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691 Pittwater Road Dee Why Operational Waste Management Plan

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1. Introduction

This Operational Waste Management Plan (OWMP) has been developed to provide 691 Pittwater Road, Dee Why with guidance on effectively managing waste and recyclable materials in compliance with current legislation and best practices, Green Star Waste from Operations criteria, and the relevant requirements of Northern Beaches Council.

Implementing the recommendations of this Waste Management Plan will ensure that waste management practices are consistent across all areas and tenancies of 691 Pittwater Road, with the maximum quantity of materials directed away from landfill disposal to resource recovery outcomes.

The measures detailed in this Plan have been incorporated into the Boarding House Management Plan prepared by the Planner.

2. Green Star Requirements

This report addresses the following requirements of Green Star - Operational Waste Management:

Requirements	Report Reference
Identify the site boundary	Section 3
Identify waste streams relevant to the project	Section 5
Specify individual roles responsible for delivering and reviewing the OWMP	Section 7
Set targets for diversion from landfill and for reducing total materials generation (general waste materials and recyclable/reusable materials)	Section 11
Outline monitoring and measurement procedures for waste and recycling streams by weight	Section 12
Outline methods for encouraging the separation of waste streams, such as bins, storage areas, or recycling facilities in public area as required	Sections 7-9
Identify storage areas for all waste streams and outline best practice safety and access requirements for their collection	Section 6-7
Identify safe methods for vehicle access and transfer of waste	Sections 6,14
Incorporate a review process to assess the success of the OWMP and make improvements, based on operational experience	Section 12

3. The Development

The site is located on Pittwater Road in the heart of Dee Why Town Centre. It forms part of a triangular block bound by Pittwater Rd to South-East, Fisher Road to the West, and St David Avenue to the North, as shown in the aerial photograph below. The site is approximately 650 m² in area.



Following the proposed redevelopment, 691 Pittwater Road will have a Gross Floor Area (GFA) of 2,319 m², with 7 floors of residential (64 dwellings) and office tenancies (190m²), and commercial/retail tenancy on the ground level (82m²).

4. Key Legislation, Standards and Guidelines

The following guidelines and standards have been used as references in compiling this Plan:

- Northern Beaches Council Waste Management Guidelines

5. Materials Generation

5.1 Resource Streams

Based on the expected tenancy profile, the following resource streams will be generated:

Resource Stream	Generation Source
General Waste (Landfill)	Residential, Office & Retail Tenancies
Mixed Recycling (commingled)	Residential, Office & Retail Tenancies
Green/Garden Organics	Residential, Office & Retail Tenancies

5.2 Total Materials Generated

Expected quantities of materials have been calculated using standard waste generation rates in litres/100 m².

Resource Streams – Residential (64 dwellings)	Generation in Litres/Unit/Day	Generation in Litres/Unit/Week	Est Total Litres/Day	Est Total Litres/Week
General Waste (Landfill)	11	80	731	5120
Mixed Recycling	14	100	914	6400
Total	25	180	1646	11520

Resource Streams – Commercial/Retail (82 m ²)	Generation in Litres/m ² /Day	Generation in Litres/m ² /Week	Est Litres/m ² /Day	Est Litres/m ² /Week
General Waste (Landfill)	0.5	3.5	41	287
Mixed Recycling (Commingled)	0.5	3.5	41	287
Total	1	7	13	19

Resource Streams – Office (191 m ²)	Generation in Litres/m ² /Day	Generation in Litres/m ² /Week	Est Litres/m ² /Day	Est Litres/m ² /Week
General Waste (Landfill)	0.1	0.7	19.1	133.7
Mixed Recycling (Commingled)	0.1	0.7	19.1	133.7
Total	0.2	1.4	38.2	267.4

General Waste and Recycling - Residential Tenancies							
Material Stream	Bin Type	No. of Bins	Weekly Clearances	Capacity (weekly)	Estimated Volume/ Week	Footprint per bin (m ²)	Total Footprint
General Waste	660	5	2	13,200	5,120	1.40	7.0
Mixed Recycling	660	6	2	7,920	3,840	1.40	8.4
Green Waste	240	1	1	240	<100	0.51	0.5
TOTAL		12		21,120	8,960		15.4

* Includes 20% allowance for space between bins and bin movement

These bin quantities, sizes, and collection frequencies are based on maximum likely generation of each of the expected materials streams. A 20% extra spatial allowance has been made for the retail and residential bin rooms to enable staff access and bin movement.

There will be two separate self-contained storage rooms having the following areas:

- **Residential General Waste and Recycling:** **28.45 square metres**
- **Commercial General Waste and Recycling:** **14.68 square metres**

7. Recycling & Waste Management

7.1 Commingled (Mixed) Recycling

Commingled recycling consists of all mixed plastic bottles and containers; paper; cardboard; glass bottles and jars, and steel and aluminium cans.

7.2 Green Waste Recycling

This material will be mainly generated from the managed landscaped area within the site boundary.

7.3 General Waste (Landfill)

All materials other than those discussed above will be classified as general waste, and disposed of and collected accordingly as listed in 7.4. The site's Facilities Manager will be responsible for implementing these programs, in conjunction with the cleaning company and waste contractor.

7.4 Waste Disposal Process and Disposal Responsibilities

Disposal of all material types will follow the following guidelines:

1. Tenancy staff will dispose of materials into correct bin within bin hubs
2. Residential Tenants will collect materials and transfer to the designated bins in the storage room
3. Retail/commercial staff will dispose of materials correctly and transfer to designated bin in commercial waste storage room
4. Cleaners/building managers will be responsible for handling the residential bins from the waste storage rooms to the footpath ready for collection by the waste/recycling service contractor. The bins will be put out on to the allocated footpath space just prior to collection and returned to the storage room immediately after being collected.
5. Commercial/retail business will be responsible for arranging and scheduling a waste service provider to collect the allocated bins on a weekly roster.
6. Waste/recycling contractor will collect from here according to designated schedule

8. Waste & Recycling Bins - Office Areas

All office areas will be equipped with 2-stream bin hubs for:

1. Commingled (Mixed) Recycling
2. General Waste

Bins will be situated in areas which effectively service a group of workstations and offices, as opposed to having bins under every desk; this improves cleaner efficiencies by reducing the number of bins that require collection, and also reduces the number of bin liners required.

Furthermore, when staff leave their desk to dispose of materials they are required to make a decision about how they dispose of these materials, and are thus more likely to separate recyclables from general waste. Buildings where these types of systems have been implemented consistently record higher rates of recycling than those with bins at each desk or workstation.

9. Waste & Recycling Bins - Retail & Residential Tenancies

Retail and residential tenants will be responsible for the separation, transfer and disposal of their waste and recyclables, using appropriate receptacles for their needs and available space within their tenancy to collect these materials and transfer them to the central storage room for disposal as required.

10. Education

All building users (tenants, facilities staff, and cleaning contractors) will be provided with detailed information on recycling and waste management, ideally as part of general building induction and orientation in the first instance, and updated on at least an annual basis. Records will be maintained of all attendees to ensure that all personnel receive this training and education.

Building management will be responsible for delivering an education program to ensure effective waste separation and resource recovery.

11. Target Setting

The following targets are recommended for diversion of waste from landfill and reducing total materials generation, within the first 12 months of operation:

- **Diversion from landfill: 50%**
- **Reduction in total materials generated: 10%**

The site's Facilities Manager will be responsible for achieving these targets through implementing the programs outlined in Section 7. The first step in this process should be to conduct a waste audit at the site to determine baseline waste and recycling generation.

Section 12 outlines the process for measuring and reviewing the site's progress towards reaching these targets and making adjustments as required based on actual operational outcomes.

12. Monitoring, Reporting, & Review

The site's waste and recycling contractor(s) must be able to provide an accurate and reliable process for measuring and reporting all materials streams by weight, either directly, using truck mounted scales, or indirectly through volume to weight conversion. If the latter methodology is used, actual operational weights derived from regular weigh-offs should be used instead of industry default weights.

These processes should be supported by an annual weight-based physical audit of all non-hazardous materials streams, to be conducted by a qualified independent third party.

The site's Manager will be responsible for reviewing waste and recycling quantities generated, total diversion, and reductions in total materials generated.

13. Waste & Recycling Contractor Requirements

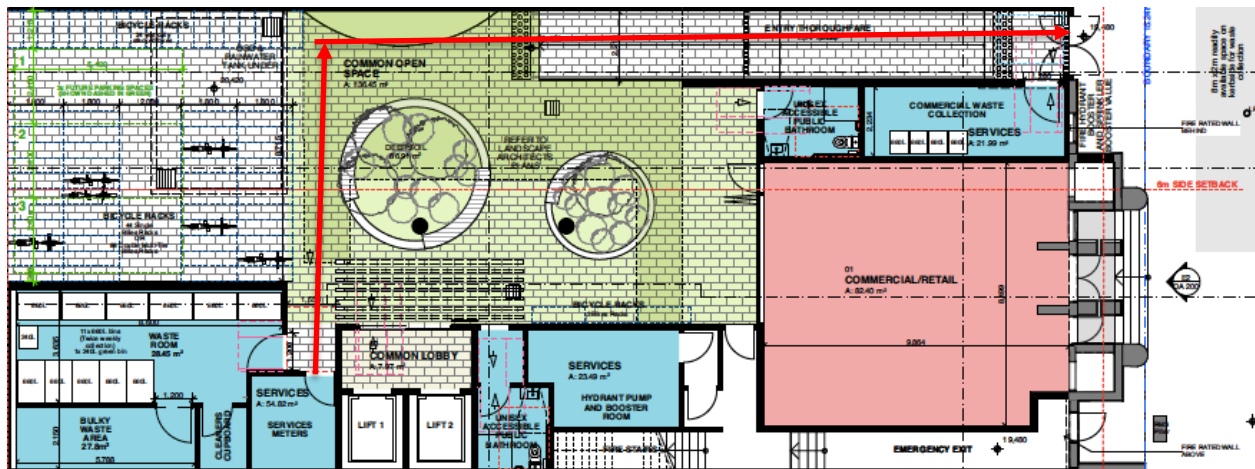
To achieve and maintain best practice, the site's waste and recycling contractor(s) will be required to demonstrate high standards of service and be able to comply with the following requirements:

- Reliable and efficient servicing, and meeting all agreed schedules
- Having collection vehicles fitted with suitable weighing technology
- Maintaining accurate and comprehensive tracking systems for all materials collected, including hazardous and prescribed wastes
- Working with the site to achieve continuous improvements in recovery rates, including providing tenant education materials
- Providing detailed monthly and annual reports on diversion and financial outcomes
- Maintaining current details of processing facilities used, and providing information on these if requested by the property

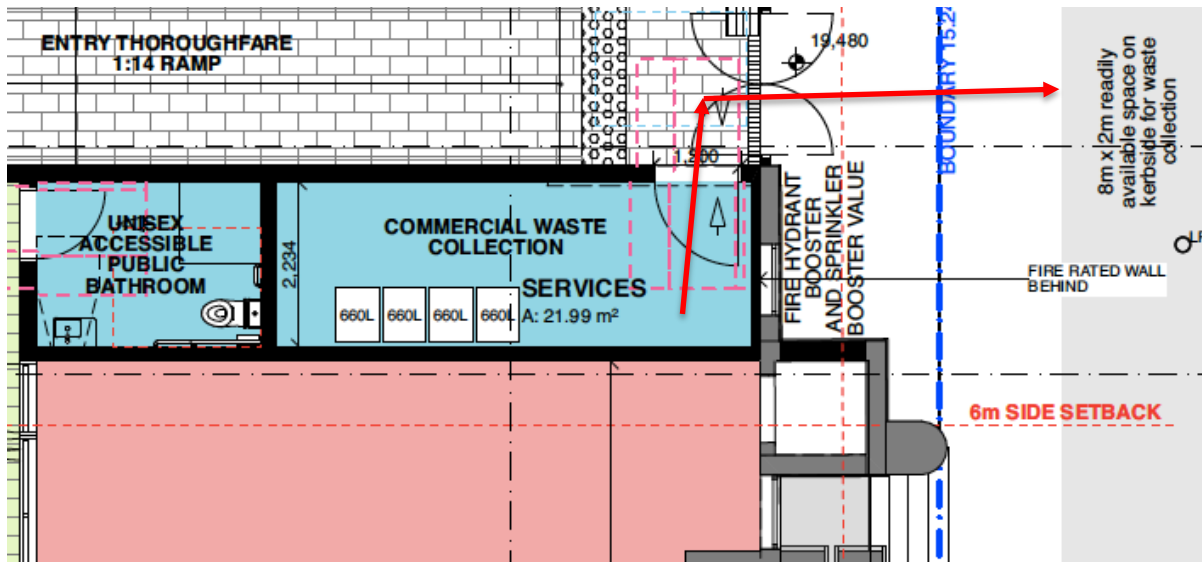
14. Storage Areas & Movement Pathways

The drawing extract below shows the location of the waste and recycling storage area on ground level.

Residential Storage Area and Waste Movement Pathway

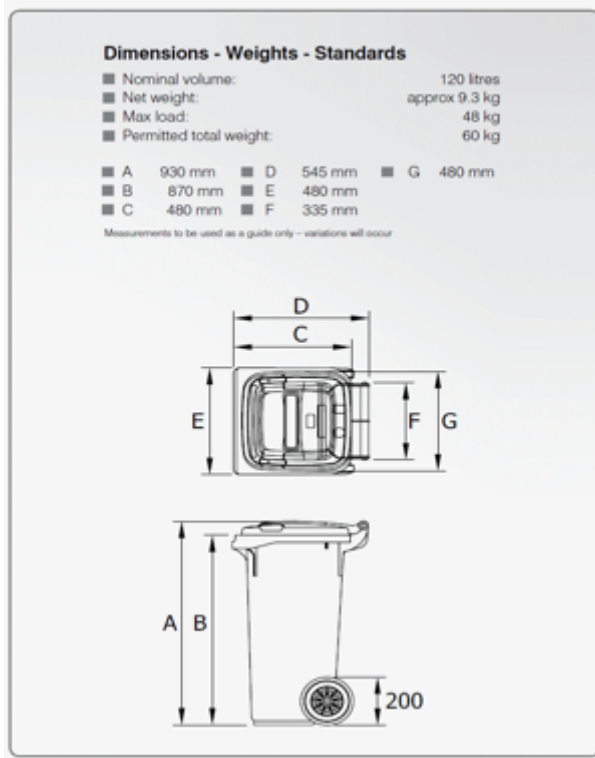


Commercial/Retail Storage Area and Waste Movement Pathway

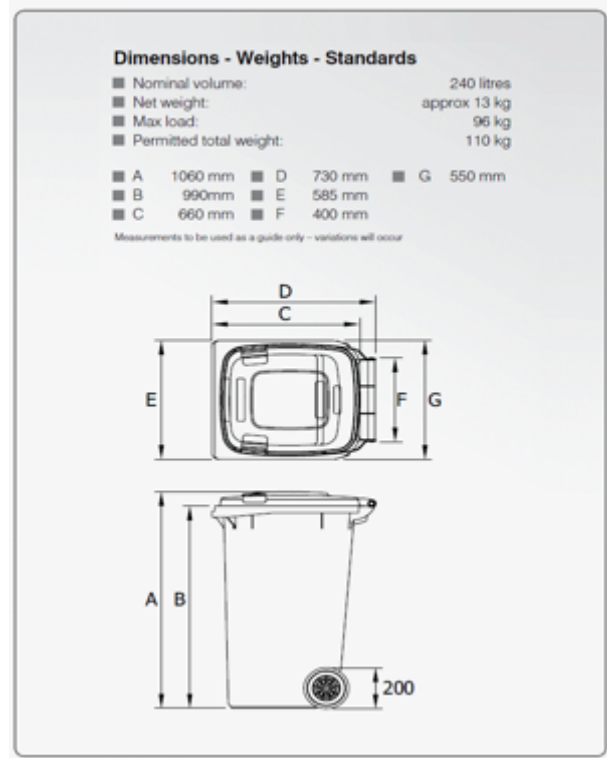


Appendix 1: Bin Specifications

120-litre MGB



240-litre MGB



660-litre MGB



1100-litre MGB



Appendix 2: Northern Beaches Council Requirements

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 200m² 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.
- 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.

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.
- e) Any doors fitted on the Waste Storage Area, pathway and access will be:
- f) A minimum width of 1200mm.
- g) Able to be latched in an open position.
- h) Unobstructed by any locks and security devices.
- i) Openable in an outward direction.

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

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.