53 - 57 Bolong Road and 4 Beinda Street, Bomaderry – Waste Management Plan

A Submission to Landcom

13 June 2024

MRA Consulting Group

53-57 Bolong Road and 4 Bienda Street, Bomaderry –Waste Management Plan

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Disclaimer

In the spirit of reconciliation MRA Consulting Group acknowledges the Traditional Custodians of Country throughout Australia and their connection to land, sea and community. We pay our respects to Aboriginal and Torres Strait Islander peoples and to Elders past, present and emerging.

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Glossary

Terminology	Definition
AS	Australian Standard
C&D	Construction and Demolition
BTR	Build to Rent
DA	Development Application
DCP	Development Control Plan
EPA	Environment Protection Authority
LGA	Local Government Area
MGB	Mobile Garbage Bin
MSW	Municipal Solid Waste
MUD	Multi-Unit Dwelling
WMP	Waste Management Plan
RFB	Residential Flat Building
SDCP	Shoalhaven Development Control Plan 2014
SLEP	Shoalhaven Local Environmental Plan 2014
WSP	Waste Service Provider
WSRA	Waste Storage and Recycling Area

1 Introduction

MRA Consulting Group (MRA) was engaged by Landcom to prepare a Waste Management Plan (WMP) for the proposed residential development at 53-57 Bolong Rd and 4 Beinda St, Bomaderry. The proposal features a four storey Build-To-Rent (BTR) residential flat development, across two building forms. The site is located within the City of Shoalhaven Local Government Area (LGA).

This WMP addresses the requirements of the Consent Authority (Council) and conforms to the following environmental planning instruments and reference documents:

- Shoalhaven Local Environmental Plan 2014 (SLEP)
- Shoalhaven Development Control Plan 2014 (SDCP)
- Shoalhaven City Council – *Waste Minimisation and Management Guidelines* (2019)

This WMP also references the following supplementary guidelines, developed by the NSW EPA:

- NSW EPA (2019) *Better Practice Guide for Resource Recovery in Residential Developments.*

The following key overarching objectives for waste management of construction and demolition waste are outlined in the SDCP 2014 (Chapter G7: Waste Minimisation and Management Controls):

- Reduce the amount of waste generated and the demand for landfill disposal.
- Maximise recovery, reuse and recycling of building/construction materials, household generated waste and industrial/commercial waste.
- Provide on-going management for waste handling and recovery on site (at the source).
- Provide guidelines on the preparation of waste management plans, matters for assessment, and the reduction and handling of waste.
- Encourage the use of materials made from recycled products and materials that can be recycled and reused.
- Achieve source separation and improve design and location standards, which complement waste collection and management services, offered by Council and/or private service providers.
- Encourage building designs and construction techniques which will maximise future resource recovery.
- Assist in achieving Federal and State Government recovery targets and directive outcomes.
- Minimise the overall environmental impacts and foster the principles of ecologically sustainable development.

This WMP is used to inform the building design to deliver best practice waste management and promote sustainable outcomes at the demolition, construction and operational phases of the development. The WMP addresses waste generation and storage associated with demolition and construction works through redevelopment, and ongoing occupation of the proposed use.

2 Background

2.1 Description of the Proposed Development

The proposed development involves the full demolition of existing structures, excavation, and construction of a four-storey residential flat building (RFB) with 60 residential dwellings. Landcom seek to establish a Build-to-Rent (BTR) pilot project on the NSW South Coast.

Relevant site plans for the proposed development are provided in Appendix A.

2.2 Location

The proposed development site is known as 52-57 Bolong Road and 4 Beinda Street, Bomaderry located in the City of Shoalhaven Local Government Area (LGA). The site has frontages to Bolong Road to the east and Beinda Street to the north.

Figure 1 depicts the location of the site in relation to the surrounding land uses and roadways.

Figure 1: Site and surrounding area

Source: Nearmap, 2024

2.3 Zoning and Use

The site is zoned as R3- Medium Density Residential zone in the SLEP 2014 (see Figure 2)

- To provide for the housing needs of the community within a medium density residential environment.
- To provide a variety of housing types within a medium density residential environment.
- To enable other land uses that provide facilities or services to meet the day to day needs of residents.

- To provide opportunities for development for the purposes of tourist and visitor accommodation where this does not conflict with the residential environment.

Figure 2: Land Use Zoning

Source: NSW eplanning Spatial Viewer, 2023.

2.4 Strategies

Waste management for the site considers better practice, necessary equipment, and integration with other guidance documents including the NSW Waste and Sustainable Materials Strategy (NSW EPA, 2021), and National Waste Policy: Less Waste, More Resources (DAWE, 2018). The key policy aims that are considered are:

- Avoidance (to prevent the generation of waste);
- Reduce the amount of waste (including hazardous waste) for disposal;
- Manage waste as a resource; and
- Ensure that waste treatment, disposal, recovery and re-use are undertaken in a safe, scientific and environmentally sound manner.

Management of waste generated onsite according to directives of the NSW Strategy will assist in achieving the target of 80% diversion from landfill in the C&D sector.

2.5 Assumptions

This report is a WMP, forming part of the development documentation and assumes:

- Drawings and information that have been used in waste management planning for this WMP are the final design set for the development plan from the project architect, St Clair Architecture, dated 12/04/2024;
- Waste generation volumes are based on waste generation rates provided from the *Shoalhaven Development Control Plan 2014* and *Waste Minimisation Guidelines*; and

- This WMP is a living document and therefore, waste management equipment and systems described in this report are subject to change based on future operations and available technology.

3 Construction and Demolition

Demolition and construction activities at the site will generate a range of construction and demolition (C&D) waste. Throughout the development process, all materials will be reused and recycled where possible, minimising the disposal (landfilling) of materials other than those that are contaminated or unsuitable for reuse or recycling processes.

Waste storage during construction operations will involve some stockpiling of reusable material, as well as placement of wheeled bins for the separation of construction materials for recycling. A bin for residual waste or contaminated material will also be made available at the site for disposal where necessary. Bins may require alternative placement across construction operations to facilitate the safe and efficient storage of materials and will be retained within property boundaries to avoid illegal dumping.

A waste storage area shall be designated by the demolition or construction contractor and shall be sufficient to store the various waste streams expected during operations. Waste storage areas will be kept clear to maintain access and shall also be kept tidy to encourage separation of waste materials and for WHS reasons. The waste storage area will retain multiple bins to allow for source separation of waste to allow for ease of recovery and reuse of materials.

Waste management principles, management measures and facilities in use on the site shall be included as part of the site induction for all personnel working on the site.

3.1 Demolition Waste

The proposed development will require demolition of existing structures prior to commencement of excavation and construction operations. Demolition works will include the removal of two dwellings and associated structures.

Table 1 outlines the expected demolition waste quantities to be generated at the site, in addition to the appropriate management methods for each material type. Other materials with limited reuse potential either on or offsite will be removed in bulk bins for recycling at an appropriately licenced and capable recycling facility.

Table 1: Demolition waste generation estimates

Type of Material	Estimated volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Disposal	Estimated % Landfill	Estimated % of landfill diversion	Methods for re-use, recycling or disposal
Concrete	100 – 150	✓	✓	✓	-	<5%	>95%	Onsite: Separated wherever possible and reused or crushed for filling, levelling or road base. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Glass	50 - 75	✓	✓	✓	-	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Bricks/pavers	100 – 150	✓	✓	✓	-	<5%	>95%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. The development will be able to reuse a number of existing building bricks as paving in landscaped areas. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Tiles	10 - 20	✓	✓	✓	-	<5%	>95%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Removed to C&D facility for crushing and recycling for recovered products.

Type of Material	Estimated volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Disposal	Estimated % Landfill	Estimated % of landfill diversion	Methods for re-use, recycling or disposal
Timber (Clean)	20 – 25	✓	✓	✓	-	0	100	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Timber (Clean)	20 - 25	✓	✓	✓	-	50	50	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Plasterboard	25 - 30	-	✓	✓	-	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Metals (ferrous & non-ferrous)	15 -20	-	✓	✓	-	<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Removed to C&D facility for recovery and recycling.
Floor covering	10 - 15	-	✓	✓		50%	50%	Should be removed in bulk and sent to carpet recycler or C&D facility for recovery where possible.
Residual waste	10 - 20	-	-	-	✓	100%	-	Resource recovery dependant on facility destination capability.

Type of Material	Estimated volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Disposal	Estimated % Landfill	Estimated % of landfill diversion	Methods for re-use, recycling or disposal
Hazardous Waste	Unknown	-	-	-		100%	-	Existing buildings may contain potentially hazardous materials. Should contaminated or potentially hazardous materials be discovered they would be handled according to the demolition and/or materials management plan
	Total % Diversion from Landfill Estimated						**>80%**	

3.2 Construction Waste

Construction involves a four-storey residential flat building (RFB) across two building forms, featuring 60 residential dwellings, ground level parking, communal open space areas, associated landscaping and services.

Table 2 outlines indicative volume to weight conversion factors for common construction materials.

Table 2: Building waste material by percentage and conversion factor for volume and weight

Building waste material	Tones per m^3	Waste as % of the total material ordered
Bricks	1	5-10%
Concrete	2.4	3-5%
Tiles	0.75	2-5%
Timber	0.5	5-7%
Plasterboard	-	5-20%
Ferrous metal	2.4	-

Source: Parramatta Waste Plan Application Template 2017.

Table 3 outlines the estimated waste generation rates for materials through construction of the proposed development, in addition to the appropriate management methods for each material type.

Table 3: Construction waste generation estimations

Type of Material	Estimated Volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Landfill	% of landfill diversion	Methods for re-use, recycling or disposal
Excavated material	Minor	✓	✓	✓	<5%	>95%	Onsite: Reuse for fill and levelling. Offsite: Removed from site for reuse as recycled fill material or soil. Disposal: Removal of any contaminated material for appropriate treatment or disposal.
Bricks/pavers	10 - 15	✓	✓	✓	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Concrete	15 - 25	✓	✓	✓	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for filling, levelling or road base. Offsite: Removed to C&D facility for crushing and recycling for recovered products.
Tiles	10 – 15	✓	✓	✓	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Timber (clean & treated)	10 – 15	-	✓	✓	<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse removed to C&D facility for recovery where possible.

Type of Material	Estimated Volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Landfill	% of landfill diversion	Methods for re-use, recycling or disposal
Plasterboard	15 – 20	-	✓	✓	<10%	90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier or removed to a C&D/plasterboard recovery facility for recovery where possible.
Glass	5 – 10	✓	✓	✓	<10%	>90%	Onsite: Separated wherever possible and reused or crushed for landscaping and driveways. Offsite: Returned to supplier for reuse or removed to C&D facility for crushing and recycling for recovered products.
Metals (ferrous) Metals (non-ferrous)	5 – 10	-	✓	✓	<10%	>90%	Onsite: Separated wherever possible to improve resource recovery. Offsite: Returned to supplier for reuse or removed to C&D facility for recovery and recycling.
Floor covering	5 – 10	✓	✓	✓	<10%	>90%	On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D processor: recovery and recycling.
Fixtures and fittings	>5	✓	✓	✓			On site: to be separated wherever possible to enhance resource recovery. Reuse: surplus and offcut material returned to manufacturer for reuse where possible. C&D processor: recovery and recycling.

Type of Material	Estimated Volumes (m^3)	Re-use on-site	Recycle (Separate collection)	Recycle (Off-site)	Landfill	% of landfill diversion	Methods for re-use, recycling or disposal
Electronic waste	>5	-	✓	✓	<10%	>90%	Offcut wires and electronics separated where possible or returned to supplier for reuse.
Packaging materials (pallets, wrap, cardboard, etc)	15 - 20	-	✓	✓	<10%	>90%	Returned to supplier where possible or separated by material type for resource recovery.
Residual waste		-	✓	✓	100%	-	Resource recovery dependant on facility destination capability.
Total % Diversion from Landfill Estimated						**>90%**	

3.3 Waste Contractors and Facilities

To ensure best practice waste management, appropriate contractors and facilities have been proposed based on their location and service offerings (Table 4).

Table 4: Waste service contractors and facilities

Role	Details
Recommended Waste Collection Contractor	The following are local skip bin operators for consideration in the management of excavation and construction waste for the site: • Purple Cow Industries; • Pro Skips; • Shoalhaven Skips; Or another supplier as elected by the building contractor.
Principal Off-Site Recycler	The following are local C&D processing facilities for consideration in the management of C&D waste generated at the site: • Wingecarribee Resource Recovery Centre. Or another appropriate facility as elected by the waste management contractor.
Principal Licensed Landfill Site	• Shoalhaven Recourse Recovery Facility Or other appropriate facility as elected by the waste management contractor.

3.4 Site Documentation

This WMP will be retained on-site during the construction phases of the development, along with other waste management documentation (e.g. contracts with waste service providers).

Responsibility for the WMP, waste documentation and processes during the excavation and construction phases will be with the site manager or builder.

A logbook that records waste management and collection will be maintained on site, with entries including:

- Time and date of collections;
- Description of waste and quantity;
- Waste/processing facility that will receive the waste; and
- Vehicle registration and company name.

Waste management documentation, the logbook and associated dockets and receipts must be made available for inspection by an authorised Council Officer at any time during site works.

4 Operational Waste Management

Waste management strategies related to site operations have been established according to the documents outlined in the SDCP.

The proposed development is for a Build-to-Rent development featuring 60 residential dwellings and ground floor parking. Operational waste generation addressed in the following sections relates to waste generation associated with the occupation of each building.

The following space calculations are based off the bin dimensions sourced from the SDCP and NSW EPA's *Better Practice Guide for Resource Recovery in Residential Developments* (2019) (Table 1).

Table 5: MGB capacity and footprint

Bin Capacity (L)	Height (mm)	Depth (mm)	Width (mm)	Footprint (Approx. m^2)
120	940	530	485	0.33
240	1,100	735	580	0.43
660	1,250	850	1,370	1.16
1,100	1,470	1,245	1,370	1.74

Source: NSW EPA - Better Practice Guide for Resource Recovery in Residential Developments (2019)

4.1 Residential Waste Generation

60 residential dwellings are proposed for the development, across two building forms. The Shoalhaven City Council – *Waste Minimisation and Management Guidelines* (2019) provide generation rates for new multi-unit residential developments:

- 120L of general waste per unit per week.
- 60L of recycling per unit per week.

Additionally, it has been assumed that 25L of Food Organics and Garden Organics (FOGO) will be generated per unit per week in line with NSW government mandates for FOGO collection state-wide.

Waste generation expected for the proposed development is calculated in Table 2. Spatial requirements of the waste storage areas are based on a weekly collection of general waste, FOGO and recycling by a private waste contractor.

Table 6: Waste Generation, bin allocation and spatial requirement

Building/Units	Waste Stream	Generation per Week (L)	240L bin allocation	Collection Frequency	Minimum Spatial Requirement
Building 1: 29 units	General Waste	3,480	15 x 240L bins	Weekly	17m^2 (26 bins total)
	Recycling	1,740	8 x 240L bins	Weekly	
	FOGO	725	3 x 240L bins	Weekly	
	Bulky Waste	As needed			4m^2

Building 2: 31 units	General Waste	3,720	16 x 240L bins	Weekly	19m^2 (28 bins total)
	Recycling	1,860	8 x 240L bins	Weekly	
	FOGO	775	4 x 240L bins	Weekly	
	Bulky Waste	As needed			4m^2

**Based on bin footprint (m^2) x 1.5 for circulation and manoeuvring.*

Waste storage rooms will be designed to accommodate all bins across the two buildings. Space will be provided to ensure any future changes required by Council (such as the introduction of a compulsory FOGO collection for MUDs) can be accommodated by the development.

Temporary Waste Storage

Provision is made for the temporary storage of up to two days volume of general waste, recycling and FOGO within each dwelling unit.

Garden Waste

Each dwelling will not retain large private garden areas. External landscaped and common garden areas will be maintained and managed by an external landscape contractor who will remove green and garden waste offsite.

Bulky Waste

Council's waste guidelines do not specify a requirement for a common bulky-waste storage area, however space will be allocated for the temporary storage of this waste stream. Residents will be required to contact building management to organise a bulky waste collection or can opt in to utilising Council's bulky waste pickup for an additional fee.

5 Equipment and Waste Management Systems

5.1 Collection Method and Loading Areas

A private waste contractor is nominated to service the proposed development, utilising a wheel out, wheel back service with a rear lift vehicle. The waste contractor will be required to service the site from a loading zone along Beinda Street in proximity to the waste storage areas. A loading zone will reduce the likelihood of traffic conflict and delays related to waste loading. Waste carting routes from the waste management areas to the kerbside will be flat and free of lips or stairs. Information relating to rear lift vehicles is provided below:

Table B2.1: Collection vehicle dimensions

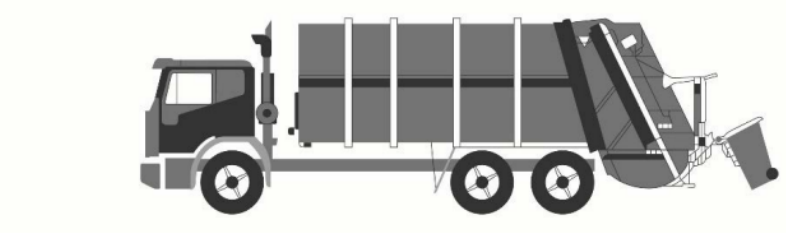
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Height in operation (m)	3.9	4.2	6.5	7.1	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0	13.0
Maximum payload (t)	10.0	10.8	11.0	14.5	9.5
Turning circle (m)	25.0	21.4	25.0	25.0	18

* The maximum reach of a side arm is 3 m.

Sources: JJ Richards, SUEZ, MacDonald Johnson, Cleanaway, Garwood, Ros Roca, Bingo and Edbro. Figures shown represent the maximum dimensions for each vehicle type.

Rear-loading collection vehicles

These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



Rear-loading waste collection vehicle

Source: NSW EPA's Better practice guide for resource recovery in residential developments (2019)

5.2 Waste management system summary

The various collection waste streams are summarised as follows:

- **General Waste:** General waste will be collected in a tied plastic bag prior to transfer to the respective 240L bins in the waste storage room on the ground floor.

- **Commingled Recycling:** All recyclables will be stored in commingled bins (mixed plastic, paper, cardboard, glass, aluminium, steel). All recyclables should be decanted loose (not bagged) with containers un-capped, drained and rinsed prior to disposal into the recycling bin.
- **Food Waste:** A separate collection for food waste is proposed in line with the NSW FOGO mandate. Collection is to be within 240L bins for manual handling purposes.
- **Other (Problem) Waste:** The disposal of hard, bulky, electronic, liquid or potentially hazardous wastes shall be organised between the residents and building management as necessary.

5.3 Management System and Responsibilities

Building management will be responsible for the management of waste at the site. Should there be any issues that impact on the operational efficiency, safety and suitability of waste management, management will be responsible for making any necessary changes.

Other responsibilities will include:

- Using this WMP to inform waste management operations, design and infrastructure;
- Providing educational materials and information on sorting methods for recycled waste, awareness of waste management procedures for waste minimisation and resource recovery;
- Maintaining a valid and current contract with a licensed waste service provider for waste and recycling collection and disposal; and
- Making information available to residents and visitors about waste management procedures.
- Organising, maintaining and cleaning bins as part of a regular maintenance schedule;
- Organising bulky waste collections as required;
- Ensuring bin allocation and waste/recycling collection frequency is adequate. Requesting additional infrastructure or services where necessary; and
- Monitoring any vermin and pest issues and arranging appropriate controls (traps or fumigating) and maintenance of doors or other points of potential entry.

Building management will be responsible for retrieval and set out of bins, as well as wheeling back to waste storage areas following servicing.

5.4 Bin Storage Areas and Amenity

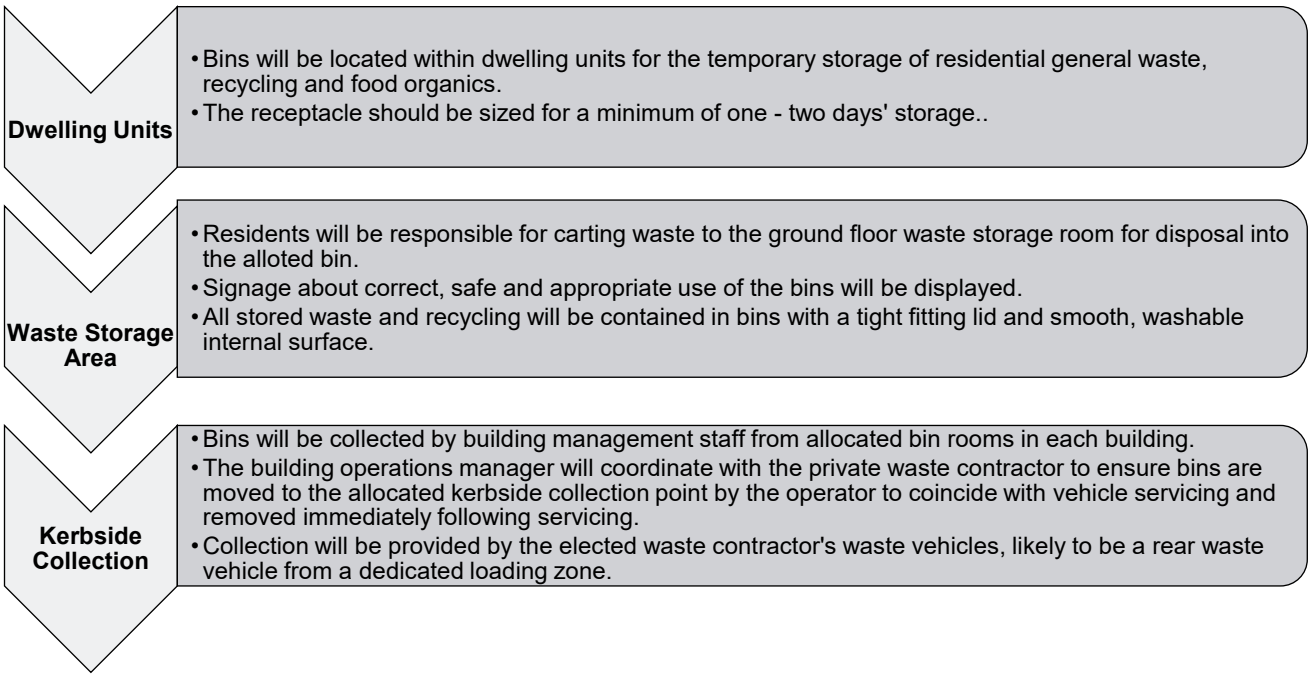
Building management will have access to the waste and recycling storage area which will house general waste, recycling, FOGO and bulky waste (when required). Bin storage areas will be constructed with the following considerations to safety and amenity:

- Hose tap connected to a water supply;
- Inaccessible to the general public and secured with a lockable door;
- Graded and drained to floor waste connected to sewer;
- Sufficiently ventilated and well-lit;
- Proofed against vermin and other pests;
- Designed to allow for segregation of waste into correct streams;
- Signage for safety and waste bin identification where necessary;
- Floors constructed of concrete or other approved solid, impervious material that can be cleaned easily; and
- Doorway ramp (if not level).

5.5 Waste Disposal and Recycling Method

The flow of general waste and recycling goes from generation to collection through several steps:

Figure 3: Waste Flow



5.6 Collection Method and Loading Areas

Collection point for the waste service provider (WSP) and areas for handling and loading are as follows:

- Waste storage area and collection area are open to the sky and will not be impacted by any overhead obstructions for the purpose of waste collection;
- Waste collections will be scheduled to occur outside of peak periods, to avoid times of high pedestrian and vehicle traffic associated with the development;
- As part of the Plan of Management (POM) for the site and in accordance with this WMP, the operator will ensure bins are moved to the allocated collection point/loading zone for each building, to coincide with vehicle servicing and removed following servicing as part of the building operation process;
- Two loading zones will enable shorter carting distances from the respective waste storage areas and a reduction in handling issues associated with WHS;
- Clear, safe, accessible, and convenient space is provided for handling of bins and loading of collection vehicles; and
- Identifiable areas where visitors and workers can recognize and avoid any risk associated with moving vehicles, and bin moving and handling.

A rear lift vehicle is likely to service the development (Table 3).

Table 7: Collection vehicle dimensions - Rear lift vehicles

Length	Width	Travel Height	Height in Operation	Turning Circle

10.5m	2.5m	3.9m	3.9m	25m

Table 4 below outlines relevant requirements and specifications related to the use of collection points and loading areas.

Table 8: Collection points and loading areas requirements and specifications

Component	Requirements	Specification
Collection point	Collection points are to be located so that:	- Collection operations should be carried out on a surface free of steps, kerbs and vehicle ramps - Oncoming traffic can be seen clearly as the vehicle leaves the property. - Bins to be moved to the allocated collection point by the operator to coincide with vehicle servicing and removed following servicing as part of the building operation process.
Vehicle manoeuvring and loading space	Truck space for adequate lift clearance, manoeuvring and operation for a contractor collection vehicle	- Collection from each site use loading area by a rear lift collection vehicle; - Adequate loading bay dimensions to not impede lift clearance; - Operational clearance for truck manoeuvring in a forward direction; and - The provision of space clear of vehicle parking spaces (level and free of obstructions).
Operating times	Appropriate collection times to limit noise and traffic disturbance	- Collection times will be arranged to ensure minimal disturbance to residents and their guests.

5.7 Signage and Education

Signage that promotes resource recovery, waste minimisation, safety and amenity follow the Australian Standard for safety signs for the occupational environment (Appendix B).

Signage is designed to consider language and accessibility (i.e. to be understood as clearly as possible by those with different abilities of vision, knowledge of the English language, intellectual ability and with other conditions). Signage is to be prominently posted on each bin and relevant waste service area indicating:

- Detail on acceptable recyclables;
- Recyclables are to be decanted loose (not bagged);
- Contact details for arranging the disposal of bulky items; and
- The area is to be kept tidy.

Standard signage requirements and guidance for application apply (see Appendix B).

5.8 Prevention of Pollution, Illegal Dumping and Litter Reduction

To minimise dispersion of litter and prevent pollution (to water and land via contamination of runoff, dust and hazardous materials), site management will also be responsible for:

- Maintenance of communal areas and bin storage areas;
- Securing the waste storage areas from vandalism and the escape of litter;
- Identification and appropriate disposal of goods with hazardous material content (paints, e-waste, fluorescent tubes);
- Acting to prevent dumping and unauthorised use of waste areas; and
- Requiring contractors to clean up any spillage that may occur during waste servicing or other work.

6 References

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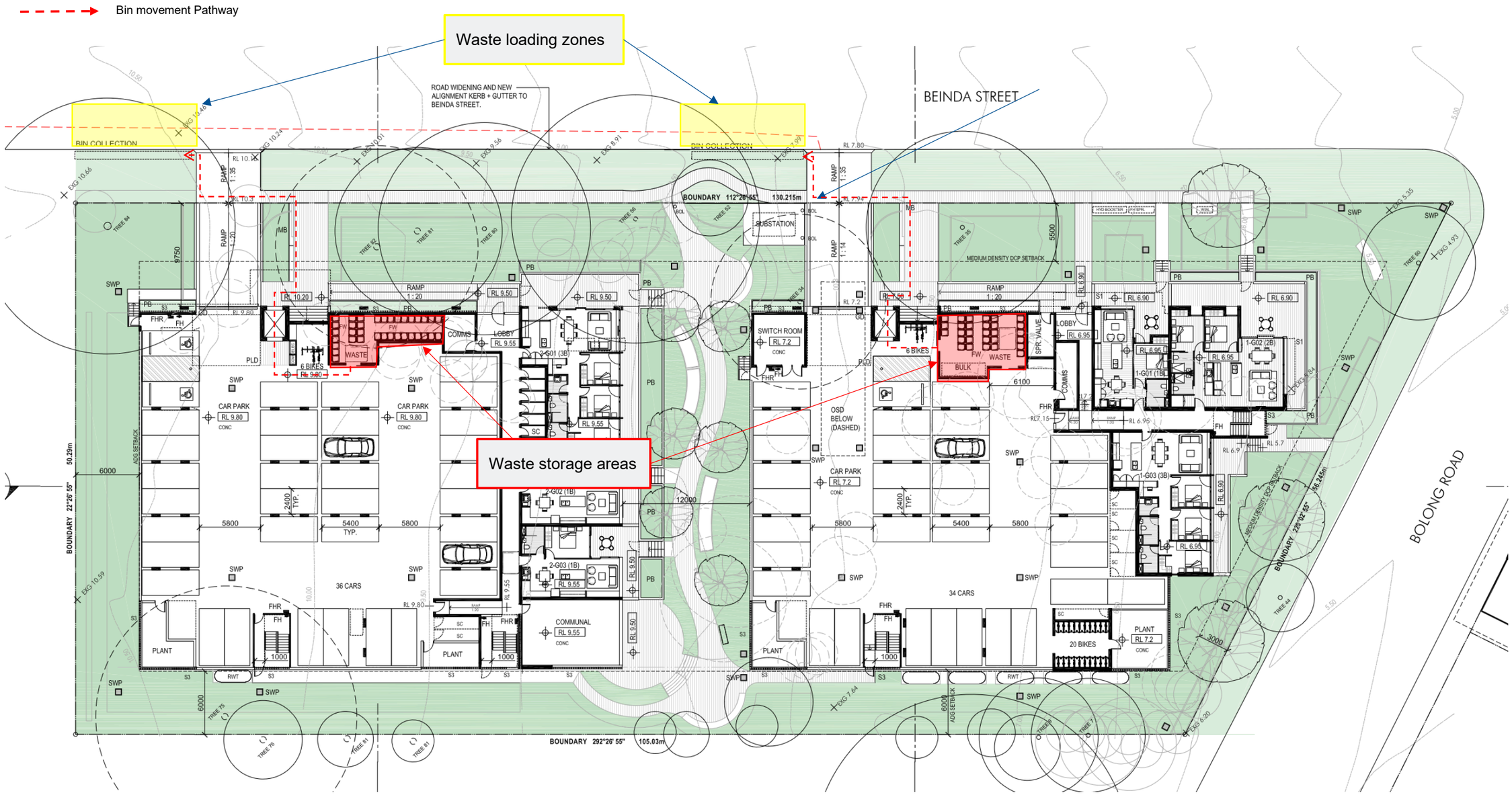
WorkCover (2011) Managing Work Environment Facilities Code of Practice.

Appendix A Proposed Site Plans



Source: St. Clair Architecture, 2024.

Appendix B Standard Signage

Waste Signage

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the NSW Office of Environment and Heritage (NSW OEH 2008b).

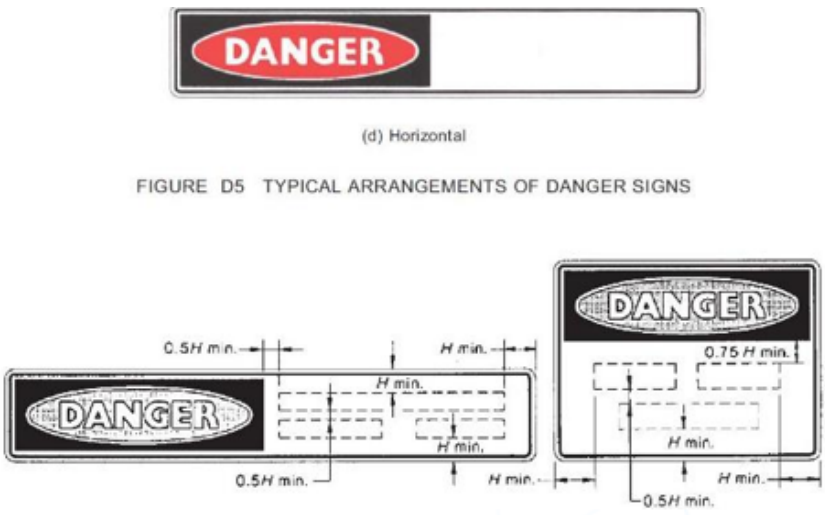
Standard symbols for use in signage, bin facade and educational materials are promoted through the NSW Environment Protection Authority. They are available for download from the NSW EPA website (NSW EPA 2016), in black and white and colour versions. The Australian Standard series AS 4123 (Part 7) details colours for mobile waste containers (Standards Australia 2008).

Figure 4: Examples of standard signage for bin uses

Safety Signs

The design and use of safety signs for waste and recycling rooms and enclosures should comply with AS 1319 (Standards Australia 1994). Safety signs should be used to regulate, and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Below are some examples (Figure 5). Clear and easy to read 'NO STANDING' and 'DANGER' warning signs must be fixed to the external face of each waste and recycling area where appropriate.

Figure 5: Safety signs



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