Concrete
- Excavation material
- Floor coverings
- Fixtures & fittings
- Garden organics and trees
- Glass
- Hazardous waste
- Metals (ferrous)
- Metals (non-ferrous)
- Mixed recycling
- Plasterboard
- Roof tiles
- Tiles
- Timber (clean)
- Timber (treated)
- Residual waste



# Occupancy

This section details Council's requirements for an Occupancy RWMP (O-RWMP).

The Occupancy Resource and Waste Management requirements are outlined in the sections below:

**General (applies to all except Residential Single Dwellings)**

**Residential Single Dwellings**

**Multi-unit Residential Developments**

**Non-Residential Developments**

**Mixed Use Developments**



## Occupancy RWMP guide

Any Development Application that results in an occupied facility must prepare an O-RWMP in line with the requirements outlined in this section.

The O-RWMP must demonstrate that RWM systems will meet Council's and future occupancy and utilisation required outcomes:



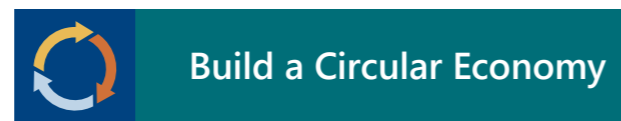
All management of materials and waste should comply with all WHS regulation requirements. The transport of materials and waste, consolidation areas, collection point and collection vehicle access must be designed to create safety.



Materials and waste that are collected for offsite recovery or disposal must be consolidated effectively and collected at an appropriate frequency to avoid unnecessary vehicle movements.



All material and waste management systems must be designed to minimise disturbances to the surrounding community, including visual unsightliness, noise, odour, and dust.



The Occupancy stage contributes the most significant material and waste volumes over the development lifespan. A good RWM system with adequate source separation provisions has the potential to divert significant quantities of recoverable materials from landfill and play a key role in delivering on the NSW State targets to:

- reduce total waste generated by 10% per person by 2030
- have an 80% average recovery rate from all waste streams by 2030
- halve the amount of organic waste sent to landfill by 2030

Provisions for effective source separation of material must be detailed in the O-RWMP.

### How to develop the Occupancy RWMP

Use the touchpoints framework to develop the O-RWMP. For a step-by-step guide, refer to the [RWMP submission guide](#).

In any instance that Part D of the Form does not provide sufficient space for completion of the required details, the applicant should address the item in supporting evidence and include a specific reference to direct the Assessing Officer to the relevant information.

The O-RWMP must include:

- The RWMP Form Part D completed with the information specified below
- A O-RWMP or site plan (drawing)
- Supporting evidence



### General information

Complete the following fields to provide an overview of the Occupancy activities.

Form field	Information required
Development type:	Select from the list: <ul style="list-style-type: none"> <li>- Residential Single Dwelling</li> <li>- Multi-unit Residential Development</li> <li>- Non-Residential Development</li> <li>- Mixed Use Development</li> </ul>
Description of development:	Description of new development including: <ul style="list-style-type: none"> <li>• Number and types of Residential Dwellings</li> <li>• Number and types of Non-Residential Dwellings</li> <li>• Number of floors</li> </ul>



### Management arrangements

Building managers, occupants, workers, visitors, patrons, and those involved with the operation and management of a building's waste and recycling systems are considered key stakeholders. These should be identified and their roles and responsibilities described to demonstrate that adequate consideration has been given to the functional operation of the RWM system.

### Typical Occupancy touchpoint journey example

A typical touchpoint journey is provided as an example for the applicant to understand the touchpoints framework.

### System overview

Complete the table (directly or in supporting evidence) to demonstrate how each material and waste stream will journey from generation to its destination. Each material and waste stream must be identified and an overview of its management provided. See example provided on following page.

### Risk assessment

The risk assessment must be completed to identify all risks presented by the RWM system and demonstrate the mitigation control measures that will be implemented to manage these risks.

### Required outcomes

The complexity and long-term nature of Occupancy RWM systems requires more detailed consideration for Council's required outcomes. Demonstrate how each touchpoint will create safety, deliver efficiency, protect amenity, and build a Circular Economy. Refer to table on the next page for more information.

### Site plan checklist

Provide site plan(s) and ensure they clearly indicate the items detailed in the checklist.











### Supporting evidence

Provide a list of supporting evidence and details of the purpose of each.



Form field	Key outcomes	Information required
Generation & Capture:	Circular Economy	List all waste streams generated and provisions made to encourage avoidance, reuse, and source separation for recovery.
Internal transfer:	Create safety Protect amenity	Describe how the material and waste transport to the consolidation area will create safety and protect amenity.
Consolidation area:	Create safety Protect amenity Deliver efficiency Circular Economy	Detail design elements of the consolidation area and its location that improve safety and protect amenity. Detail all bins and equipment to demonstrate safe access, good consolidation, and sufficient capacity for a variety of waste streams. Detail any provisions made for ensuring the correct materials are placed into the correct bins.
Transfer to collection:	Create safety Protect amenity	Describe how the material and waste transport to the consolidation area will create safety and protect amenity.
Collection point:	Create safety Protect amenity	Detail all design elements of the collection point that reduce the safety hazards and negative amenity impacts inherent in material and waste collection.
Vehicle access:	Create safety Protect amenity Deliver efficiency	Provide details of the collection vehicle(s) and path of access to demonstrate how the design creates safety, protects amenity, and minimises collection frequency to deliver efficiency.

## Occupancy system overview table example

 Material or waste stream	 Quantity	 Capture	 Internal transfer	 Consolidation area	 Onsite reuse	 Transfer to collection	 Collection point	 Collection vehicle access	 Recovery rate
Touchpoint and required information									
Type of material or waste.	Total estimated quantity generated in L or m <sup>3</sup> per day or week.	Location and volume of any capture bins.	Method and distance of transport from capture to consolidation. *	Location and total dimensions of bin room or consolidation area. Number, type, and total capacity of bins.	Reuse purpose and total quantity to be reused. Only applicable for material that will be reused onsite.	Method and distance of transport from consolidation to collection.	Location of collection point.	Collection vehicle type and collection vehicle and path of access.	Recovery or disposal site name.
<b>Example: Residential Single Dwelling</b>									
General waste.	40L per week.	Space for on-floor garbage bin is provided in the kitchen.	The resident will carry the waste out in a plastic bag.	One 140L red lid MGB (mobile garbage bin) to be stored in a fenced off area at the side of the property. The storage area is 2m <sup>2</sup> and lockable.	Not applicable.	The transfer path from the consolidation area to the collection point does not exceed 30m.	140L red lid MGB to stand kerbside at the front of the property. The area is 2m <sup>2</sup> .	The collection point is easily accessed by waste collection vehicles and collections staff, with no traffic or environmental obstructions.	Not applicable.
<b>Example: Multi-unit Residential Development</b>									
Comingled recyclables.	240L per day based on EPA Waste Generation Rates for multi-unit dwelling (MUD).	Reasonable space for smaller interim storage bins will be provided for in the kitchen.	The resident will carry the bagged recyclables to the interim storage room (or chute). Where the waste will be stored until emptied by facilities management staff and transferred to the consolidation area.  See attached <a href="#">Plan 1</a> for details of storage area design and risk assessment.	Three 660L yellow lid MGBs will be used for the storage of comingled recycling and emptied weekly. 6m <sup>2</sup> has been allocated for the storage of these bins accounting for access, movement requirements and no bin stacking.	Not applicable.	Waste collections personnel will cart waste MGBs to the collection point, the path does not exceed 10m and is of a flat gradient.	The comingled recycling MGB will be taken to the loading area by the contractor and emptied into the waste collections vehicle.	A rear-lift waste collection vehicle will be used, the vehicle dimensions are included in the RWMP and swept paths proving accessibility to the loading area can be seen in the attached Attachment 2.	Not applicable.

\* If an interim storage is part of the RWM system design, please provide details of the area, bins, and additional transfer movement to the consolidation area. This can be addressed in supporting documentation.





## Occupancy requirements

### General

This section applies to all development types with the exception of *Residential Single Dwellings*.



#### Generation

**The O-RWMP must clearly show waste volume estimations for the core waste streams.**

1. Operational waste management planning for the development must include a minimum separation of three core waste streams: Comingled recyclables, Food Organics and Garden Organics (FOGO), and residual waste.
2. The three core waste streams must be source separated, with three separate distinctly coloured and identifiable bins provided, to reduce the risk of cross-contamination by the user.
3. Additionally, space must be provided for the separation and storage of bulky waste and electronic waste.
4. Estimated waste generation for comingled recycling, FOGO, and residual waste must be calculated and evidenced using the waste generation rates provided in [Appendix B](#).
5. One or more interim storage rooms or areas must be provided and indicated on planning documentation, these areas must be:
  - a. Adequately sized to accommodate at least one days' worth of waste stored in MGBs.
  - b. Easily and safely accessible to building users.
  - c. Located in a place or places within the development that minimises the transfer distance of waste to the central waste consolidation area. Considerations should be given to proximity to vertical transport such as service lifts or waste chutes.
6. If the development will generate hazardous and liquid wastes, then a suitably sized space must be allocated to the storage of these waste streams. Hazardous and liquid wastes may include paint, needles, chemicals, cooking oil, commercial cleaning products, and solvents. Hazardous waste should be kept secure and inaccessible to everyone but facilities management staff and specific hazardous waste collections contractors.
7. Appropriately sized bins must be used in the development, accounting for the expected waste generation of all areas, practicality of bin movement and frequency of emptying. Additionally:
  - a. FOGO bins are not to be larger than 240L due to the density of this waste stream making it difficult to transfer in large quantities.
  - b. All other waste streams to be transferred in a maximum of 1100L bins.
  - c. Bins can either be swapped for empty ones or decanted into larger bins using bin lifts.
  - d. Allow sufficient space for manoeuvrability of bins within storage areas. A minimum additional 70% of actual bin size is required e.g.  $3 \times 660L \text{ bins} = 3 \times (1.4m \times 0.8m) = 3.36m^2 + 70\% = 5.7m^2$ . Additional space must be allowed where items such as drainage, doors, equipment, hoses, and other items are co-located.
8. Sufficient space around the collection vehicle must be allowed within the collection or service zone to allow the collection operatives to safely manoeuvre and empty bins.
 

The development must allow at least the following:

  - a. 1m pedestrian clearance for operatives to walk.
  - b. 1.5 x the largest bin size for wheeling bins.
  - c. 2.5 x the largest bin size within the emptying zone.



### Transfer to Consolidation

**The O-RWMP must clearly display the safe transfer of materials from interim storage areas to the central waste consolidation area.**

8. Equipment such as MGBs or cleaner's trolleys are to be used to transfer waste from interim storage areas to the central waste consolidation area.
9. The central waste consolidation area must be located in a place within the development that minimises travel distance from the interim storage areas.
10. The transfer path should avoid high thoroughfare areas, slopes, and stairs.
11. The unassisted transfer of large or heavy bins must not be more than 5m, this applies to bins over 600L in size or FOGO bins larger than 140L.
12. For multi-levelled developments the use of vertical transport such as service lifts to cart the waste to the consolidation area must be employed.
  - a. If a chute system is installed this can be used to transfer comingled recyclables and residual waste to a chute service room located on the same level or within the central waste consolidation area. For more information on chutes and their requirements please see [Appendix E](#).



### Consolidation area

**The O-RWMP must clearly describe the location and size of the central waste consolidation area, as well as the number and type of bins that it will contain.**

13. The central waste consolidation area will be primarily used for the storage of all the development's waste materials and associated equipment and therefore must be adequately sized to accommodate the following:
  - a. At least two days' worth of comingled recycling, FOGO, and residual waste storage. This must be evidenced in the O-RWMP using waste generation estimations.

14. Safe and effective movement of bins within the consolidation area:
  - a. A minimum bin scaling factor of +70% must be used to calculate the extra space required for the manoeuvring of bins.
  - b. The access paths within the consolidation area must be kept free and clear of obstructions or items which can impact bin movements such as open drains or steps.
  - c. Bin storage arrangements must avoid bin blocking and ensure that all core waste streams always have readily accessible bins.
  - d. FOGO bins must not be larger than 240L due to the density of this waste stream making it difficult to transfer in large quantities.
15. Space for bulky waste (see development specific sections for bulky waste space requirements) and other intermittently collected waste stream such as:
  - a. E-Waste
  - b. Printer toner cartridges
  - c. Charity donatable goods
16. The consolidation area must be suitably located within an enclosed area of the building envelope, to minimise unwanted pests and vermin, vandalism, and disturbances / amenity impacts.
17. The consolidation area should be located in a suitable position that is both convenient for users and waste collection staff, promotes simplified resource recovery, and separation of waste streams.
18. The consolidation area must have facilities to enable the cleaning of bins, this will reduce any odour impacts to amenity and minimise pests. Cleaning must be undertaken regularly – especially FOGO bins which should be cleaned after each empty.
  - a. Bin washing facilities must be provided within or adjacent to the waste consolidation area.

19. Waste compaction machinery and waste chute outlet areas must address all health and safety considerations, such as:
  - a. Appropriate PPE
  - b. Hazard signage
  - c. Any other bespoke operational requirements
  - d. Spillages and or liquids from waste
20. Detailed design considerations and requirements for waste consolidation areas are outlined in [Appendix F](#).



### Transfer for collection

**The O-RWMP must clearly describe how waste materials will be safely transferred from the consolidation area to the point of collection.**

21. The waste vehicle collection point must be located within 10m of the entrance to the waste consolidation area, with the following exception:
  - a. Bins larger than 660L must not be transferred unassisted more than 5m.
22. The route from consolidation area to collection point must not exceed a grade of 1:14 for bins sized 360L or smaller and must not exceed a grade of 1:24 for bins larger than 360L at any point.
23. Collection points must be located to avoid the potential for disturbances.



### Collection point and Vehicle access

**The O-RWMP must clearly describe where the collection point is located and how the collection vehicle accesses this.**

24. Waste and recycling storage containers must not be stored outside of the bounds of the development at any stage of the collection process.
  25. The collection point must be located where the collection vehicle(s) can stand and function safely.
  26. The collection point must be as close to the consolidation area as possible and not further than 10m away.
  27. The waste collection vehicle must be able to enter and exit the site in a forward direction from the direction of approach on the same side of the road as the development i.e. turning left in and left out.
  28. Reversing of collection vehicles within the development is to be minimised as much as possible. Detailed swept paths showing how waste collection vehicles manoeuvre within, and enter and exit the development must be provided along with the RWMP.
- ### Other Considerations
29. An individual domestic waste management charge will be levied by Council on every individually residential rateable property, regardless of whether Council provide the services, or a private contractor is engaged directly by the property manager.
  30. Council will assess the O-RWMP using and applying the same levels of criteria and requirements regardless of whether Council services or contractor services are proposed.

### Council Service Contracts

31. The structure of Central Coast Council's waste collection and recycling services plays an important role in ensuring efficient servicing. Waste service flexibility is an important issue that should be considered in relation to deciding an appropriate best practice system for the development. It is important to talk to Council as early as possible to identify potential servicing issues; this can be discussed at a Pre-development meeting.

## Residential Single Dwellings

This section applies to all Single Dwelling Residential Developments.

This section does not need to be read in conjunction with *General Occupancy Requirements*.

### Specific requirements for Residential Single Dwellings

1. A minimum of two days' worth of comingled recyclables and residual waste storage must be provisioned for inside each residence.
2. A floor plan of the proposed development must be included which shows:
  - a. Space allocated within the property boundaries for 3 x 240L bins (comingled recycling, FOGO, and residual waste). Note: actual bin sizes provided may differ but the minimum space for 3 x 240L bins must be available.
  - b. The transfer path that the bins will take from their storage point to the kerbside collection point. This path should be less than 30m in distance, transitioning between less than 2 floor levels, avoid steep gradients and be adequate for the transfer of 240L bins.
  - c. The location of the proposed kerbside collection point capable of holding 3 x 240L bins (3m x 1m).
3. An individual domestic waste management charge will be levied by Council on every individually rated residential property.
4. Waste collection points must be easily accessed by Council waste collections staff with the following criteria evidenced in the O-RWMP:
  - a. Preference for kerbside waste collection, in circumstances where Council vehicles need to provide onsite collection then swept paths must be provided showing how the waste collection vehicle will service the development accounting for vehicle height (including the maximum height of a bin lift), length, width, turning circle, and maximum weight (see [Appendix G](#)).
  - b. Kerbside collection points need to consider issues such as the following:
    - i. Car parking spaces that may impede collection.
    - ii. Possible interference with trees, street furniture, bus stops, loading zones, or other noted ordinance.
    - iii. Sized to accommodate all bins presented and allowing sufficient manoeuvrability.

### Council Service Contracts

The structure of Central Coast Council's waste collection and recycling systems play an important role in ensuring efficient servicing. Waste service flexibility is an important issue that should be considered in relation to deciding an appropriate best practice system for the development. It is important to talk to Council as early as possible to identify potential servicing issues; this can be discussed at a Pre-development meeting.

## Multi-unit Residential Developments

This section applies to all Multi-unit Dwelling Residential Developments and must be read

in conjunction with *General Occupancy Requirements*.

### Specific requirements for MUDs

**In addition to the considerations described in the general requirements section, RWMPs for Multi-unit Residential Developments must also display the following.**

1. Residents must not be required to transfer waste more than 30m in distance or over 2 floor levels from their residences to a communal waste storage/disposal point, i.e. an interim waste storage room or waste disposal chute inlet. Multiple storage points should be considered for larger developments.
2. Onsite collection of waste is required for all MUDs. Collections from a basement area should be the preference, however some development circumstances may not permit this as a viable option in which case the following may be considered in order of preference:
  - a. A dedicated waste collection or loading bay on the same grade as the building.
  - b. Kerbside collections – for developments with six or less dwellings.
3. Note: any collection proposals will need to consider other development controls and impacts and although the proposal may provide an acceptable waste outcome it may not be permissible under other planning requirements.
4. Waste collection points must be accessible to Council collection vehicles. Swept paths showing how Council waste collection vehicles will enter and exit the development must be supplied.
5. A bulky waste storage space is to be designated for residents to temporarily store large waste items awaiting collection by Council's clean up service, such areas must be:
  - a. Minimum 10m<sup>2</sup> of space for developments up to 40 units in size, an extra 2m<sup>2</sup> is required for every additional 10 units. For example, a 60 unit development would require 14m<sup>2</sup> minimum of bulky waste storage space.
  - b. Easily accessible by buildings residents.
  - c. Secured and caged to prevent illegal dumping and for the contents to be viewed from the outside.
  - d. Access doorways leading from the bulky waste storage area to the collection point must be at least 1.5m wide.
  - e. Located on ground or basement level and can be integrated with the centralised waste storage area.
6. Kerbside collection utilising 240L bins is permissible for developments with six or less residential units in certain circumstances if it can be proven that the space required for onsite storage of waste would be of detriment to the feasibility of the project and the presentation of kerbside bins is acceptable and in line with these Guidelines. Kerbside collections must also adhere to the following design considerations as referenced in the *NSW EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*:
  - a. Bins fit in a row with a minimum 50cm space between them.
  - b. Bins are within the site's frontage (not impeding driveway or neighbours' lots).
  - c. Bins are a minimum 2m away from trees, bus stops, street furniture, and road infrastructure.
  - d. The development includes parking free zones at least 10m each side of the bin presentation space to allow safe collection.
7. Kerbside collections should not be located adjacent to the following structures and services:
  - a. Intersections, roundabouts, or traffic-calming devices.
  - b. Along arterial roads.
  - c. Narrow lanes which heavy rigid class vehicles cannot access.
  - d. Obstructions such as trees, overhanging buildings, under eaves and low overhead powerlines.
  - e. Walls and garage doors.
  - f. 'No stopping' signs, loading zones, parked cars, or other enforceable penalty zones.

## Non-Residential Developments

This section applies to all Non-Residential Developments and must be read in conjunction with *General Occupancy Requirements*.



### Generation

1. Bulky waste storage space is to be determined based on the size and type of Non-Residential Development:
  - a. 2m<sup>2</sup> for developments under 100m<sup>2</sup>,
  - b. 4m<sup>2</sup> for developments between 100m<sup>2</sup> and 2,000m<sup>2</sup>.
  - c. Retail, accommodation, and entertainment developments must provide an extra 4m<sup>2</sup> of bulky waste storage space for every 2,000m<sup>2</sup> (i.e. a retail development of 5000m<sup>2</sup> must provide 8m<sup>2</sup> of bulky waste storage).
  - e. Office developments must provide an extra 4m<sup>2</sup> of bulky waste storage for every 20,000m<sup>2</sup>.
  - f. Bulky waste storage areas must be secured and caged to prevent illegal dumping and for the contents to be viewed from the outside.
2. An area must be provided for the temporary storage of reusable commercial items such as pallets, kegs, and crates. This area should be located in an easily accessible location adjacent to a goods loading dock or stored within each applicable commercial premises.
3. Reusable and recyclable fit out waste is to be stored and managed in a separate interim storage room, unless it is stipulated in contracts with the organisations conducting the fit out that they are required to remove old furnishings and materials as they are generated.



### Collection area and Vehicle access

4. Commercial waste contractor vehicles may differ in size to the Council fleet; however, the Council waste vehicle specifications, methodology, and objectives must still be used when creating swept paths to confirm access to the waste collection point.
5. Contracts with waste collection contractors must cover all waste streams applicable to the development type and copies of the contract deliverables must be supplied to tenants of the development.
6. Preference should be given to the onsite weighing of materials as this yields the best quality data.

### Specific Non-Residential requirements Offices, universities, and light industrial

7. The source separation of waste is to be provisioned on each floor of an office development. This can be achieved by providing centrally located bin stations for each waste stream that remove the need for under desk bins.
8. Paper and cardboard are a significant waste stream for office developments and provisions must be made to ensure that this waste is stored in a vermin-proof area and must not be held for more than two weeks to deter nesting of vermin.
9. Printing or photocopying areas should have space provisions for at least one MGB of up to 240L in volume.
10. Developments of more than 20,000m<sup>2</sup> of office area must provide space for a cardboard baler or in-bin compactor, within or adjacent to the waste consolidation area.

### Cafés, supermarkets, pubs, clubs, and commercial kitchens

11. Food premises are to comply with the requirements of *AS4674-2004 Design, Construction, and fit-out of food premises*, including the general waste and recyclable materials requirements. These Guidelines are not intended to alter obligations under that Standard and in the event of any conflict between these Guidelines and the Australian Standard, the Standard prevails.
12. If the food waste from the development is estimated to produce more than 50L of seafood, poultry, and meat waste per day, or contain more than 20% of these by weight or volume, then this should be collected daily.
13. Kitchen preparation areas must have space designated for the separate storage of comingled recyclables, food scraps, and residual waste. These waste receptacles are to be emptied daily.
14. Waste oils must be kept separately from other waste streams.

### Retail

15. Retail developments of over 2,000m<sup>2</sup> must provide space for either a baler or bin press for cardboard waste located within or adjacent to the waste consolidation area.

## Mixed Use Developments

This section applies to all Mixed Use Developments and must be read in conjunction with *General Occupancy Requirements*.

### Additional considerations for Mixed Use Developments

In addition to the considerations described in the general requirements section, RWMPs for Mixed Use Developments must also meet the requirements of *Multi-unit Residential and Non-Residential*, and demonstrate the following:

1. Residential and non-residential waste streams must be kept physically separated due to a difference in charging for waste collection services. Residential waste is levied by Central Coast Council. Non-residential waste is a business expense, and the waste collection services is paid for by the waste generating business (or businesses).
2. Residential and non-residential waste handling and storage systems must be kept separate and eliminate operational interferences or the flow of waste between each other.
3. Residential and non-residential tenants must not be able to access each other's waste storage areas.
4. Collection points may be shared between residential and non-residential waste and recycling as long as each waste stream is clearly identifiable or presented at different times.
5. The O-RWMP must specify interim waste and recycling storage areas, waste, and recycling consolidation areas and collection points for both residential and non-residential.
6. Proof that the residential and non-residential waste generation estimations have been calculated separately. Calculating these together may lead to incorrect bin estimation numbers.
7. Consideration must be given to the servicing hours of both residential and non-residential waste and recycling, ensuring that noise disturbance does not impact residents or neighbours of the development. This includes the collection of non-residential waste and recycling which must adhere to Council's current collection timelines.
8. If a facilities management contractor is employed to assist with the management of waste for both residential and non-residential elements of the development, then waste equipment such as bin washes, bin compactors, and bin lifts may be shared. It is not recommended to share a baler or bin press due to the potential to mix cardboard between residential and non-residential waste streams.

**Appendix A** Resource and Waste Management Plan Form

**Appendix B** Waste generation rates

**Appendix C** Waste management equipment

**Appendix D** Central Coast collection services

**Appendix E** Chutes

**Appendix F** Consolidation area

**Appendix G** Collection vehicle access

**Appendix H** Food waste



## Appendix A

# Resource and Waste Management Plan Form

Access the Form online [here](#).

## Appendix B

# Waste generation rates



Having an idea of the amount of materials that the development will generate when in operation is crucial to the planning of a good Resource and Waste Management system.

### Estimated residential waste and recycling generation rates

Accounting for variances and increases in waste generation, the allowance for waste and recycling storage for residential developments can be calculated using the following figures:

Single Dwelling Developments*	Litres per week		
	Comingled Recycling	Food & Garden Organics	Residual Materials & Waste
Single-dwellings (houses, small scale villas, or townhouse-type developments)	120	160	100

\* Waste and recycling generation rates for single dwellings also depend upon the number of people residing in the dwelling.

The waste generation rates above provide a guide only and are in line with the *City of Sydney Guidelines for Waste Management in New Developments 2018*.

Multi-unit Residential Developments*	Litres per week		
	Comingled Recycling	Food & Garden Organics	Residual Materials & Waste
1 Bedroom Apartment or Studio	80	25	80
2 Bedroom Apartment	100	25	100
3 Bedroom Apartment or greater	120	50	120

\* This assumes a 7L kitchen caddy for food preparation and food scraps is emptied 3.5 times per week. In addition to food waste there may also be organics waste generated from the maintenance of communal gardens and pot plants.

The waste generation rates above provide a guide only and are in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*.

## Estimated commercial waste and recycling generation rates

The following instructions apply when using the data in the table below to calculate waste generation rates for commercial buildings:

Premises type	Units	Expected litres per 100m <sup>2</sup> per day	
		Comingled Recycling	Residual Materials & Waste
Accommodation: non-hotel/motel	Per number of guest rooms <sup>(a)</sup>	5	10
Aged care	Per resident <sup>(b)</sup>	1	5
Cafes	Per 100m <sup>2</sup> floor space	120	100
Childcare	Per child	5	5
Cultural and recreational services: (museums, theatres, cinemas)	Per 100 m <sup>2</sup> floor space <sup>(c)</sup>	10	5
Food retail: takeaway (with sit-down area)	Per premises (80m <sup>2</sup> ) <sup>(d)</sup>	240	500
Food retail: takeaway (food preparation only)	Per premises (80m <sup>2</sup> )	60	120
Hotels/pubs (without meals provided at the bar)	Per 100m <sup>2</sup> floor space <sup>(e)</sup>	50	50
Licensed clubs (with gaming)	Per 100m <sup>2</sup> floor space <sup>(e)</sup>	50	50
Medical	Per number of doctor's consulting rooms <sup>(f)</sup>	10	20
Motels	Per number of guest rooms <sup>(g)</sup>	5	10
Offices	Per 100m <sup>2</sup> floor space <sup>(h)</sup>	15	10
Restaurants	Per 100m <sup>2</sup> floor space	280	400
Retail: chain stores (clothing, manchester etc.)	Per 100m <sup>2</sup> floor space <sup>(i)</sup>	20	5
Retail: other non-food	Per premises	100	50
Retail: grocery and convenience stores	Per 100m <sup>2</sup> floor space	240	120
Showrooms	Per 100m <sup>2</sup> floor space	25	10
Supermarkets	Per 100m <sup>2</sup> floor space <sup>(j)</sup>	300	240

*a) Other types of facilities calculated separately. Function rooms are based on potential bookings and restaurant data.*

*b) Kitchen to be calculated as per restaurant. Need to determine if other services are offered. Note that other waste such as clinical waste will be generated.*

*c) Floor space for patrons (seating areas for theatre/cinema). Calculate cafes separately. Calculate office areas separately.*

*d) Day operation only. Note consideration must be given to the number of hours or operation.*

*e) Calculate restaurants separately (including meals served at bar) as well as accommodation (use motel rate).*

*f) Need to determine if other services are offered. Note that other waste such as clinical waste will be generated.*

*g) Other types of facilities calculated separately*

*h) Floor space that is used for staff activities (e.g. exclude lobby areas)*

*i) Other facilities such as cafes calculated separately*

*j) Larger supermarkets may have a number of recycling streams, so advice should be sought as to what systems will be provided*

The waste generation rates on the previous page provide a guide only and are in line with the *NSW EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*.

- This data is for comingled recycling, food organics, and residual waste. The premises may generate other waste types (i.e. medical clinics in a shopping centre) and so generation rates for these should also be considered.
- For premises that have multiple types of facilities (i.e. a club that has accommodation, bars, cafes and restaurants or a residential building with a convenience store or an office building with café, gym, and childcare), all such facilities must be calculated separately and then volumes generated considered when looking at the bins required, storage size, and servicing frequencies.
- Consideration should be given for times of peak generation such as when stock is delivered or sale times at retail stores.
- Shopping centres can have a variable tenant mix. Some have large tenancies (used by the major chains), whereas others have a broad range of small tenancies as well as offices, medical centres, and a higher percentage of food outlets as opposed to general retail. Therefore, these should be calculated separately.
- The volume calculations do not take into consideration waste compaction systems that may be used, such as bin presses or balers for paper/ cardboard or waste.
- If the retail or commercial tenancies are not known at the DA stage, the rates for the largest waste and recycling generator permitted in the zoning of the proposed development must be applied.

## Appendix C

# Waste management equipment



A variety of bins and equipment exist for handling, collecting, and storing waste and recycling in commercial and residential buildings. The type of bin or equipment required depends on the type of material to be handled and the type of premises in which it's used.

All images shown are for illustration purposes only. Central Coast Council does not endorse the suppliers of the indicated equipment, nor any other manufacturers or suppliers of equipment and applicants must conduct their own investigations and research to inform their decisions.

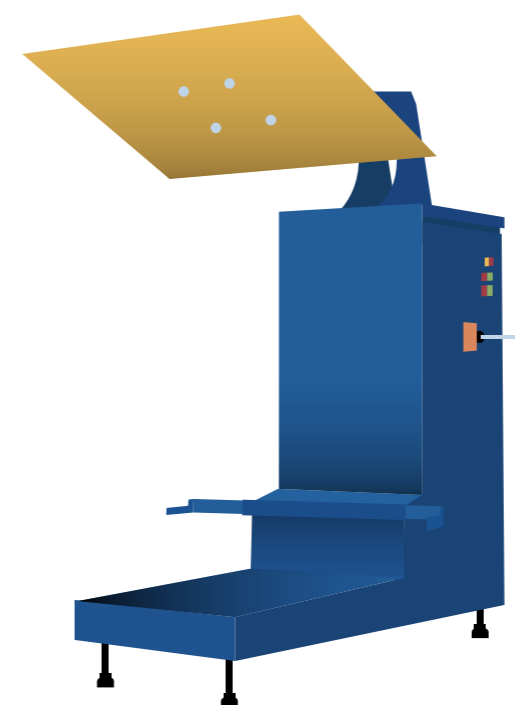
### Mobile Garbage Bins (MGBs)

These bins are the most commonly used method of storing waste and recycling due to their good manoeuvrability, which allows for some flexibility in where they are stored and where they are collected. Regardless of their size, MGBs are typically serviced by rear-lifting vehicles.

### Australian standard sizes for MGBs

MGB Type	Dimensions*			Footprint (m <sup>2</sup> )
	Height (mm)	Depth (mm)	Width (mm)	
<b>Two-Wheeled MGBs</b>				
120L	940	560	485	0.28
140L	915	615	535	0.32
240L	1080	735	580	0.43
<b>Four-Wheeled MGBs</b>				
660L	1250	850	1370	1.17
1100L	1470	1245	1370	1.70

\*These dimensions are only a guide and may differ slightly according to manufacturer, some MGBs have flat or domed lids and thus may require different bin lifting devices.



**Bin press**

### Compaction equipment

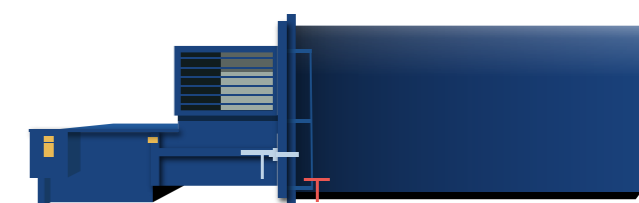
Equipment for waste and recycling compaction are used to condense various waste streams for the purpose of saving space. They are an effective way to reduce storage requirements while also keeping waste collections to a minimum.

#### Bin press

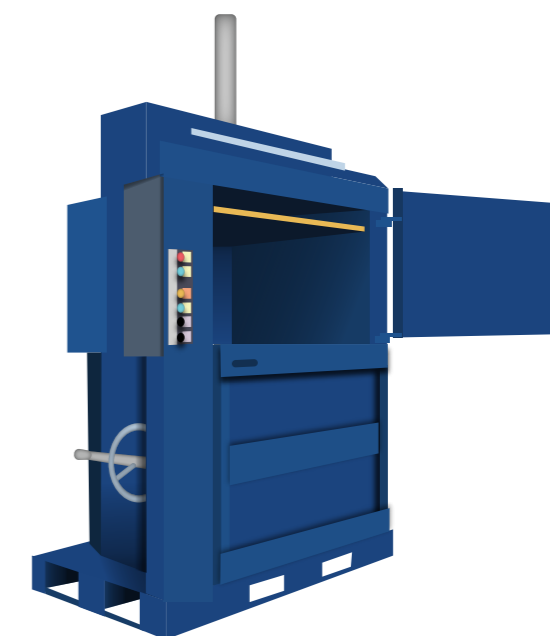
- Condenses waste and recycling contained in MGBs.
- Generally used for 660L and 1100L MGBs.
- Compaction ratios to be used in waste and recycling calculations:
  - Comingled recyclables 2:1
  - Paper and cardboard 3:1
  - Residual waste 2:1

#### Compactors

- Superior compaction of waste materials usually used for large commercial developments.
- Bin lifts are usually required to tip bins into the compactor chamber.



**Compactor**



**Baler**

- Compactor feeds into detachable Roll-on Roll-Off (RORO) bulk bin which must be collected using a hook lift truck.
- Compaction ratios to be used in waste and recycling calculations:
  - Comingled recyclables 3:1
  - Paper and cardboard 5:1
  - Residual waste 3:1

#### Balers

- Highest compaction ratio for paper and cardboard stream depending on pressing force of baler used.
- Bins must be emptied into these manually.
- Produces heavy bales which should be moved using a forklift or if palletised using an electric assist pallet.
- Compaction ratios to be used in waste and recycling calculations:
  - Paper and cardboard 6:1



## Appendix D

# Central Coast collection services



### Single Residential Dwellings and Multi-unit Developments (up to 6 units)

Developments are provided with:

- 140L waste bin with a red lid. This bin is serviced weekly.
- 240L recycling bin with a yellow lid. This bin is serviced fortnightly.
- 240L garden organics bin with a green lid. This bin is serviced fortnightly but on alternate weeks to the recycling bin.

Note: Single residential dwelling west of the Freeway (F3) are currently not entitled to the 240L garden organics bin. Provision for FOGO services must be included in any application as FOGO services have been mandated to all residential properties.

### Multi-unit Residential Developments (more than 6 units)

Developments are provided with:

- Bulk bins (660L, 1100L, or 1500L) for the storage of non-recyclable waste. Size and service frequency depends on unit numbers. Generally, 140L capacity is allowed per unit. Adequate truck access must be available to service bulk bins.
- 240L waste bins with a red lid. These bins are serviced weekly.
- 240L recycling bins with a yellow lid. These bins are generally serviced fortnightly, but weekly servicing can be arranged subject to site and proposed constraints.
- 240L garden organics bins with a green lid. These bins are serviced fortnightly.
- Alternatives to the above may be proposed and be subject to site specific agreement and approval if acceptable.

### Commercial and Industrial Buildings

Buildings can be provided with:

- Bulk bins (660L, 1100L, or 1500L) for the storage of non-recyclable waste. Size and service frequency depends on unit numbers. Generally, 140L capacity is allowed per unit. Adequate truck access must be available to service bulk bins on site.
- 120L, 140L, and 240L waste bins with a red lid. These bins are serviced weekly where kerbside presentation is clear of driveways or other obstructions.
- 240L recycling bins with a yellow lid. These bins are generally serviced fortnightly, but weekly servicing can be arranged where kerbside presentation is clear of driveways or other obstructions.
- 240L garden organics bins with a green lid. These bins are serviced fortnightly where kerbside presentation is clear of driveways or other obstructions. Bins must not be kept in front of the premises, unless an appropriately screened Waste Storage and Recycling Area is approved and provided.
- Required parking spaces must not be compromised by storage/servicing of bulk waste bins on site.
- Alternatives to the above may be proposed and be subject to site specific agreement and approval if acceptable.

Bins are to be placed at the collection point, no earlier than the evening prior to the collection day.

The owner or occupier should remove bins from the kerbside on the day of collection, once they have been serviced or as soon as practicable after service, but no later than the evening of collection day.

Where onsite collection is essential (e.g. bulk bins are being utilised), Council and service contractors will require indemnity against potential damages to property and access roads.

## Appendix E

# Chutes



### Recycling and waste chutes

Chutes are an effective way to move residual waste and some recyclables vertically through a development.

Recycling and waste chutes run vertically through a building with openings on each floor where users can deposit bags of residual waste and comingled recycling.

To accommodate both waste and recycling either a double chute system can be used, where two chutes are placed next to each other, or a single chute with a diverter.

Chutes terminate in dedicated chute service rooms located in the basement of a building where the waste is captured by bins. Developments exceeding three storeys must be provided with an acceptable method of transporting waste from each level to a central waste consolidation area. Chutes are an acceptable method.

Approval must be sought from Council before committing to the use of chutes.

Bulky recyclables and glass are not appropriate for transfer using chutes. Bulky recyclables can cause blockages and glass can break during transfer which contaminates the comingled recycling stream. The transfer and storage of glass and bulky recyclables should be considered.

### Chute design

- Recycling and waste chutes must be constructed in accordance with the requirements of the Building Code of Australia (BCA). 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 compliant with *AS1530.4-2014*.
- 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.

### Chute service opening

- 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.
- Service openings on each floor must be accessible to anyone with a disability and be compliant with *AS1428 Design for access and mobility*.
- Branches connecting service openings to the main chute are to be no more than 1m long.
- Chutes must be used for the disposal of the appropriate recyclables and/or waste. Signage should be displayed near service openings to inform users of how to correctly use the chute system.

### Chute service room design

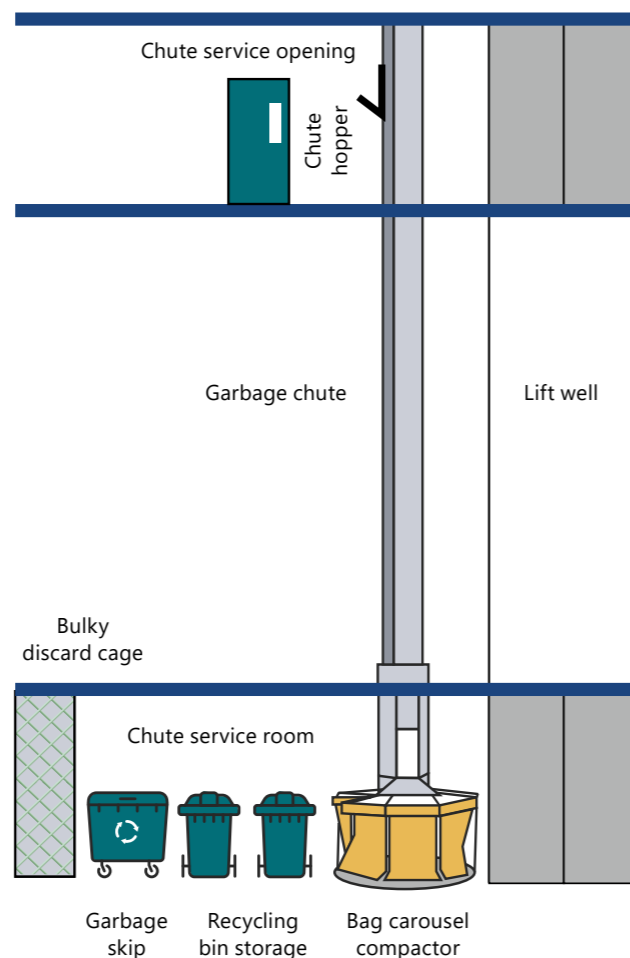
- Access to the chute service room should be restricted to authorised personnel only, this is to ensure against damage to equipment or injury.
- Chutes must not be located adjacent to any habitable or public space and doors must have an effective self-sealing system.
- Each service room must include bins at the base of the chute for the storage of waste and recyclables. Carousel or linear track systems can also be used to reduce bin management requirements.
- Each service room must be located for convenient access by authorised users and must be well ventilated and well lit.
- The room must be designed to a suitable standard and consider items such as surfaces, lighting, ventilation, and drainage.

### Management

- Arrangements must be in place for the regular maintenance and cleaning of chutes and any associated service rooms, service openings, and charging devices.
- Arrangements must be in place for the regular transferral of material and waste containers used in the chute service room to the main consolidation area.

### Chute contingency

Any proposal to use a chute system must include detailed contingency plans for if the chute system becomes unavailable.



## Appendix F

# Consolidation area



Recycling and waste consolidation areas (also known as storage areas or bin rooms) must be constructed in accordance with the following minimum requirements:

- Compliant with the BCA.
- Adequately ventilated in accordance with *AS1668.4-2012 The use of ventilation and air-conditioning in buildings*.
- Consolidation areas are well lit with a preference given for sensor lighting.
- Bin washing facilities are provided with both hot and cold water taps available. These taps must be easily accessible even when the area is at full bin capacity.
- Floor is constructed of concrete at least 75mm thick.
- Floor is to be graded so that water from bin washing can drain to a Central Coast Council approved drainage connection. This is to avoid discharge from these areas to a stormwater drain.
- The floors and walls of the consolidation area must be smooth, cleanable, and durable. Walls must exhibit these characteristics up to at least the same height as the tallest bin being held in the area.
- The finishing of the ceiling must be smooth-faced, non-absorbent, and cleanable.
- All surfaces (walls, floor, and ceiling) must be light coloured.

### Location and appearance

- Consolidation areas must be integrated into the design of the overall development and such areas be located within the site boundary.
- Consolidation areas 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 consolidation area must adequately control adverse impacts associated with:
  - The proximity of the area to any dwellings
  - Noise generated by any equipment located within the area
  - Noise generated by the movement of bins into and out of the area
  - Noise generated by collection vehicles accessing the site
  - Odours emanating from the area
- Double glazing should be considered for habitable areas above or near to the waste consolidation area

### Size

The consolidation areas must be sized to comfortably accommodate all recycling and waste containers (bins or MGBs) associated with the development with sufficient volume to contain the quantity of waste generated (at the rate described in [Appendix B](#)) between collections.

## Layout

- The gradient of consolidation area floors for servicing purposes must be 3% or less and the gradient of any associated access ramps must be 1:8 or less in accordance with WorkCover and NSW Occupational Health and Safety requirements.
- Bins used for the storage of recyclable materials should be kept separate from (but close to) general waste containers to minimise the potential for contamination of recyclable materials.

## Access: General

- In commercial development, public buildings, and industrial development, there must be convenient access from each tenancy to a consolidation area.
- There must be step-free access between the capture point and the consolidation area.
- Arrangements must be in place so that the consolidation area is not accessible to the general public.
- Vermin must be prevented from entering the consolidation area.
- The area should not be used for other purposes such as a utility room for gas metres, power boards, or general storage of items.
- The installation of fixed structures should be avoided in waste consolidation areas to allow for potential future service changes.

## Doors and gates

- Doors and gates to consolidation areas must be durable.
- All doors and gates are to be openable from both inside and outside the storage area.
- All doors and gates must be wide enough to allow for the easy passage of containers.

## Signage

Consolidation areas must include signage that clearly describes the specific materials and waste that can be deposited in each bin.

## Management

- Arrangements must be in place for the regular maintenance and cleaning of consolidation areas.
- Servicing arrangements for the emptying of bins must be compatible with the operation of any other loading and unloading facilities onsite.

## Refrigerated waste storage

In some instances, Council may require that the consolidation area is refrigerated. This is likely if large quantities of food waste are generated onsite and waste removal from this site is difficult due to its location or long trading hours.

- The temperature is to be maintained at or below 5°C with all refrigeration equipment installed with sufficient space for cleaning.
- The floor, walls, and ceiling of the refrigerated waste room are to be constructed of a rigid, smooth-faced impermeable material capable of being easily cleaned.
- The floor is to be graded to the doorway.
- The room is to comply with Section G.1 of the BCA.
- The room should be provided with artificial light controllable from within the room.
- Noise from the use of the refrigeration equipment associated with the waste room is not to give rise to "offensive noise", as defined under the *NSW Protection of the Environment Operations Act 1997*.

## Requirements for Multi-unit Dwellings less than 6 units

- Enclosures are to be a maximum dimension of 4m x 2.5m.
- The dimensions of the enclosure are based on the following:

<b>Length</b>	0.65m x no. of units
<b>Depth &amp; width</b>	1.5m for 1 row and 2.5m for 2 rows between engaged piers or other obstructions within the enclosure

- An individual property's bins may be stored their garage, courtyard, or in an enclosure. Shared bins can be stored in an enclosure subject to sufficient, suitable kerb side presentation at the front of the property, clear of driveways, or other obstructions. No encroachment for bin presentation beyond the boundaries of the property permitted.
- Internal resident access to the enclosure shall have a gradient not exceeding 10% and should not exceed 30m in length.
- Access between the bin enclosure and the kerb side is to be free of obstructions.

## Requirements for Multi-unit Dwellings greater than 6 units

- The area required for MGB bulk bins can be calculated as set out below. The one metre allows for adequate corridor space.

MGB	Depth / Width	Length
<b>660L</b>	(1 x number of rows) + 1m	1.25 x number of bins
<b>1100L</b>	(1.35 x number of rows) + 1m	1.45 x number of bins
<b>1500L</b>	(1.55 x number of rows) + 1m	2.25 x number of bins

# Appendix G

## Collection vehicle access



### Requirements

- The development must be designed to allow safe access by collection vehicles to service all bins. The dimensions and weight of the largest waste collection vehicle that will service the site must be proven to have been considered and catered for within the design of the collections area and any access routes leading to the collections area. Swept path drawings for these vehicles showing entry to and exit from the collection point must be included with the applicant's O-RWMP.
- 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 for the purpose of emptying bins must be able to occur in accordance with WorkCover NSW Occupational Health and Safety requirements.

### Collection vehicles

Generally, there are two types of waste collection service. The first service type involves emptying the contents of each customer's bin or bins into a truck with waste from many other customers. These trucks are fitted with a compactor that compresses waste, so that it takes up as little volume as possible and allows for as much waste as possible to be loaded on board.

The trucks drive between different customers on a 'run' that generally extends over a certain geographic area. Visits to disposal facilities are included in the run and most runs also end at a disposal facility. A good deal of care is taken by contractors to work out how to service all the customers along the shortest route and in the quickest time. Services that lengthen the route or the time it takes to complete a run generally cost more.

The second service type involves collecting waste in a single large bin (often an open bin or compactor) from a customer and delivering it directly to a disposal facility where it is emptied. The empty bin is then usually returned to the customer and the customer is without the bin for the time it takes for the return journey.

The waste collection vehicles may be side-loading, rear-end loading, or front-end loading. The size of the vehicle varies according to the type and frequency of the collection service. Thus, it is impossible to specify what constitutes the definitive waste collection vehicle. The vehicle dimensions below provide a guide only and are in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*. Turning circles and collection requirements must also be in accordance with the latest AS2890.2.

### Rear lift collection vehicles

The information submitted with the DA must be supported by scaled site and floor plans that clearly identify:

- Swept paths suitable for a 10.5m long, rear lift collection vehicle for the trucks entire travel path including forward entry and exit and around the collection point.
- A minimum vertical clearance of 4m in the collection area.

### Rear lift collection vehicle dimensions

<b>Length overall</b>	Up to 10.24m
<b>Width overall</b>	2.50m
<b>Operational height</b>	Up to 3.50m
<b>Travel height</b>	Up to 3.50m
<b>Weight – vehicle only</b>	12.4 tonnes
<b>Weight – payload</b>	9.5 tonnes
<b>Turning circle</b>	18.00m

### Side lift collection vehicles

The information submitted with the DA must be supported by scaled site and floor plans that clearly identify:

- Swept paths suitable for a 10.5m long, side lift waste collection vehicle for the trucks entire travel path including forward entry and exit and around the collection point.
- A minimum vertical clearance of 4m in the collection area.

### Side lift collection vehicle dimensions

<b>Length overall</b>	Up to 9.64m
<b>Front overhead</b>	1.51m
<b>Wheelbase</b>	5.20m
<b>Rear overhead</b>	2.93m
<b>Turning circle kerb to kerb</b>	17.86m
<b>Turning circle wall to wall</b>	20.56m
<b>Front of vehicle to collection arm</b>	3.80m
<b>Maximum reach of side arm</b>	3.00m
<b>Travel height</b>	Up to 3.63m
<b>Clearance height for loading</b>	Up to 3.9m

### Front lift collection vehicles

The information submitted with the DA must be supported by scaled site and floor plans that clearly identify:

- Swept paths suitable for an 11.8m long, heavy rigid, front lift waste collection vehicle servicing 1 to 4.5m<sup>3</sup> bulk bins in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*. This is required for the vehicles entire travel path including forward entry and exit and around the collection point.
- A minimum vertical clearance of 6.5m in the collection area in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*.

### Front lift collection vehicle dimensions

<b>Length overall</b>	Up to 11.50m
<b>Front overhead</b>	1.51m
<b>Wheelbase</b>	Up to 5.84m
<b>Rear overhead</b>	3.17m
<b>Turning circle kerb to kerb</b>	22.1m
<b>Turning circle wall to wall</b>	23.66m
<b>Travel height</b>	3.82m
<b>Clearance height for loading</b>	Up to 6.2m

## Hook lift collection vehicles

The information submitted with the DA must be supported by scaled site and floor plans that clearly identify:

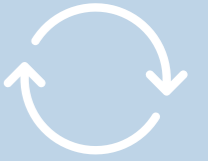
- Swept paths suitable for a 10m long, heavy rigid, hook lift waste collection vehicle servicing 1 to 36m<sup>3</sup> skip bins in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*. This is required for the trucks entire travel path including forward entry and exit and around the collection point.
- A minimum vertical clearance of 7.1m in the collection area in line with the *EPA Better Practice Guide for Resource Recovery in Residential Developments 2019*.

## Constrained sites

Smaller and isolated sites may be problematic for waste collection, particularly for when they are unable to consolidate with surrounding lots. These sites may require an alternative onsite service arrangement with a small rigid waste collection vehicle (as defined by Australian Standard 2890.2). Council may use the below criteria to determine if an alternative arrangement is permitted. This may include, but is not limited to, sites that:

- Cannot accommodate a safe and/or efficient kerbside collection.
- Have insufficient and/or unsuitable frontage for kerbside collection.
- Have access off cul-de-sac heads with limited frontage within in the lot boundary.
- Are located within a 1km radius of Transport for NSW designated train stations. Here commuter car parking prevents kerbside collection, and 'no parking' signage is permitted only with approval from Transport for NSW.

# Appendix H Food waste



Food waste can make up 70% of the average residential bin. When this is disposed of to landfill, negatively impacts recycling rates, represents a loss of valuable resources, and generates methane (a potent greenhouse gas). When recycled, food waste can be used to produce valuable fertiliser and reduce the amount of waste sent to landfill.

Council supports the implementation of food waste separation and recycling as a key step to improving recycling rates and achieving targets for reducing waste to landfill.

Food waste can be managed onsite or collected for offsite processing. A range of onsite processing options for food waste are discussed below and presented as options only. Further investigation is required by the developer to assess their feasibility. Any onsite food waste system must be purchased, maintained and managed by the development.

Key considerations for assessing the viability of separated food waste systems for a development:

- Size of the development, number of households and quantities of food waste generated.
- Presence of retailers and commercial premises and quantities and types of food waste generated.
- Availability of trained people to manage and operate systems.
- Availability of suitable space.
- Willingness and ability to source separate food waste.
- Availability and cost of food or food and garden collection services to offsite organic processors.
- Ongoing operation and maintenance requirements of the selected onsite system.

## Compost bins

Compost bins and piles are a way of processing compostable material and garden organics onsite and produces a useful soil enhancer (compost). There are a variety of compost bin arrangements and systems that are available. The footprint area requirement for a typical compost bin is about 1m<sup>2</sup> and they are often situated in a garden. Compost bins can generally process a range of materials including all fruit and vegetable scraps and fine garden waste. Meat, dairy, grains, and processed food are not generally recommended however, can be placed in compost bins in moderate quantities provided the bins are well managed.

## Worm farms

Worm farms can be a cheap and effective method of managing fruit and vegetable scraps except for citrus fruit, garlic, and onions. Vermiculture systems (worm farms) transform compostable material into vermicast (worm compost) and vermi-liquid (liquid extract from the worm farm). These outputs can be used in gardens to promote plant growth. Worm farms can occupy a small footprint and can be located on balconies or in gardens. There are a number of commercially available worm farms of different designs. They are sold through hardware stores and some specialist suppliers.

Space requirements for a typical worm farm for an average household are (indicative only):

- Height – 300mm per level
- Width – 600mm
- Length – 900mm

## Food macerators

These systems pulp food and store it in a tank at the source. They are commonly found in commercial premises and have the potential for use in residential buildings. When the tank is full, the contents are collected by truck and taken to a treatment facility, such as an anaerobic digester.

## Decomposers and dehydrators

These systems are scalable and rapidly decompose or dehydrate food waste by heating and agitating the waste over 24 hours. They reduce the volume of food waste by removing most of the water it holds to produce a dehydrate waste. Generally, decomposers and dehydrators require a sewer connection to dispose of the wastewater and/or a filter for the vapours vented to the air and may require additional Council approval. The dehydrated waste can be sent to a lawful facility such as a commercial composting facility.

## Anaerobic digester

Onsite anaerobic digesters are systems that use bacteria to break down food waste in an oxygen-free environment. The resulting biogas that is produced during this process can be used as an onsite energy source.

## Food waste disposal units

A kitchen food waste disposal unit (also known as an in-sink macerator) is a mechanical appliance that is installed under the kitchen sink and connects to the drain. Residents feed food waste into the unit which grinds it and sends it into the sewer system or into a septic tank. Council does not support the use of this technology, due to the increased load it puts on the sewage system and because of its relatively low resource recovery rates. However, in-sink macerators which have onsite collection and containment and do not connect to the sewer may be considered.

## Food waste in commercial premises

To tackle the issue of food waste generated in commercial premises, the NSW Government offers programs to help businesses to better understand:

- The amount of food waste they generate
- Adopt simple and practical actions to avoid food waste
- Donate unwanted good quality food to people in need
- Recycle any remaining food waste

Further resources from the NSW EPA:

- Bin Trim program
- Love Food, Hate Waste program

# Terminology

## Abbreviations

<b>BCA</b>	Building Code of Australia
<b>C-RWMP</b>	Construction Resource and Waste Management Plan
<b>CE</b>	Circular Economy
<b>DA</b>	Development Application
<b>DCP</b>	Development Control Plan
<b>EPA</b>	Environmental Protection Authority
<b>FOGO</b>	Food Organics and Garden Organics
<b>LEP</b>	Local Environment Plan
<b>MGB</b>	Mobile Garbage Bin
<b>NSW</b>	New South Wales
<b>O-RWMP</b>	Occupancy Resource and Waste Management Plan
<b>RWM</b>	Resource and Waste Management
<b>RWMP</b>	Resource and Waste Management Plan
<b>SP-RWMP</b>	Site Preparation Resource and Waste Management Plan
<b>WHS</b>	Workplace Health and Safety

## Glossary

**Collection point** means the usual (or agreed) point of the footpath/roadway, or onsite, 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 and Non-Residential.

**Compaction equipment** means devices which reduce the volume of waste or recyclable material including compressing devices such as compactors and balers as well as shredding, pulverising or crushing devices.

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

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

**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.

**Chute** means a duct in which deposited material descends from one level to another within the building.

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

**Guidelines** means this document.

**Materials and waste** any discarded, rejected, unwanted, surplus or abandoned item including any substance prescribed by regulation to be waste for the purpose of the *NSW Protection of the Environment Operations Act 1997*.

**Resource and Waste Management Plan submission** means the completed RWMP Form with all required attachments for Council assessment.

**Resource and Waste Management system** describes the set of elements that work together to manage materials and waste.

**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.



**Council offices**  
2 Hely St Wyong  
T 1300 463 954  
[centralcoast.nsw.gov.au](http://centralcoast.nsw.gov.au)