195-197 Sydney Road, Fairlight Waste Management Plan

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This report contains confidential information. It has been compiled by Waste Audit and Consultancy Services (Aust) Pty Ltd on behalf of Micro Nest Pty Ltd for the 195-197 Sydney Road, Fairlight Development.

This Waste Management Plan is not a substitute for legal advice on the relevant environmental legislation, which applies to Micro Nest Pty Ltd its contractors or other bodies. Accordingly, Waste Audit and Consultancy Services (Aust) Pty Ltd will not be liable for any loss or damage that may arise out of this project, other than loss or damage caused as a direct result of Waste Audit and Consultancy Services (Aust) Pty Ltd's negligence.

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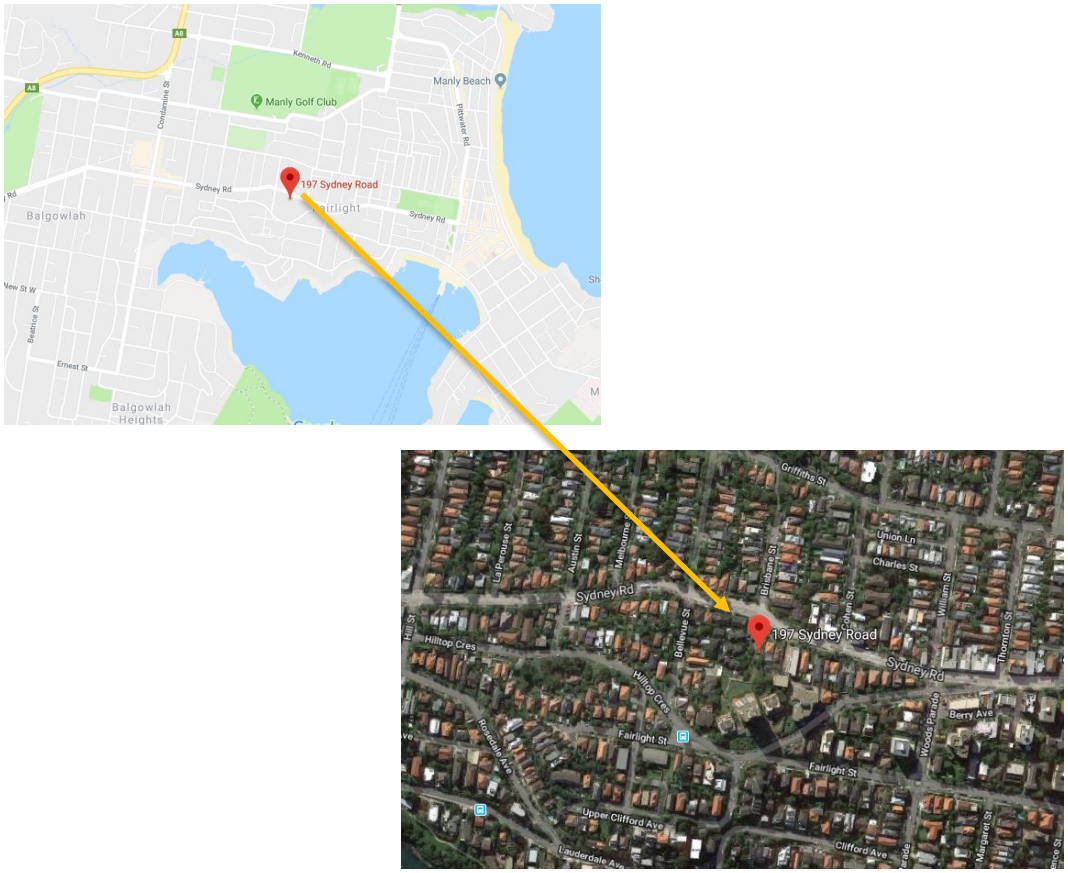
1 Introduction

This Waste Management Plan (WMP) has been prepared on behalf of Micro Nest Pty Ltd to accompany a Development Application for 195-197 Sydney Road, Fairlight. The development consists of approximately 75 boarding houses and accompanying communal spaces, resident facilities and associated infrastructure.

The location is represented below:



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 residents and staff 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 residents and staff to segregate appropriate materials that can be recycled; displaying signage in all relevant areas to remind and encourage avoidance and recycling to staff; and through associated signage in the commercial areas to reinforce these messages.

Northern Beaches Council *Manly Development Control Plan 2013 (and specifically Part 3, 3.8 Waste Management*), and other Authority's requirements haves been referred to in the development of the waste estimates and related requirements.

2 Waste Generation

2.1 Waste Streams

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

- General waste
- Commingled recycling (including paper & cardboard recycling)

2.2 Waste Generation Estimates

Council requires that 13 x 660 litre mobile garbage bins be provided for, with these being serviced twice per week[1]. Therefore, based on this requirement, calculations of waste/recycling generation is not needed.

However, based on the Council's requirement, this allows for 17,160 litres of waste and recyclables generated per week. Calculations of generation rates based on the City of Sydney "Policy for Waste Minimisation in New Developments, 2005", are approximately 6,000 litres of waste and 3,000 litres of recyclables per week. Therefore the bin requirements by Northern Beaches Council is more than adequate.

The footprint for these 13 x 660 litre mobile garbage bins is approximately 12.8 m^2, and with an allowance of 30% for bin movement, the waste storage area would need to be approximately 17.1 m^2.

[1] Northern Beaches Council, Pre-lodgement Advice 10th July 2018

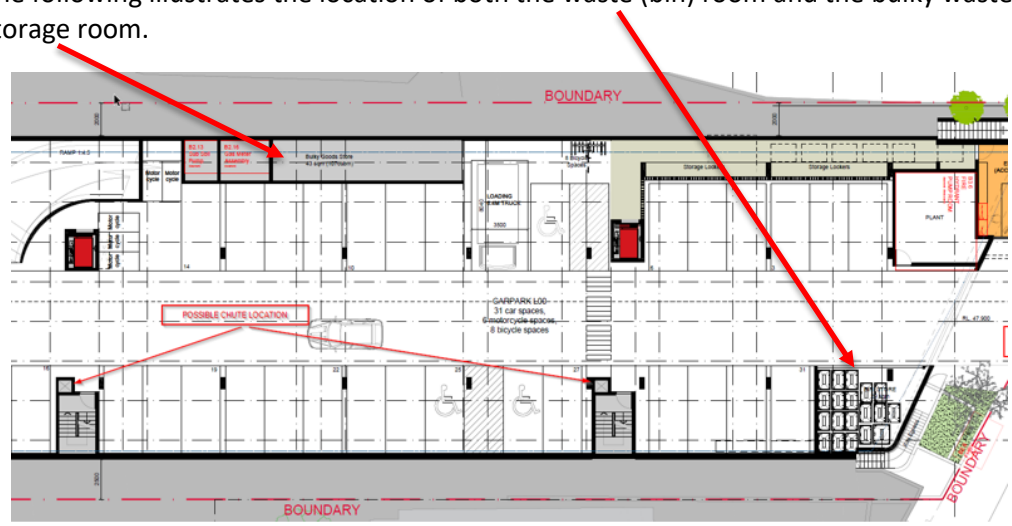
3 Waste Management System

Based on the volume of waste/recyclables generated and the twice weekly collection service for waste and weekly for recyclables, the following table illustrates the number of bins per stream and associated footprint.

Waste/recycling bin and storage requirements

Waste Stream	Bin Type	No. of Bins	Clearance Frequency (week)	Capacity - Litres (weekly)	Estimated volume / weekly (litres)	Footprint per bin (m2)	Total Footprint
General Waste	660 MGB	9	**2**	**11,880**	6,000	0.98	8.82
Recycling	660 MGB	4	**2**	**5,280**	3,000	0.98	3.92
TOTAL		**13**		**17,160**	**9,000**		**12.74**

The following illustrates the location of both the waste (bin) room and the bulky waste storage room.



3.1 Waste Storage Room

Based on Council's requirements, the waste bin storage room is located within 6.5 metres of the front property boundary.

Doors to the bin room will be 1200mm wide.

As indicated above, the waste room needs to be a minimum of 17.1 m^2. The design as below, has a bin room of approximately 29.0 m^2.

3.2 Bulky Waste Room

The bulky waste room is located adjacent to the loading dock for ease of movement of any items requiring disposal. This room is approximately 43 m^2, which exceeds the Councils mandate of a minimum 28 m^3.

3.3 Waste Storage Room Design

All storage area will be constructed in accordance with the Council's and Department of Environment and Climate Change NSW *Better Practice Guide for Waste Management in Multi-unit Dwellings 2008*.

Based on this, the storage areas will be constructed to:

- Permit easy, direct and convenient access for the users of the facility.
- Permit easy transfer of bins to the collection point if relocation of bins is required.
- Permit easy, direct and convenient access for collection service providers.
- Are well screened and do not reduce amenity.
- Are secure and provide protection against potential vandalism.
- With smooth impervious base to enable cleaning;
- In locations that enable resident's to readily access them;
- Have signs advising resident's as to where materials are to be deposited.

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 waste 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;
- 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 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);
- 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.

Occupational Health and Safety issues such as slippery floors in waste rooms and the weight of the waste and recycling receptacles will need to be monitored. Cleaners will monitor the bin storage area and will attend to all spills immediately, as they occur.

3.4 Waste Management System

Appendix A contains illustrations of bins (and other waste management equipment) that could be used. The pictures provide examples of the different options for equipment such as MGB, tugs for transporting bins, trolley unit and a wheelie-safe trolley.

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 community facility and waste storage area(s).

It is intended that the Council will be used for the collection of wastes and recyclables. Council has indicated that it will collect 660 litre MGB), twice per week for both waste and recyclables

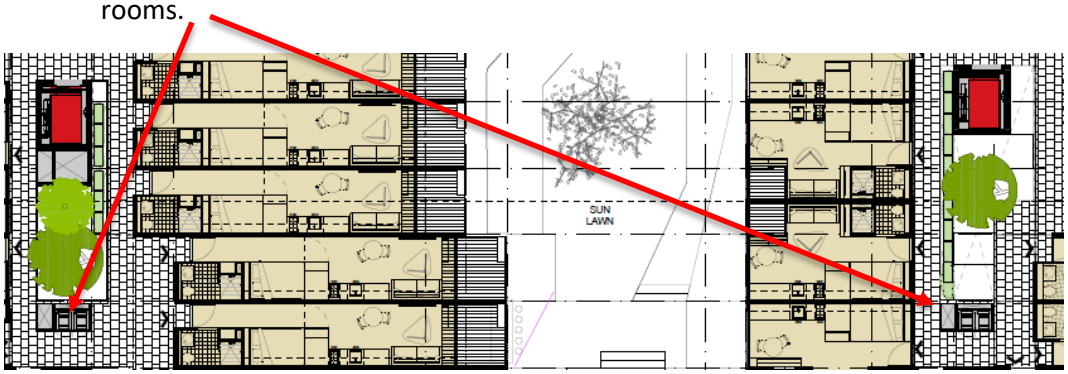
All garden waste and landscaping will be managed by an outside contractor with all maintenance/landscaping provided by contractors. As a component of the service contract, the appointed contractor will be required to demonstrate how such waste will be managed so as to reduce disposal of material to landfill.

The café is used only for coffee making facilities and as such is not classified as a commercial operation. Waste from this is to be included in the bins as mandated by Council

Bins will be returned to the storage room as soon as practicable following servicing by the Council.

To ensure that wastes and recyclables are managed correctly (ie., deposited into the correct container):

- Residents will be provided with information on the proper disposal of wastes and recyclables – that is correct segregation requirements.
- To assist, residents will be provided with separate bins for waste and recyclables. These bins should have a capacity of 30 litres for general waste and 15 litres for recyclables (ie., 2 days' worth of generation).
- Residents will be encouraged to maximise the separation of general waste and mixed recyclables to aid the proper disposal of all materials.
- As indicated residents will be responsible for transporting waste/recyclables from their apartment to the interim waste/recycling storage areas located on each floor and then deposit into the correct MGB. This will be achieved by education programs, colour coded bins and signage in the bin holding areas. The following illustrates a typical layout of each floor showing the temporary bin rooms.



- General waste bins will be distinguished by having a red lid and the commingled recycling bins have a yellow lid.
- In keeping with best practice sustainability programs, all waste areas and waste and recycling bins will be clearly differentiated through appropriate signage and colour coding to Australia Standards to reflect the materials contained.
- Site caretakers/cleaners will be responsible for transporting bins from the temporary bin rooms on each level to the central room and returning empty bins.
- The dedicated path for movement of the 660 litre MGB from the waste room to the property boundary is slip proof, free of obstructions and 1200mm wide.

4 Waste Management Education

All residents 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. Facilities 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 B.

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 staff (and resident) induction and welcoming 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.

An active waste monitoring program will be employed. The waste and cleaning contracts will ensure that contractors actively participate in the waste reduction program for the site and meet regularly to identify performance and new opportunities for diversion and avoidance.

5 Ongoing 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.

Appendix A – Waste Management Equipment

The following diagrams illustrate colours and sizes of different bins that could be used within the development.

Figure 1 – MGB bin

Figure 2 – MGB bin

Figure 3 – Indicative size of MGB

Figures 4, 5, 6 and 7 – Bin movers and tugs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Appendix B – Example Signage