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**NEW WARRINGAH GOLF & COMMUNITY CLUB CUBHOUSE -
433 PITTWATER ROAD NORTH MANLY NSW 2100
WASTE MANAGEMENT PLAN
For DA Submission to Northern Beaches Council**

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Introduction

AusWide Consulting was commissioned by Warringah Golf Club Ltd (WGC) to prepare a Waste Management Plan (WMP) for approval of a proposed new club house at 433 Pittwater Road, Manly NSW. The proposed development consists of the construction of a two-storey club house consisting of bar and function facilities, golf pro shop and office space.

In the course of preparing this WMP, the subject site and its environs have been inspected, plans of the development examined, and all relevant council requirements and documentation collected and analysed.

This WMP has been prepared based on the following information:

- Architectural Plans provided by Group Architects.
- Northern Beaches Council's Waste Management Guidelines. Specifically - Chapter 5 – Ongoing Waste management for non-residential developments.

Background and Existing Conditions

The subject site is located at 433 Pittwater Road North Manly NSW on the northwest corner of Pittwater Road and Kentwell Road. The nearby land use is primarily residential. The golf club has a long and proud history originally being established in 1939 and consists of a picturesque 18-hole course.

Figure 1 provides an overview of the area and its surrounding land uses whilst **Figure 2** provides an aerial view of the subject site and immediate area surrounding the site.

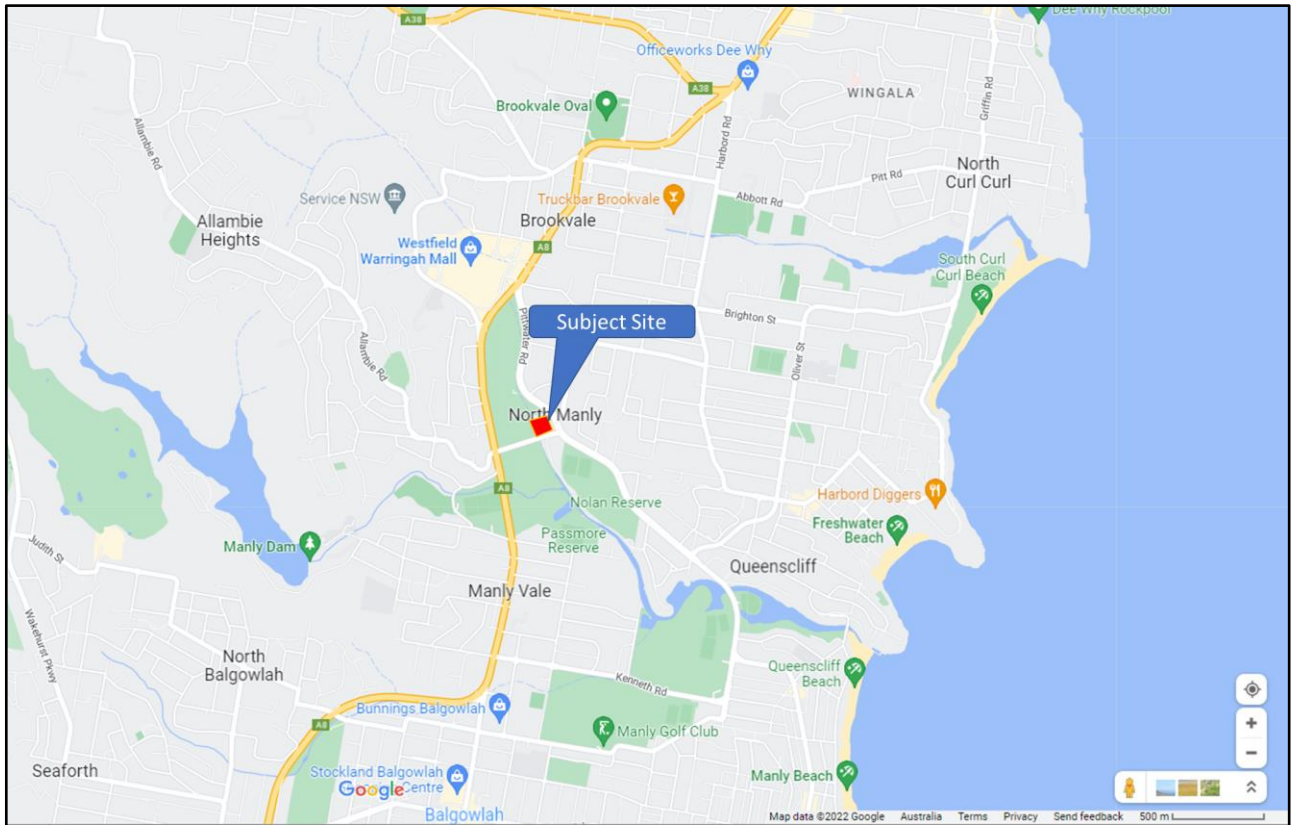


Figure 1: Location of the Subject Site



Figure 2: Aerial View of the Subject Site

Proposed Development

The proposed development is for the construction of a new club house for the Warringah Golf Club. The development will be a two-storey building consisting of bar and kitchen facilities, function space, golf pro retail space and office space. Vehicular and walkway access to the proposed development will be provided via Kentwell Road to the south of the subject site.

Anticipated Waste Generation, Storage and Collection

The waste collection service will be provided by a private contractor.

Waste Generation

As per The Northern Beaches Council Waste Management Guidelines, the following table illustrates the typical garbage and recycling generation rates.

Table 1: Typical General and Recycling Generation Rates for Non-Residential Developments.

Type of Premises	General Landfill Waste	Comingled Recycling Waste
Retail	50L/100m ² floor/area/day	50L/100m ² floor/area/day
Office	10L/100m ² floor/area/day	10L/100m ² floor/area/day
Licensed Club	50L/100m ² floor/area/day	50L/100m ² floor/area/day

Waste within Overall Development

Using the garbage and recycling generation rates above, the following can be calculated;

Gross Floor Area by Use

The following table shows the gross floor area (GFA) of the separate spaces within the proposed development.

Table 2: Gross Floor Area

Item	Area (m ²)	Waste Generation Category		
		Retail	Office	Licensed Club
GROUND FLOOR				
Back of House	93			93
Administration	58		58	
Toilets	66			
GF Bar	33			33
Stairs	22			
Meeting and Council Room	61		61	
PRO shop	134	134		
Public Toilets	12			
Foyer	31			31
Garden Bar/Lounge	127			127
Corridor	20			
Passenger Lift	6.5			
Goods Lift	2.7			
TOTAL GROUND FLOOR	666.2			
EXTERNAL AREAS				
Loading Bay	467			
External Covered Walkway	332			
External Covered Entry	99			
Outdoor Garden Terrace Area	148			
TOTAL EXTERNAL AREA	1046			
FIRST FLOOR				
Dining Room	179			179
Function Room	113			113
Sports Bar	130			130
Bar	24			24
Kitchen	52			52
Stairs	22			
Toilets	49			
Store	31			31
Corridor	18			
TOTAL FIRST FLOOR	618			
TOTAL AREA BY CATEGORY		134	119	813

Total Waste Generation

Office (119m²)

- 10L/100m² of floor area per day general waste = 60L per week (uncompacted)
- 10L/100m² of floor area per day recycling waste = 60L per week (uncompacted)

Licensed Club (813m²)

- 50L/100m² of floor area per day general waste = 2,845L per week (uncompacted)
- 50L/100m² of floor area per day recycling waste = 2,845L per week (uncompacted)

Retail (134m²)

- 50L/100m² of floor area per day general waste = 469L per week (uncompacted)
- 50L/100m² of floor area per day recycling waste = 469L per week (uncompacted)

Total Waste Generation

- General Waste = 3,374L per week (uncompacted)
- Recycling Waste = 3,374L per week (uncompacted)

Waste Storage Areas

Based on the total waste generated by the development, the following combination of bins should be provided:

- 1 x 1100L General Waste MGB – collected and emptied twice a week.
- 1 x 660L General Waste MGB – collected and emptied twice a week.
- 1 x 1100L Recycling Waste MGBs – collected and emptied twice a week.
- 1 x 1100L Paper and Cardboard MGB – collected and emptied once a week.

NB: Client has indicated that food MGBs will be located in the Back of House (BOH). A 660L MGB has been designated for this purpose. This will be disposed of with the general waste but can be separated if organics waste collection is required at a later date in the Northern Beaches Council. The clubhouse currently has a paper waste collection, so the recycling stream is split into paper and cardboard and other comingled recycling.

The following Table illustrates the typical dimensions of 660L & 1100L MGBs mentioned above.

Table 3: Typical Measurements for MGB's.

Size	Height (mm)	Width (mm)	Depth (mm)
660L	1,250	1,370	850
1100L	1390	1360	1090

Waste Storage Area Design Requirements

The location of the waste storage area and the design considers the Northern Beaches Council Waste Management Guidelines. The considerations are that it is;

- a) incorporated entirely within the site boundary, not visible to the public and landscaped to reduce visual impact and clutter.
- b) no closer than 3m from any dwelling openings.
- c) clear of any stormwater system and prevents wastewater from entering the system.
- d) designated area to accommodate waste, recycling containers, crates, pallets and other reusable items.
- e) a minimum floor space capable of managing the proposed commercial development's waste generation rate.
- f) in accordance with the BCA, relevant AS and other relevant legislation.
- g) graded and drained to a Sydney Water approved drainage system.
- h) easily kept clean and tidy at all times.

In addition to the above requirements the waste storage area for the proposed development will be located in the loading area at the BOH outside of the main building. The MGBs will be housed in an easily accessible, screened structure ensuring the following is met;

1. roofed with the downpipe directed to the stormwater and
2. graded to divert stormwater away from the waste area

An example of the structure to be constructed is below.



Figure 3: Waste Storage Area Example

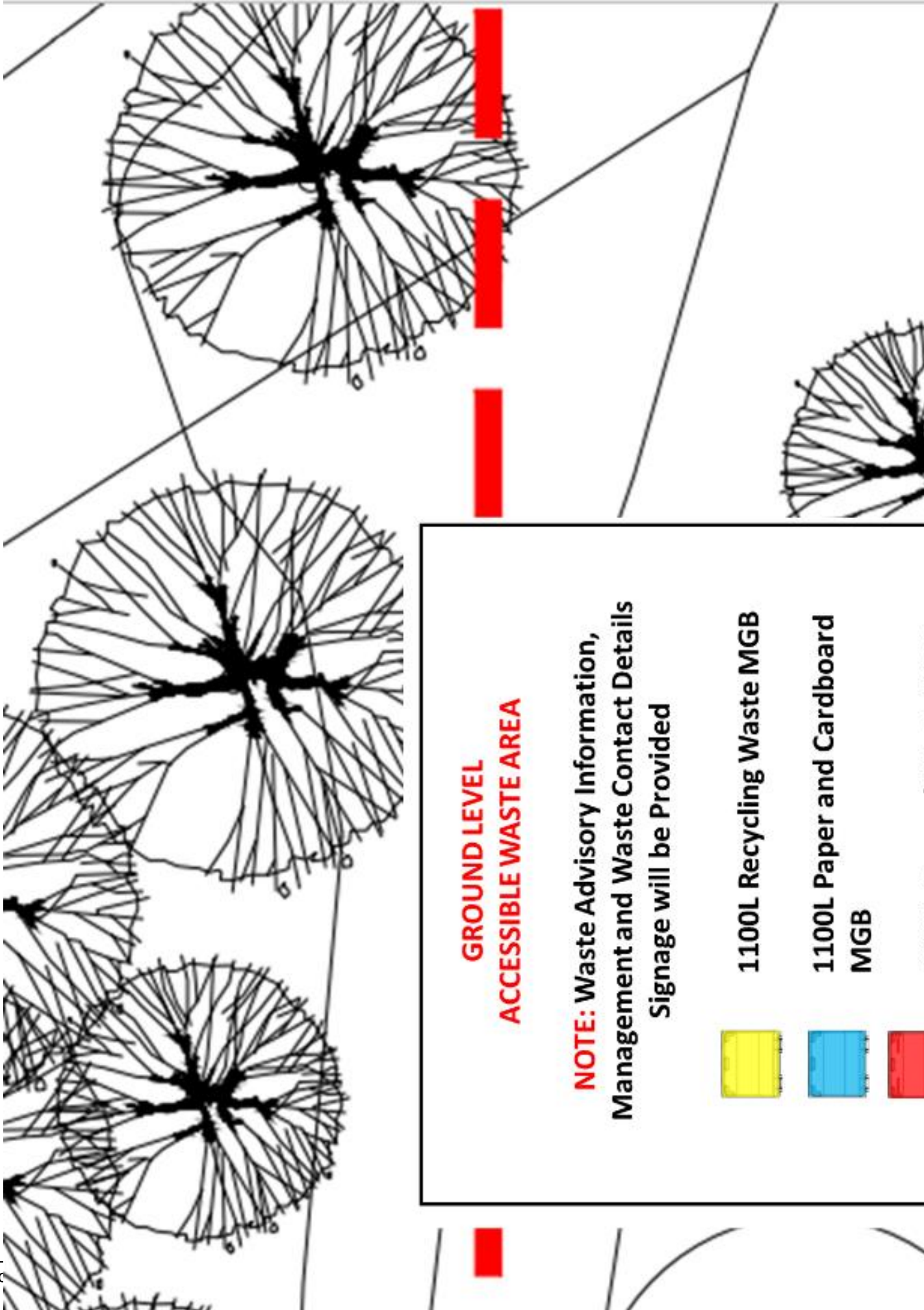
Signage

Appropriate colour coded signage will be provided in the bin storage room. These will be displayed in a prominent position to assist residents when depositing their waste. In particular, signage will include educational material from Council and address items that are acceptable or not acceptable based on Council’s requirements.

Recycling	Garbage
<ul style="list-style-type: none"> ✓ All recycling. ✓ Steel, tin, aluminium cans, empty aerosols. ✓ Clear, brown, green glass bottles / jars (rinsed, no lids). ✓ Plastic bottles, soft drink bottles, containers (rinsed, no lids). ✓ Carboard boxes, milk, juice cartons. ✓ Newspapers, magazines, office paper, junk mail, window envelopes. ✓ Council provided compostable caddy liner. ✗ Plastic bags, light bulbs, mirrors, drinking glasses, general and food waste, ceramics, crockery, foam, ovenware, polystyrene, waxed cardboard boxes. 	<ul style="list-style-type: none"> ✓ General waste. ✓ Plastic bags. ✓ Packets, wrappers, cling wrap, bubble wrap. ✓ Nappies, sanitary waste, (wrapped tightly, stored in a well-sealed bag). ✓ Animal faeces, bedding, and kitty litter. ✓ Foam, polythene, and polystyrene. ✓ Light bulbs, mirrors, ceramics, cookware, drinking glasses. ✓ Contents of your vacuum cleaner, cotton wool, buds and cigarette ends. ✗ Building materials, syringes, oil or paint, gas bottles, hazardous or chemical waste. ✗ Medical waste: (speak to your doctor / pharmacy).

Figure 4: General Guide for use of MGBs

The following figures illustrates the scaled diagrams of the MGB’s within the commercial waste storage area.



**GROUND LEVEL
ACCESSIBLE WASTE AREA**

NOTE: Waste Advisory Information,
Management and Waste Contact Details
Signage will be Provided



1100L Recycling Waste MGB



**1100L Paper and Cardboard
MGB**



Figure 5: Scaled Diagram of the proposed area

Waste Collection

The waste collection service will be provided by a private contractor.

The waste collection vehicle will enter the proposed development via Kentwell Road on the loading bay vehicle turnstile and position the turnstile to conveniently empty the MGBs. Once all the MGBs have been emptied and returned to the waste storage areas, the waste vehicle will then leave in a forward motion.

Amenity

Noise

The only noise generated from the waste management at the property will be that of the MGBs being wheeled to/from the waste vehicle and emptied. Any other noise related to the waste management will be kept to a minimum.

Security/Communication Strategy

All MGBs will be secured within the ground level waste storage areas behind the screened doors.

All staff will receive detailed documentation detailing all necessary requirements for safe waste management and handling including all relevant contact information.

Ventilation

The waste storage area is located outside in a screened structure so specific ventilation will not be required.

Cleaning Facilities

Management will be responsible for keeping the MGBs clean.

NOTE: It is recommended that waste enclosure should consist of: **(1)** Impervious coated/treated walls and ground surface, ensuring the ground is graded to the sewer (100 mm diameter) floor

drain outlet within the enclosure. **(2)** Tap and hose (hose cock must be protected from the waste containers) for use of cleaning the MGBs and waste area. **(3)** Self closing lockable double doors or electric roller door allowing easy removal of the MGBs.

Prevention of Vermin

Staff will be advised to not overfill the bins so that the lids are closed at all times.

Miscellaneous

Composting Facility

No consideration has been given to a composting facility at this time.

Waste Storage (Internal)

It is recommended that sufficient space be provided in each commercial space for interim storage of at least one days' worth of garbage and recyclables.

Green/Food Waste

Any green waste will be managed by a private contractor.

A 660L MGB has been allocated in the BOH for food waste however this will need to be monitored by management. The Northern Beaches Council Waste Management Guideline states that 'where waste generated contains either 20% by weight or volume of seafood, poultry or meat, or generates 50L of seafood, poultry or meat in total per day, the applicant must ensure the waste is collected daily or refrigerated until it is collected.'

It is intended to have the food waste disposed of with the general waste however the separate food bin will allow an easy transition to FOGO collection if this is required by the Northern Beaches Council.

Bulky Hard Waste

Bulky hard Waste will be handled by a private contractor.



E-Waste

Recyclable electronic goods include batteries, equipment containing printed circuit boards, computers, televisions, fluorescent tubes and smoke detectors. E-Waste will be placed in impermeable surface containers and collected by a registered E-Waste Re-Processor as required.