



# **Waste Management Plan**

**4 Brookvale Avenue, Brookvale NSW 2100**

February 2018



**APEX ENGINEERS**



**Type of Assessment:** Waste Management Plan

**Site Location:** 4 Brookvale Avenue, Brookvale NSW 2100

**Prepared for:** Lotus Projects

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## **1. Introduction**

APEX Engineers were engaged by Lotus Projects to provide a Waste Management Plan as a part of the development application for the proposed multi-unit residential development at 4 Brookvale Avenue, Brookvale NSW 2100.

## **2. Basis of Assessment**

### **2.1 Aim**

This report outlines the on-going waste management strategies to be adopted by the proposed multi-unit residential development.

### **2.2 Site Description and Local Road Network**

The subject site is located at 4 Brookvale Avenue in Brookvale. At the site frontage, Brookvale Avenue is a local access road, which includes an undivided carriageway with kerbside parking on either side. Brookvale Avenue includes a cul-de-sac end approx. 300m from its roundabout intersection with Old Pittwater Road. The immediate site vicinity, on the north side of Old Pittwater Road, is characterised by residential uses. The south side of Old Pittwater Road, within the site vicinity, includes light industrial and commercial land uses.

**Figure 1** Highlights the site location from an aerial perspective.



**Figure 1: Location of the Subject Site**

### **2.3 Details of the Proposed Development**

The proposed development includes 11 residential units and a total of 17 car parking spaces. The specific details are as follows;

- Ground floor level – includes a total of 8 car parking spaces, 2 motorbike spaces and 8 bike racks along with a bulky good storage and a bin area.
- Level 1 – includes 9 car parking spaces and 4 bike racks along with 1 residential unit (1 x 2 bedroom unit).
- Level 2 – includes 2 residential units (2 bedroom units).
- Level 3 – includes 2 residential units (2 x 2 bedroom units).
- Level 4 – includes 2 residential units (2 x 2 bedroom units).
- Level 5 – includes 2 residential units (2 x 2 bedroom units).
- Level 6 – includes 2 residential units (2 x 2 bedroom units).

### 3. On-Going Waste Management Plan

#### 3.1 Waste Storage Provisions

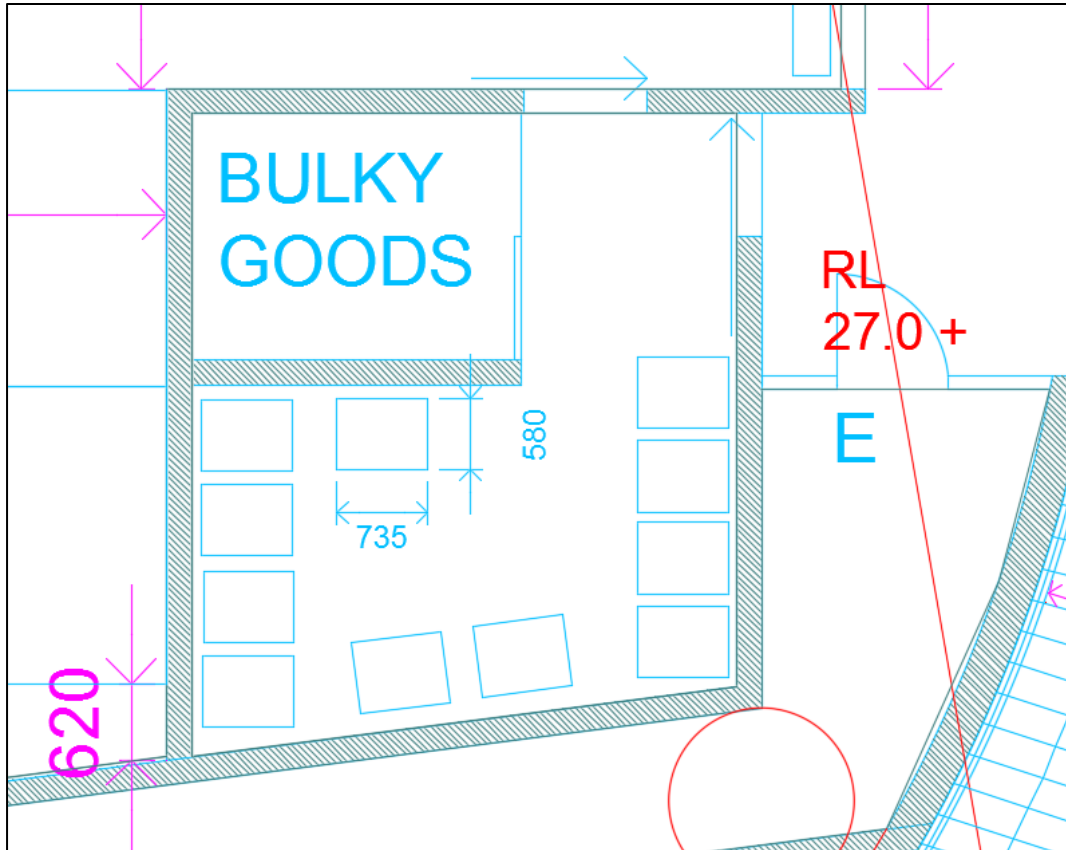
Waste provisions have been determined with reference to the Warringah Waste Management Guidelines (2010). Appendix 1 of the Warringah Waste Management Guidelines (2010) stipulates the number of bins to be allocated for residential developments, based on the number of dwellings. Considering the proposed development which includes 11 residential units, 11 x 240L MGBs (mobile garbage bins, which cater for both garbage and recycling) are required for the development.

In addition to the above outlined provisions, each dwelling will possess private bins within the household for waste and recyclables. These bins shall have handles which allow them to be transported and emptied at the communal waste enclosure by each resident.

#### 3.2 Waste Enclosure

The above mentioned 240L MGBs are considered to be 580mm wide by 735mm long, as per Appendix 1 of the Warringah Waste Management Guidelines (2010).

From the above identified dimensions, it was established that each bin requires a minimum area of 0.43m<sup>2</sup>. The anticipated bin configurations (to scale) within communal bin storage area, is provided in **Figure 2** below. Accordingly, it is concluded that more than sufficient area has been provided to allow for bin storage and access, within the bin storage area. These enclosures shall be designed and constructed in accordance with the requirements of the *Better Practice Guide for Waste Management in Multi-unit Dwellings* (Dept. of Environment and Climate Change, 2008).



**Figure 2: Scaled Bin Arrangement Diagram**

#### **4. Collection**

The following points are noted in relation to bin collection;

- The waste collection service for the proposed development will be provided by the Council (through Council waste contractor).
- Both general waste and recyclable waste, of the proposed development, will be collected weekly.
- The waste collections will be undertaken by the Council contractor by parking the waste truck at the kerbside, at site frontage, during off peak periods. The wheel in and wheel out service for the bins will also be provided by the Council waste contractor.

## **5. Amenity**

### **5.1 Noise**

Being located within the enclosed ground level parking area, noise associated with the waste disposal process shall be minimal. Unavoidably some noise shall be generated when wheeling bins to the kerbside once a week by the Council waste contractor, however, this will remain within normal limits.

### **5.2 Cleaning Facilities**

As stipulated within the design controls of the *Better Practice Guide for Waste Management in Multi-unit Dwellings* (Dept. of Environment and Climate Change, 2008), the storage area shall include hot and cold water taps for cleaning purposes. The area shall be appropriately drained, and completely isolated from stormwater.

### **5.3 Ventilation**

It is noted that the proposed communal bin enclosure shall be vented to the external air by natural or artificial (mechanical ventilation) means. The installation and operation of the mechanical ventilation system shall comply with Australian Standards AS 1668.1:1998: The use of ventilation and air conditioning in buildings – Fire and smoke control in multi-compartment buildings and Australian Standards AS 1668.2:2012: The use of ventilation and air conditioning in buildings – Mechanical ventilation in buildings.

## **6. Management**

### **6.1 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.



## 6.2 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 or other special services.

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

## 7. 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 Northern Beaches 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
<b>4.2. Waste Storage Area design requirements</b>	
All Waste Storage Areas will: <ul style="list-style-type: none"> <li>a) Be a designated area to accommodate Council's allocated number of waste and recycling containers.</li> <li>b) Have a practical layout, be free of obstructions and have only 90 degree angle corners.</li> <li>c) Have a floor area capable of storing the number</li> </ul>	Proposed bin storage area offers sufficient space to accommodate the required number of bins.  Additional vegetation bins can also be accommodated within

<p>of bins outlined in Appendix A.</p> <p>d) Accommodate 1 x 240L vegetation bin for every 200m<sup>2</sup> of landscaped open space on the site.</p> <p>e) Be graded and drained to a Sydney Water approved drainage system.</p> <p>f) Be serviced by an easily accessible water tap. The tap must not obstruct aisles, access ways and placement of bins.</p> <p>g) Be cement rendered and coved (smooth rounded corners) at the floor and wall intersections.</p> <p>h) Be clear of any service and utilities infrastructure and related activities.</p> <p>i) Be capable of being kept clean and tidy at all times.</p> <p>j) Be in accordance with the BCA, relevant AS and legislation detailed in Chapter xii of the Waste Management Guidelines.</p>	<p>the proposed residential bin storage area (as it has additional capacity).</p> <p>Waste storage room is capable of complying with design requirements during CC stage.</p>
<p><b>4.3. Waste Storage Area location requirements</b></p>	
<p>The Waste Storage Area must be:</p> <p>a) At street level and permit easy, direct and convenient access for the residents, Council and Council's waste contractors.</p> <p>b) Clear of any obstructions and security devices.</p> <p>c) Incorporated entirely within the site boundary and, if it is an external structure, be designed to reduce visual impact and clutter.</p> <p>d) No closer than 3m from any dwelling openings.</p> <p>e) Clear of any entry points to stormwater systems</p>	<p>Waste storage room is compliant and are capable of complying with these requirements at CC stage.</p>

<p>and prevent waste water from entering any stormwater system.</p>	
<p><b>4.4. Pathway, access and door requirements</b></p>	
<p>The pathway and access between the Waste Storage Area and Collection Point will be:</p> <ul style="list-style-type: none"> <li>a) Solid, concrete, continuous, non-slip and clear of any obstructions and steps.</li> <li>b) A maximum ramp gradient of 1 in 8.</li> <li>c) Hazard free and not via a pathway with vehicular traffic.</li> <li>d) A minimum width of 1200mm.</li> </ul> <p>Any doors fitted on the Waste Storage Area, pathway and access will be:</p> <ul style="list-style-type: none"> <li>e) A minimum width of 1200mm.</li> <li>f) Able to be latched in an open position.</li> <li>g) Unobstructed by any locks and security devices.</li> <li>h) Openable in an outward direction.</li> </ul>	<p>Waste storage room is compliant and are capable of complying with these requirements at CC stage.</p> <p>Path to the bin storage area includes grades &lt; 1:8 and are wider than 1.2m.</p> <p>Bin storage room door can be made 1200mm wide. Bin storage room door should open outwards and are unobstructed by locks.</p>
<p><b>4.5. Bulky goods waste storage area requirements</b></p>	
<p>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:</p> <ul style="list-style-type: none"> <li>a) A minimum of 4m<sup>3</sup> per 10 dwellings fit for the purpose of storing bulky goods.</li> <li>b) A room or caged area separate from the Waste Storage Area.</li> <li>c) Incorporated entirely within the site boundary</li> </ul>	<p>The proposed 11 dwellings require 4.4 square metres of bulky good storage area. Accordingly, a bulky good storage room with 5.34 square metres of area has been proposed within the ground floor level. This room is separated from the waste</p>

and not visible to the public	storage area and is not visible to the public.
<b>4.6. Kerbside (on-street) waste collection requirements</b>	
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 area is located at a distance of approx. 6.5m from the property boundary.

## 8. Summary

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

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

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