Waste Management Plan

638 Pittwater Road, Brookvale NSW 2100

April 2024

APEX ENGINEERS

Type of Assessment: Waste Management Plan
Site Location: 638 Pittwater Road, Brookvale NSW 2100
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1. Introduction

APEX Engineers were engaged by Tony Chirillo to provide a Waste Management Plan as part of the development application for the proposed mixed-use, multi-unit development located at 638 Pittwater Road, Brookvale NSW 2100.

2. Basis of Assessment

2.1 Aim

This report shall outline the on-going waste management strategies to be adopted by the proposed development.

2.2 Site Description and Local Road Network

The subject site (located at 638 Pittwater Road in Brookvale) is zoned as Business Development (B5) and is bound by 3 roads; Pittwater Road to the west, Orchard Road to the south and Charlton Lane to the east. At the site frontage, Pittwater Road includes two traffic lanes and a bus lane in each direction (with a posted speed limit of 60 km/hr) and is a part of the A8 arterial route linking Mona Vale to North Sydney. Both Orchard Road (with a posted speed limit of 50 km/hr) and Charlton Lane are local roads. Orchard Road includes left in/left out access from/to Pittwater Road.

Figure 1 Highlights the site location from an aerial perspective.

2.3 Proposal Characteristics

The proposed development includes the following components;

- 60 residential units (39 x 1 bed units + 15 x 2 bed units + 6 x 3 bed units).
- 8 commercial units totalling 794 square metres of GFA.
- 3 retail units totalling 1,030 square metres of GFA.
- Total of 152 car parking spaces (across three basement levels) with access off Charlton Lane.
- 2 service vehicle bays (within ground level) with access off Orchard Road.

Figure 1: Location of the Subject Site

3. On-Going Waste Management Plan

3.1 Waste Generation Levels and Bin Requirements

Waste generation levels and bin requirements have been determined with reference to the Warringah Waste Management Plan (2010).

3.1.1 Residential Component

Appendix 1 of the Warringah Waste Management Plan (2010) stipulates the number of bins to be allocated for multi-unit residential developments, based on the number of dwellings. Considering the proposed development which includes 60 residential units, 46 x 240L bins are required for the residential component of the development.

3.1.2 Commercial Component

Table 1 of the Warringah Waste Management Plan (2010) provides waste and recycling generation rates for on-going operations of various land uses. For Offices[1], the following rates are provided;

- Garbage: 10L per 100m^2 floor area/day; and
- Recyclable Material: 10L per 100m^2 floor area/day.

Applying the above rates to the total GFA of the 8 commercial units (being 794 sqm), the following maximum garbage and recycling accumulation levels (based on respective collection frequencies) have been obtained (it is noted that all the commercial units have been assumed to operate every day of the week, for conservative assessment purposes);

- Garbage: 10L per 100m^2 floor area/day x 794 m^2 x 7 days = 555.80L (once a week collection)
- Recyclable Material: 10L per 100m^2 floor area/day x 794 m^2 x 14 days = 1,111.60L (once a fortnight collection)

[1] It is noted that all the commercial units of the proposed development are assumed to be offices

As per the above, for the commercial component of the development, it is recommended to provide 3 x 240L (total capacity of 720L) bins for garbage and 5 x 240L (total capacity of 1,200L) bins for recyclable material.

3.1.3 Retail Component

Table 1 of the Warringah Waste Management Plan (2010) provides waste and recycling generation rates for on-going operations of various land uses. For Shops, the following rates are provided;

- Garbage: 50L per 100m^2 floor area/day; and
- Recyclable Material: 25L per 100m^2 floor area/day.

Applying the above rates to the total GFA of the 3 retail units (1,030 square metres), the following maximum garbage and recycling accumulation levels (based on respective collection frequencies) have been obtained (it is noted that all the retail units have been assumed to operate every day of the week, for conservative assessment purposes);

- Garbage: 50L per 100m^2 floor area/day x 1,030 m^2 x 7 days
  = 3,605L (once a week collection)

- Recyclable Material: 25L per 100m^2 floor area/day x 1,030 m^2 x 14 days
  = 3,605L (once a fortnight collection)

As per the above, for the retail component of the development, it is recommended to provide 15 x 240L (total capacity of 3,600L) bins for garbage and 15 x 240L (total capacity of 3,600L) bins for recyclable material.

3.2 Communal Waste Enclosure Sizes

The dimensions of the above mentioned 240L bins are considered to be 585mm wide by 730mm long, as per the below figure extracted from Appendix 1 of the Warringah Waste Management Plan (2010).

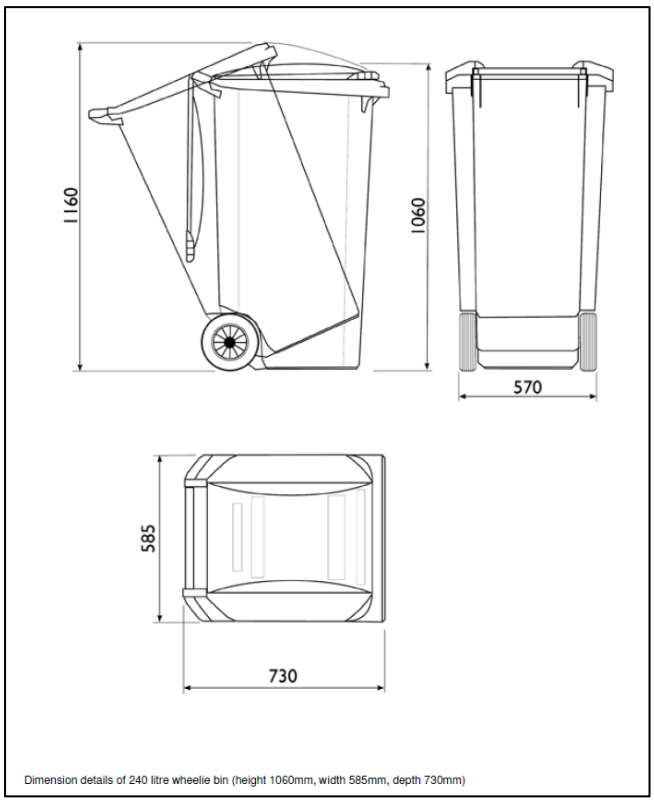

Figure 2: 240L Bin Dimensions

From the above identified dimensions, it was established that each bin requires a minimum area of 0.43m^2. Locations of communal bin storage rooms are shown in **Figure 3**. The anticipated bin configurations (to scale) within each room, are illustrated in **Figures 4**, **5** and **6**.

As per these figures, the proposed two residential bin storage rooms are capable of accommodating a total of 46 x 240L bins and the commercial/retail bin storage room is capable of accommodating 18 x 240L bins for garbage and 20 x 240L bins for recyclable material.

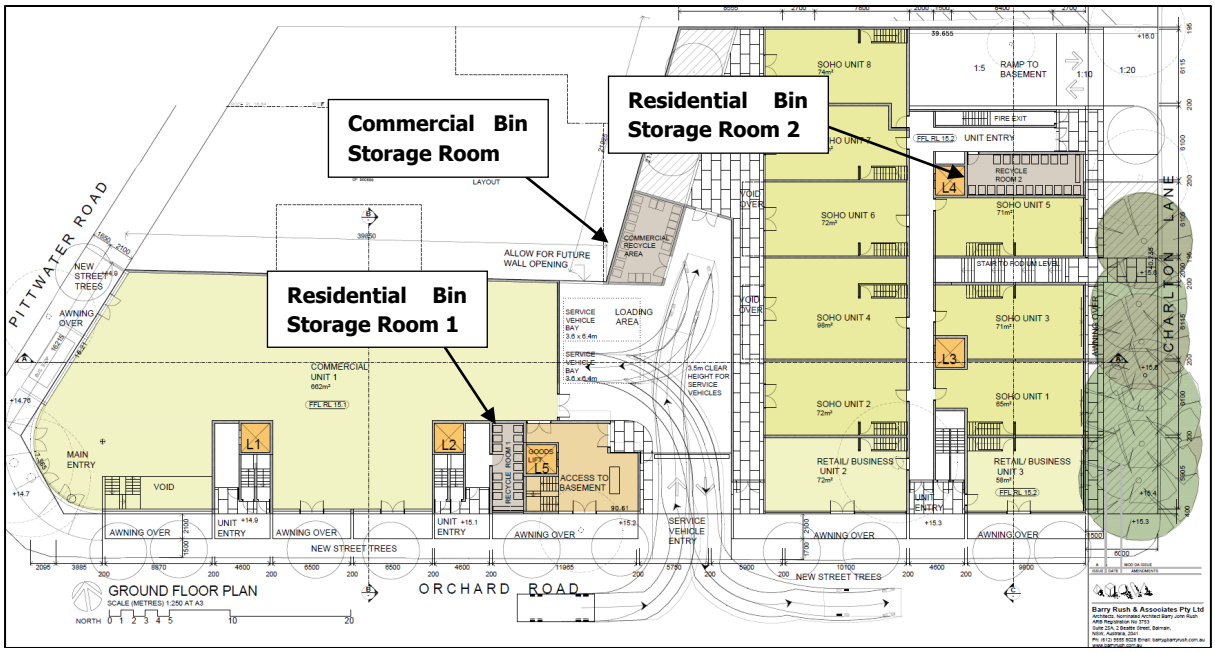

Figure 3: Location of Communal Bin Storage Rooms

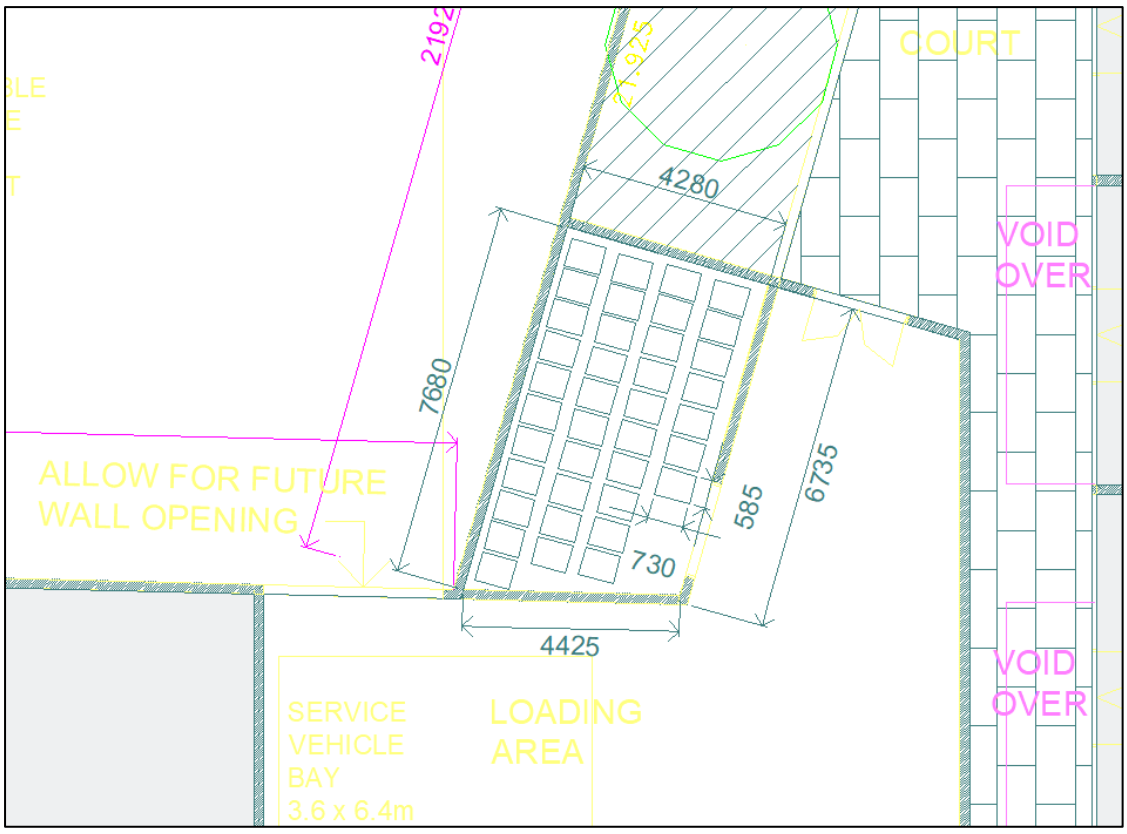

Figure 4: Scaled Bin Diagram for Commercial/Retail Bin Storage Room

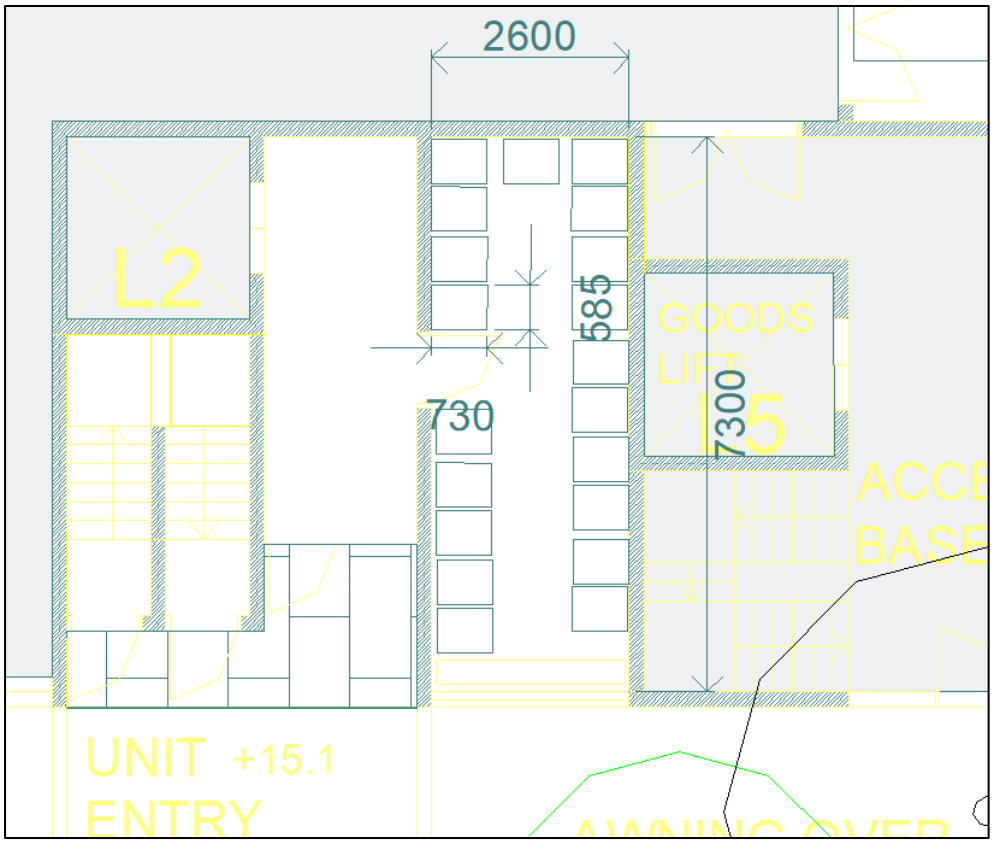

Figure 5: Scaled Bin Diagram for Residential Bin Storage Room 1

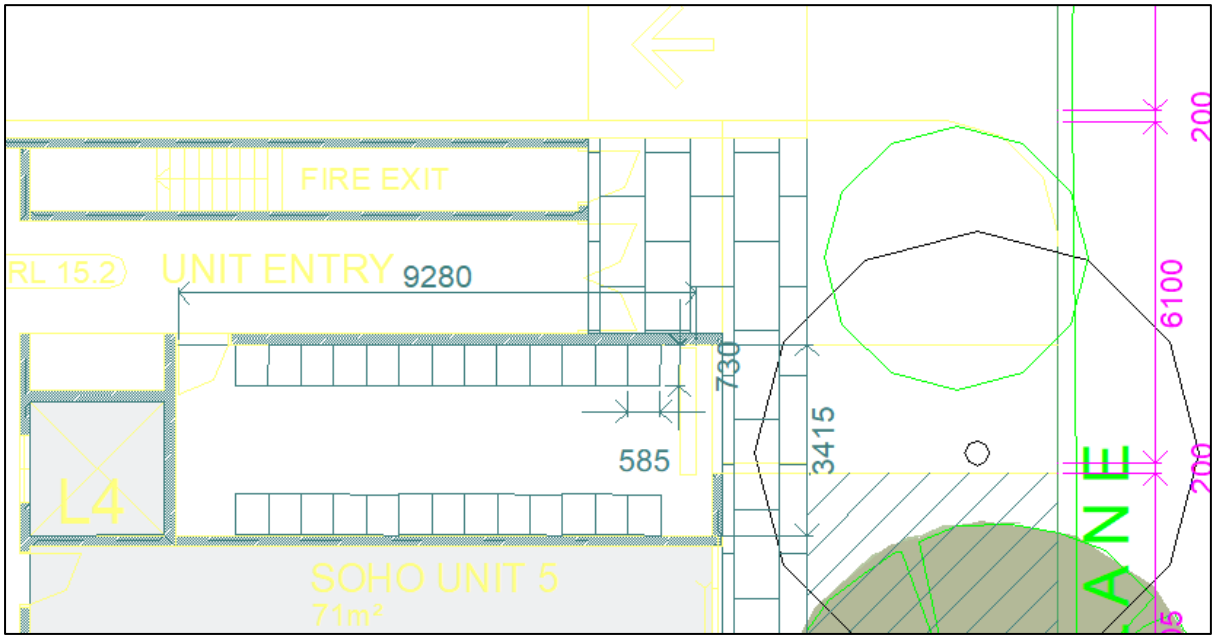

Figure 6: Scaled Bin Diagram for Residential Bin Storage Room 2

4. Collection

The waste collection service for both the residential and commercial components of the proposed development will be provided by the Council (through Council waste contractor). It is noted that general waste will be collected weekly while recyclable material will be collected every fortnight. The subject site is located in Council Zone 1 and the collection day is on Thursday.

The waste collections will be undertaken by the Council contractor by parking the waste truck at the kerbside, at site frontage on Orchard Road or on Charlton Lane. Note that the commercial bin collection can also be carried out from the commercial loading area which has access off Orchard Road. The wheel in and wheel out service for the bins will also be provided by the Council waste contractor.

5. Management

5.1 Green Waste

The Owners Corporation shall employ a gardener (private contractor) to maintain the communal garden area. It will be the responsibility of the gardeners to remove any green waste as required.

5.2 Responsibility

The development's management shall employ a person, to maintain the bin storage area. This will involve using the provided facilities to clean the enclosure and bins. Management shall also be responsible for council dealings, including, but not limited to:

- Ordering initial bins;
- Ordering replacements or additional bins; and
- Organising Council clean-ups (for bulky waste) or other special services.

Prior to moving in, management shall provide residents with information regarding the adopted waste management system.

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6. Specific Requirements

The following table provides a list of specific requirements for on-going waste management, as outlined in Chapter 4 (On-going waste management for three or more dwellings) of Warringah Council - Waste Management Guidelines (2016) document. It is noted that the subject development shall comply with Sections 4.2, 4.3, 4.4, 4.5 and 4.6 in the above document.

Table 1: Summary of Compliance with Specific Requirements

Requirement	Compliance/Comments
4.2. Waste Storage Area design requirements	
All Waste Storage Areas will: a) Be a designated area to accommodate Council's allocated number of waste and recycling containers. b) Have a practical layout, be free of obstructions and have only 90-degree angle corners. c) Have a floor area capable of storing the number of bins outlined in Appendix A. d) Accommodate 1 x 240L vegetation bin for every 200m^2 of landscaped open space on the site. e) Be graded and drained to a Sydney Water approved drainage system. f) Be serviced by an easily accessible water tap. The tap must not obstruct aisles, access ways and placement of bins. g) Be cement rendered and coved (smooth rounded corners) at the floor and wall intersections.	Proposed bin storage areas offer sufficient space to accommodate the required number of bins. Additional vegetation bins can also be accommodated within the proposed bin storage areas (as the scaled bin area diagrams show, there is ample spare capacity in each storage room). All bin rooms are capable of complying with design requirements during CC stage.

h) Be clear of any service and utilities infrastructure and related activities. i) Be capable of being kept clean and tidy at all times. j) Be in accordance with the BCA, relevant AS and legislation detailed in Chapter xii of the Waste Management Guidelines.	
4.3. Waste Storage Area location requirements	
The Waste Storage Area must be: a) At street level and permit easy, direct and convenient access for the residents, Council and Council's waste contractors. b) Clear of any obstructions and security devices. c) Incorporated entirely within the site boundary and, if it is an external structure, be designed to reduce visual impact and clutter. d) No closer than 3m from any dwelling openings. e) Clear of any entry points to stormwater systems and prevent waste water from entering any stormwater system.	All waste storage rooms are compliant and are capable of complying with these requirements at CC stage.
4.4. Pathway, access and door requirements	
The pathway and access between the Waste Storage Area and Collection Point will be: a) Solid, concrete, continuous, non-slip and clear of any obstructions and steps. b) A maximum ramp gradient of 1 in 8. c) Hazard free and not via a pathway with vehicular traffic. d) A minimum width of 1200mm.	All recycle rooms are compliant and are capable of complying with these requirements at CC stage. All recycle rooms offer sufficient aisle width

Any doors fitted on the Waste Storage Area, pathway and access will be: e) A minimum width of 1200mm. f) Able to be latched in an open position. g) Unobstructed by any locks and security devices. h) Openable in an outward direction.	(>1200mm) as per the scaled bin area diagrams. All bin storage rooms include at least one door wider than 1200mm. Other requirements can be complied with during the CC stage.
4.5. Bulky goods waste storage area requirements	
To assist with the storage of goods for Council clean-ups, where the development exceeds 10 dwellings, a bulky goods waste storage area must be provided that will be: a) A minimum of 4m³ per 10 dwellings fit for the purpose of storing bulky goods. b) A room or caged area separate from the Waste Storage Area. c) Incorporated entirely within the site boundary and not visible to the public	The proposed 40 dwellings require 16 square metres of bulky goods storage area. Provision has been made for separate storage spaces within the basement parking level.
4.6. Kerbside (on-street) waste collection requirements	
For developments with 3 – 80 dwellings, the pathway and access between the Waste Storage Area and property boundary must be a maximum distance of 6.5m.	The residential waste storage rooms are located at a distance <6.5m from the property boundary. The commercial waste storage room is located approx. 19m from the property boundary – however, a loading area is

	present between the boundary and the commercial waste room and therefore the collection vehicles can use this space to park and collect waste.

7. Summary

We trust that the information provided within this report sufficiently outlines the on-going waste management strategy to be adopted by the proposed mixed-use development.

Should Council require further information or clarification, please contact the undersigned.

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