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WASTE MANAGEMENT PLAN

4 Minna Close, Belrose NSW 2085

Proposed Commercial Development

Prepared for:	Bureau SRH
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Introduction

AusWide Consulting was commissioned by Bureau SRH to prepare a Waste Management Plan (WMP) for approval of a proposed commercial development at 4 Minna Close, Belrose NSW.

The proposed development consists of;

- **Ground Level:** Warehouse Storage, staff rooms and reception (1,551.52 m²)
- Level 1: Mezzanine Office (175.47m²)

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 Bureau SRH
- Northern Beaches Council Waste Management Guidelines (For development in the area of WLEP 2011 and WLEP 2000)

Background and Existing Conditions

The subject site is naturally vegetated and located at 4 Minna Close, Belrose NSW, backing on to Mona Vale Road, with all the nearby land uses being commercial.



Figure 1: Architectural Rendering of Facility from Minna Close

Figure 2 provides an overview of the area and its surrounding land uses whilst **Figure 3** provides an aerial view of the immediate area surround the subject site.





Figure 2: Location of the Subject Site (Six Maps)



Figure 3: Aerial View of the Subject Site



Waste Management Principles

When dealing with waste, the following hierarchy has been adopted, prioritising from left to right;



Avoid/Reduce

Particularly during the construction phase, avoidance of waste will be achieved through:

- Selecting design options with the most efficient use of materials;
- Selecting materials with minimal wastage, such as pre-fabricated materials.

<u>Reuse</u>

Some of the materials encountered in the demolition stage can be recovered and reused both on-site and off-site. This will be practiced wherever possible. Reusable materials shall be appropriately stored to avoid damage from weather or machinery.

<u>Recycle</u>

Similarly, many materials form the demolition stage will be recyclable. These materials will be identified prior to demolition, and a system incorporated to efficiently separate reusable materials, recyclable materials and disposable materials. Recyclable materials shall be appropriately stored to avoid damage from weather or machinery. Details and receipts verifying the recycling of these materials shall be kept present on site at all times.

<u>Disposal</u>

The waste disposal contractor chosen for the job will comply with Council's DCP. Details and receipts verifying the disposal of these materials shall be kept present on site at all times.

Handling

When handling waste on-site, the system (including bin placement, volumes, and access) shall be designed with the following factors in mind:

- Safety (highest priority);
- Ease of use; and
- Aesthetics.



Demolition & Construction Stage

The proposed development involves the clearing of land and construction of a warehouse and office development within the undeveloped property.

Site Preparation Works

The site is currently vegetated, and no buildings exist on the site. The building is to be excavated into the natural ground profile, with an estimated 7,159m³ of virgin excavated natural material to be excavated and recycled.

Site contractors should demonstrate project management which seeks to:

- Re-use of excavated material on-site and disposal of any excess to an approved site;
- Green waste mulched and re-used in landscaping either on-site or off-site;
- Locations of on-site storage facilities for material to be reused on-site, or separated for recycling off-site; and
- Destination and transportation routes of all materials to be either recycled or disposed of off-site.

Construction Works

The following measures shall be considered during the construction stage in order to save resources and minimise waste:

- Purchasing Policy i.e. ordering the right quantities of materials and prefabrication of materials where possible;
- Reusing formwork;
- Minimising site disturbance, limiting unnecessary excavation;
- Careful source separation of off-cuts to facilitate re-use, resale, or efficient recycling; and
- Co-ordination/sequencing of various trades.

Stockpiling

Waste sorting areas and vehicular access on-site during construction shall be adequately maintained. The material (excavation material, construction material and waste) stockpiling area shall always remain within the site boundary and relocate during different construction stages as necessary. The waste area shall be largely located at the front of the site. This is to maintain easy access and removal of waste. The stockpiling area shall not infringe on access to the site however. Hoardings shall bind the site perimeter; therefore, the waste shall not be visible from the street.



Estimating Construction Waste Quantities

There are many simple techniques to estimate volumes of construction and demolition waste. The sequence of steps provided below can be used as a guide;

- 1) Quantify materials for the project
- 2) Use margin normally allowed in ordering
- 3) Copy these amounts of waste into your waste management plan

When estimating waste generation, the following percentages can be used as a "rule of thumb" practice;

Table 1: Estimating Waste Levels

Materials	Percentage of Waste / Total Materials Ordered	
Timber	5-7%	
Plasterboard	5-20%	
Concrete	3-5%	
Bricks	5-10%	
Tiles	2-5%	

Subsequently, the following table illustrates how to convert volumes of material to their respective weights. This information is particularly important during material storage and transportation stages.

Table 2: Converting Volume into Weight

Materials
Timber = 0.5 tonnes per m ³
Concrete = 2.4 tonnes per m ³
Bricks = 1.5 tonnes per m ³
Tiles = 0.75 tonnes per m ³
Steel = 2.4 tonnes per m ³

Wastage Types and Handling

Waste volumes produced by excavation and construction stages shall be confirmed by the contractor at the construction certificate stage. Where possible, materials shall be reused or recycled, with disposal being the last resort. The destination of all recycled and disposed material shall be announced upon the selecting the waste collectors and recyclers. Suggested recycling facilities are contained in Appendix A.

The arrangements for all reused, recycled and disposed waste shall be tracked and recorded, and all receipts shall be held on-site.



Anticipated Ongoing Waste Generation, Storage and Collection

The proposed development includes construction of a warehouse, packaging line for olive oil, and office and research and development area. Access to the development will be via the paved walkway and driveway off Minna Close through to the proposed internal road. The waste storage areas can be accessed via the driveway off Minna Close (**Ref: Appendix B**).

The waste will be collected by a private waste services contractor.

It is proposed that the warehouse facility operates five days per week. Being a food production facility, it is proposed that general waste be collected twice a week (no more than 3 days apart), with comingled recycling collected weekly.

Waste Generation

Waste generation has been estimated as per the Northern Beaches Council Waste Management Guidelines Warringah Development Control Plan (2013), Chapter 5 – On-going waste management for non-residential developments.

The ground floor consists of a warehouse (1,551.52m²), with pallet racking, staff facilities and a small reception area. The first floor consists of an open plan mezzanine office (175.47m²).

The following table illustrates the general and recycling generation rates as per the Council guidelines.

Type of Premises	Area	General Landfill Waste	Recycling Waste	
Warehouse	1,551.51m²	30L/100m ² floor area/day = 465L/day	30L/100m² floor area/day = 465L/day	
Office	175.47m ²	10L/100m2 floor area/day = 17.5L/day	10L/100m2 floor area/day = 17.5L/day	
TOTAL per day		483L/day	483L/day	
TOTAL per 5-day day week		2,415L/week	2,415L/week	

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Table 4: Garbage and Recycling	Generation Rates	for Commercial Developm	ents.
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NOTE: Generation rates based on weekly rates (as per the Northern Beaches Council Waste Management Guidelines Warringah Development Control Plan (2013) Chapter 5 – On-going waste management for non-residential developments). Actual usage can vary and may be generated at a reduced rate. Management will monitor all waste requirements and handling. Accessing any needs for waste management plan revisions.



Waste Storage Areas

Ground Level (warehouse, packaging, amenities and reception)

The waste storage area within the ground level will have (figure 5):

- 1 * 1,100L General Waste MGB collected and emptied twice a week.
- 1 * 240L General Waste MGB collected and emptied twice a week.
- 3 * 1,100L Recycling Waste MGBs collected and emptied once a week.

First Floor (open plan mezzanine office)

The waste storage areas within the first floor (Figure 6):

- 1 * 240L General Waste MGB collected and emptied twice a week.
- 1 * 240L Recycling Waste MGBs collected and emptied once a week.

Waste Collection Area (at rear of site next to the roller shutter door)

The temporary waste storage areas for MGBs awaiting collection will outside the warehouse next to the roller shutter door (RSD) (Figure 6). This will allow for movement of the bins out through the RSD, and pickup with a rear loading waste truck. The bin path is level and sealed, but the site forklift could be used to help move the 1,110 MGBs.

General waste collection (twice a week, no more than 3 days apart)

- 1 * 1,100L General Waste MGB
- 2 * 240L General Waste MGBs

Comingled recycling collection (once a week)

- 3 * 1,100L Comingled Recycling MGBs
- 1 * 240L Comingled Recycling MGBs

The following table illustrates the typical dimensions of the MGB's/Skip's as mentioned above.

Size	Height (mm)	Width (mm)	Depth (mm)
240L	1,080	580	735
1,100L	1,470	1,370	1,245

Table 5: Typical Mobile Garbage Bin (MGBs) Measurements for Developments in NSW



Liquid Waste Storage Area design requirements

The facility will be handling, blending and packaging olive oil. Where liquid waste will be generated, the applicant must also ensure that a designated and separate area, bunded and drained to a grease tap in accordance with Sydney Water requirements. This bunded area is shown on the packaging area of the warehouse. Any spills outside this area should be collected on adsorbent material and disposed of to general waste.

The applicant must ensure that the liquid waste from grease traps is removed by licensed waste contractors approved by Sydney Water and the NSW Environment Protection Authority.



Figure 4: Guidelines for Acceeptable Waste Placement within the MGB's

The following figures illustrates a scaled diagram of the waste area on the ground and first floors.





Figure 5: Scaled Diagram of Waste Areas on the Ground Floor





Figure 6: Scaled Diagram of Waste Areas on the First Floor



Waste Collection

The waste collection service for the proposed development will be provided by a private contractor.

The site staff will be responsible for moving the MGBs from the storage area to the collection area at the rear of the warehouse on collection day. There are lifts to bring the 240L MGBs from the first to the ground floor. The bin path for the 1,100 MGBs on the ground floor is level and sealed, but the site forklift could be used to move these larger bins.

The waste collection vehicle will enter via the Minna Close entrance ramp emptying the MGB's/Skip's. Once all the MGB's/Skip's have been emptied and returned to their designated waste storage areas the waste vehicle will leave in a forward motion.



Figure 7: Template of a Typical HRV (MGB) Waste Collection Vehicle



Amenity

Noise

The only noise generated from the waste management at the property will be that of the MGB's being collected by the waste collection truck and emptied. Any other noise related to the waste management will be kept to a minimum.

Ventilation

The waste storage areas should be ventilated unless there is ample ventilation.

Security/Communication Strategy

All MGBs will be secured within the waste storage area.

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

Cleaning Facilities & MGB/Skip Area or Enclosures

Management & staff will be responsible for keeping the MGB's & Skip's clean.

NOTE: It is recommended that the waste storage areas 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/Skip's and waste area. **(3)** Enclosures should include large double doors (preferably electric roller door) allowing for easy access to wheel the MGB's/Skip's.

Prevention of Vermin

Staff will be advised to not overfill the bins so that the lids are closed at all times. Rat traps should be placed in a safe place within the waste area.



Miscellaneous

Communal Composting Facility

A composting facility could be provided on site for all garden and organic food waste as an alternative to placing waste within any of the MGB's. Also see Green/Food Waste below.

Cafe (Internal) Waste Storage

It is suggested that sufficient space within the kitchen, should be provided for interim storage of at least two days' worth of garbage and recyclables. Space should allow for separate storage of recyclables from the garbage stream and, ideally, for the segregation of food organics in a separate waste container for compositing or within a organics waste MGB.

Green/Food Waste

Green can be handled by a private gardening contractor if needed. Food waste should be placed within the general waste MGB's if the optional organic waste MGB's are not provided, or provision has not been put in place for composting as stated above.

Hard Waste

If hard waste collection is required, management should call the private contractor directly. A Bulky Hard waste area should be provided.

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.



Appendix A – Waste Management Contacts

Materials	Company Name	Company Address	Contact Details
Evacuation Material/Soil Waste	Enviroguard	Cnr Mamre & Erskine Parks Rds Erskine Park	9834 3411
Green Waste	Ecocycle	155 Newton Road Wetherill Park	9757 2999
Bricks	Brandown	Lot 9 Elizabeth Drive Kemps Creek	9826 1256
Concrete	Brandown	Lot 9 Elizabeth Drive Kemps Creek	9826 1256
Timber	Artistic Popular Furniture	10 Raglan Road Auburn	9644 3054
Metals	Parramatta Scrap Metal	12 North Roack Rd Nth Parramatta	9630 2974
Roof Tiles	Obsolete Tiles	3 South Street Rydalmere	9684 6333
Door Fittings	Recycling Works	45 Parramatta Rd Annandale	9517 2711
Plastics	Cromford	120-122 Ballandella Rd Pendle Hill	9631 6644
Plasterboard	Ecocycle	155 Newton Road Wetherill Park	9757 2999
Fibro Containing Asbestos	Enviroguard	Cnr Mamre & Erskine Parks Rds Erskine Park	9834 3411



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