

42 North Steyne, Manly

Operational Waste Management Plan

OCTOBER 2021



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1 Introduction

This Waste Management Plan (WMP) has been prepared on behalf of Iris Capital to accompany a Development Application for the 42 North Steyne, Manly development.

The Plan has been developed with consideration of the Northern Beaches Council's and other Authority's requirements. It is intended to inform the design of the waste services by identifying the estimated waste profile for the development and providing the total area required by the recommended equipment/systems.

In doing so this Plan, which includes waste estimates and related management requirements, has been developed in accordance with the Northern Beaches Council's *Waste Management Guidelines*.

The proposed development is for substantial alterations and additions (new building) to the site known as 75 The Corso and 42 North Steyne Manly, legally described as Lots 100, 101 and 102 in Deposited Plan 1069144 and Lot 1, DP 1034722. The works allow for the adaptive reuse of the existing buildings, with demolition of existing facade elements and internal elements, building services and amenities; construction of retail/office premises at the ground floor facing both the eastern and western exterior of the site, as well as construction of seven (7) apartments across four building levels, each containing four bedrooms, replacement of plant and installation of new plant on the rooftop. The proposal includes the retention of both the existing 42 North Steyne vehicular access driveway and majority of existing basement car park together with the extension of the existing basement generally into part of 75 The Corso (beneath the Steyne Cafe building), for the purpose of creating augmented car parking and amenities.

In relation to this waste management plan, key components of the development include:

- 38 Hotel accommodation rooms
- Retail/Office on Ground level (562 sqm area approx.)
- Ground floor Café (275 sqm area approx.)
- 7 residential units
- Commercial waste storage area
- Residential waste storage area

Waste audit and management strategies are recommended for new developments to provide support for the building design and promote strong sustainability outcomes for the building. All recommended waste management plans will comply with council codes and any statutory requirements.

To assist building management in achieving effective waste and recycling management, this waste management plan has three key objectives:

- i. **to minimise the environmental impacts of the operations of the development** – this will be achieved by ensuring maximum diversion of waste from landfill; correct containerisation and transport of materials; correct segregation of materials into

- appropriate management streams; awareness among tenants of waste avoidance practices.
- ii. **to minimise the impact of the management of waste within the development on local residents** – this will be achieved by ensuring waste is managed so as to avoid odour and litter and collected during suitable times.
 - iii. **to ensure waste is managed so as to reduce the amount landfilled and to minimise the overall quantity generated** – this will be achieved by implementing systems that assist tenants to segregate appropriate materials that can be recycled; displaying signage in all tenant areas to remind and encourage avoidance and recycling to tenants; and through associated signage in the waste storage areas to reinforce these messages.

2 Waste Generation

2.1 Waste Streams

Based on the development profile, the following waste streams would be expected:

- General waste;
- Commingled recycling; and
- Paper/Cardboard

2.2 Waste Generation Estimates

Based on averages for quantity of waste generated and composition as determined by industry data (i.e. data/information provided by WACS' waste audits conducted in a broad range of sectors) as well as consideration of the waste generation rates as detailed by the Northern Beaches Council's *Waste Management Guidelines*, it is estimated that the entire development will generate a total of **26,102 litres** of waste and recyclables per week.

The following table summarises the expected quantities of waste and recyclables generated for the development in terms of weight and volume per week.

Table 1 - Waste estimates (Entire development)

	L/week
General Waste	16,258
Commingled Recycling	4,922
Paper/Cardboard	4,922
Total	26,102

Note: The weights and volumes are based on correct segregation of waste and recyclables.

Table 2 - Waste estimates (Residential - 7 units)

L/week	
General waste	560
Commingled recycling	490
Paper/Cardboard	490
Total	1,540

Table 3 - Waste estimates (Commercial waste)

L/week	
General waste	15,698
Commingled recycling	4,432
Paper/Cardboard	4,432
Total	24,562

3 Waste Management Systems and Spatial Requirements

3.1 Waste Systems and Bin Requirements

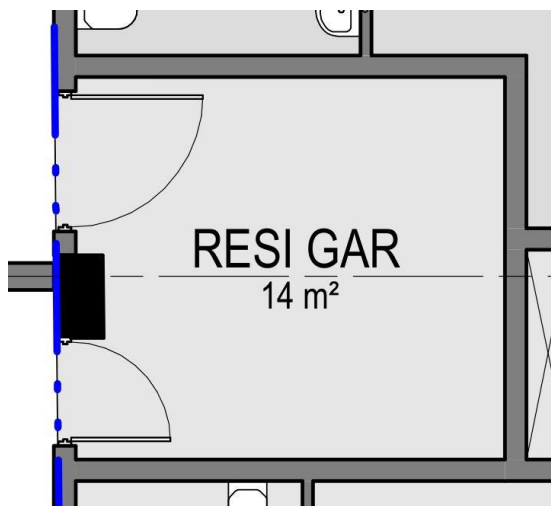
The following table shows the recommended system required to manage residential waste. The system refers to main residential waste storage system on Ground level rather than the internal bins that may be used within the development.

Table 4 – Residential waste system

Waste Stream	Bin Size	No. of bins	Clearance (frequency/week)	Capacity (Weekly)	Estimated Volume/Week	Footprint per bin (m ²)	Total Footprint
General waste	240 L	3	2	720	560	0.43	1.29
Commingle Recycling	240 L	5	0.5	600	490	0.43	2.15
Paper/Cardboard	240 L	5	0.5	600	490	0.43	2.15
TOTAL				1,920	1,540		5.59
						Plus 50%	8.38

Based on the estimates of waste generation and the number of bins required (with the collection schedule as noted), as well as allowing 50% space for bin movement, the minimum size of the residential waste storage area should be approximately 10 m².

Diagram 1 – Residential Waste Room



3.2 Commercial Waste

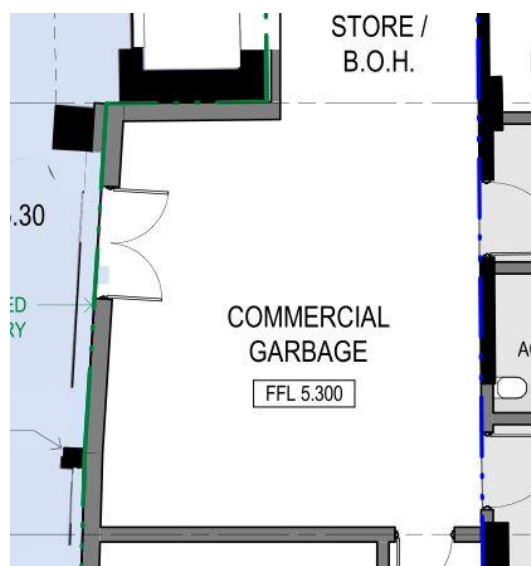
The following table shows the recommended system required to manage commercial waste. The system refers to main commercial waste storage system on ground level rather than the internal bins that may be used within the development.

Table 5 – Commercial waste system

Waste Stream	Bin Size	No. of bins	Clearance (frequency/week)	Capacity (Weekly)	Estimated Volume/Week	Footprint per bin (m2)	Total Footprint
General waste	1,100 L	5	3	16,500	15,698	1.32	6.6
Commingled Recycling	1,100 L	2	3	6,600	4,432	1.32	2.64
Paper/Cardboard	1,100 L	2	3	6,600	4,432	1.32	2.64
TOTAL				29,700	24,562		11.88
						Plus 50%	17.82

Based on the estimates of waste generation and the number of bins required (with the collection schedule as noted), as well as allowing 50% space for bin movement, the minimum size of the commercial waste storage area should be approximately 18 m2.

Diagram 2 – Commercial Waste Room



3.3 Storage Design

In keeping with best practice sustainability programs, all waste areas; reuse areas and waste and recycling bins will be clearly differentiated through appropriate signage and colour coding to Australia Standards to reflect the materials contained.

The waste and recycling bins will be colour coded and clearly signed. Each stream will be located in a designated area. This will assist in easy identification of correct bins by cleaners and staff.

Photographs 1 & 2 - Examples of waste room colour coding



The garbage room will contain the following to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area:

- waste room floor to be sealed with a two pack epoxy;
- waste room walls and floor surface is flat and even;
- all corners coved and sealed 100mm up, this is to eliminate build-up of dirt;
- a water facility with hose cock must be provided for washing the bins;
- any waste water discharge from bin washing must be drained to sewer in accordance with the relevant water board;
- tap height of 1.6m;
- storm water access preventatives (grate);
- all walls painted with light colour and washable paint;
- equipment electric outlets to be installed 1700mm above floor levels;
- the room must be mechanically ventilated;
- light switch installed at height of 1.6m;
- waste rooms must be well lit (sensor lighting recommended);
- optional automatic odour and pest control system installed to eliminate all pest types and assist with odour reduction – this process generally takes place at building handover – building management make the decision to install;
- all personnel doors are hinged and self-closing;
- waste collection area must hold all bins – bin movements should be with ease of access;
- conform to the Building Code of Australia, Australian Standards and local laws; and
- childproofing and public/operator safety shall be assessed and ensured.

4 Waste Management Systems

The following summarises the recommended waste and recycling systems that will be implemented. These recommendations are based on Northern Beaches Council requirements and systems implemented for similar developments (ie., types of tenants and residential areas).

4.1 Residential Waste Management System

To ensure that the proposed management requirements as detailed in this section are achieved, specific management requirements will be contained within the Strata By-laws as well as within the service contract for the maintenance/cleaning contractors(s).

All residents will be briefed on the proper use of waste management systems. Recycling streams will be monitored and reported by building management/caretaker(s), as it is imperative that they remain free of contamination to ensure compliance with Northern Beaches Council and the appointed waste service contractor collection protocols. Residents will be encouraged to maximise the separation of general waste and mixed recyclables to aid the proper disposal of all materials.

Residents will dispose of waste and recyclables into the designated 240L bins located in waste storage room on ground floor. Council will provide waste collection (Wheel In Wheel Out service) services.

4.2 Commercial Waste Management System

All commercial tenants and cleaning staff will be briefed on the proper use of waste management systems. Recycling streams will be monitored and reported by cleaning staff and site caretaker(s), as it is imperative that they remain free of contamination to ensure compliance with the Northern Beaches Council and the appointed waste service contractor collection protocols. Staff and tenants will be encouraged to maximise the separation of general waste and recyclables to aid the proper disposal of all materials.

Waste/recyclables from the commercial tenancies will be collected on a daily basis by building cleaners and transported to commercial waste storage room on ground level. Private waste contractor will provide waste and recycling collection services.

Signage will be a crucial element of the waste management system. Appendix B contains examples of signage. These are the type of signs that should be used throughout the commercial tenancies and waste storage area(s).

In addition, tenants will be provided with ad hoc recycling systems such as e-waste; batteries; mobile phones etc. Systems for these streams will be located within each tenancy or in common areas or be available upon request from building management.

5 Waste Stream Acceptance Criteria

5.1 Acceptance Criteria

General Waste:

General waste bins will be in 240L MGB's. The lids and signage should be colour-coded red. The general waste stream does not include hazardous material (such as batteries, fluorescent light tubes, light bulbs and/or toner cartridges), recyclable material or electronic equipment such as computers, TVs and mobile phones.

Paper/Cardboard:

Paper/Cardboard bins will be 240L MGB's (Blue lid). This stream includes Newspapers and magazines, office paper and envelopes (window face are fine), telephone books, clean cardboard such as egg and cardboard milk cartons, tissue boxes and clean pizza boxes

Commingled (Mixed Recycling):

The comingled recycling system will be 240L MGB's (Yellow lid) and should accept Disposable plastic bottles and containers from the kitchen, bathroom and laundry, aluminium and steel cans including aerosols, empty dry paint tins, glass bottles and jars, and foil-lined milk and juice cartons.

5.2 Bin Requirements

Containers located within the development for waste and recycling should be consistent. The following table outlines the colour coding that has been developed by Standards Australia.

Table 5: Standards Australia waste/recycling container colour coding

Waste Stream	Bin Body Colour	Lid Colour
Paper Recycling	Blue	Blue
Cardboard Recycling	Green	Blue
Food Organics	Burgundy	Burgundy
Commingled Recycling	Green	Yellow
Used Cooking Oil Recycling	NA	NA
General Waste	Green	Red

6 Tenant Education

All tenants will receive information regarding the waste collection systems including how to use the system, which items are appropriate for each stream and collection times. Appropriate signage and updated information will also be provided, as well as receiving feedback on issues such as contamination of the recycling stream or leakage of the recyclables into the general waste. Building management will have the responsibility for these tasks.

All waste receptacles will be appropriately signed and additional room signage is usually provided from most waste contractors during implementation of the waste contract. Examples of signage are included in Appendix A.

It is recommended that all signs should:

- Clearly identify the waste/recycling stream;
- Use correct waste/recycling stream colour coding;
- Identify what can and cannot be disposed of in the receptacle; and
- Include highly visual elements to accommodate for individuals with inadequate English literacy.
- As part of the tenant induction process, a waste and recycling toolkit will be provided. This toolkit will include the details of each of the systems in place; acceptance criteria for each stream and how each stream is managed.

On a quarterly basis waste and recycling performance reports will be reported back to staff so that they are aware of their performance and areas for improvement.

7 Ongoing Management

In addition to waste management systems as described in section 4.1 of this report, following systems will be adopted for on-going management.

Having suitable systems in place is only one element of an effective waste management system. Compliance by all stakeholders is essential.

Cleaners are a key element in the effectiveness of the systems in place. Prior to acceptance of the cleaning contract, the contractor will be required to demonstrate how the management of waste and recycling will be carried out so as to ensure that segregated materials are placed in the correct systems. This process will be agreed and a training program implemented by the cleaning contractor to ensure full understanding by all cleaners. The cleaning supervisor and site management throughout the term of the contract will carry out monitoring of the system.

In addition, cleaners will be required to feed back to site management any non-compliance issues they observe during their cleaning activities. This may include contamination of recycling, non-participation in the recycling system, or missing or damaged bins. In this way issues can be promptly dealt with by management.

Waste and recycling contractors will be required to report actual volumes collected by stream so that site management can monitor performance and feed this back to stakeholders.

It is highly recommended that a basic reporting program be set up at the site which would include bin tally sheets that detail the number of bins collected and how full they are at the time of collection, in addition to communication procedures to allow waste contractors to provide feedback regarding contamination and leakage.

All tenants and staff should be educated and made aware of any changes to the existing waste systems.

Appendix A – Example Signage

