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DEMOLITION & CONSTRUCTION

WASTE MANAGEMENT PLAN

23 Dobroyd Road, Balgowlah Heights NSW 2093

Proposed Rear Extension & New Upper Floor

Prepared for:	Mark & Alanna Valerio
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Northern Beaches Council Application #:

TBA



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Introduction

AusWide Consulting was commissioned by LMD Design & Drafting on behalf of the client, Mark & Alanna Valerio, to prepare a Waste Management Plan (WMP) for approval of a proposed additions & alterations development at 23 Dobroyd Road, Balgowlah Heights NSW (Sydways 258 N10).

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 LMD Design & Drafting.
- As per the Northern Beaches DCP & NSW EPA Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities.

Description of Works

The proposed works involved a rear extension and new upper floor.

Background and Existing Conditions

The subject site is located 23 Dobroyd Road, Balgowlah Heights NSW on the southern side of Dobroyd Road and the nearby land uses are mainly residential.



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



Figure 1: Location of the Subject Site





Figure 2: 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.



Stockpiling

Waste sorting areas and vehicular access on-site during demolition shall be adequately maintained. The material (demolition material, excavation material, construction material and waste) stockpiling area shall always remain within the site boundary and relocate during different demolition 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 waste area; therefore, the waste shall not be visible from the street.



Demolition & Construction Stage

The proposed development consists of creating a rear extension and new upper floor.

Demolition Works

It should be noted that the demolition stage has the greatest potential for waste minimisation, particularly in Sydney where there are high levels of development, relatively high tipping charges and where alternative quarry materials are located on the outskirts.

The contractor should consider whether it is possible to re-use existing buildings, or parts thereof, for the proposed use. With careful onsite sorting and storage and by staging work programs it is possible to re-use many materials, either on-site or off-site.

Councils are typically seeking to move from the attitude of straight demolition to a process of selected deconstruction, i.e. total reuse and recycling both off-site and on-site. This could require a number of colour-coded or clearly labelled bins onsite (rather than one size fits all).

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;
- Bricks, tiles and concrete re-used on-site as appropriate, or recycled off-site;
- Plasterboard re-used in landscaping on-site, or returned to supplier for recycling;
- Framing timber re-used on-site or recycled elsewhere;
- Windows, doors and joinery recycled off-site;
- Plumbing, fittings and metal elements recycled off-site;
- All asbestos, hazardous and/or intractable wastes are to be disposed of in accordance with Workcover Authority and EPA requirements;
- 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.



Estimating Waste Quantities

There are many simple techniques to estimate volumes of 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	Table	1:	Estimating	W	aste	Level	s
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Material	Waste as a Percent of the Total
	Material 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

Timber = 0.5 tonnes per m3
Concrete = 2.4 tonne per m3
Bricks = 1.0 tonne per m3
Tiles = 0.75 tonne per m3
Steel = 2.4 tonne per m3

Wastage Types and Handling

Exact waste volumes produced by excavation and demolition stages shall be estimated 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.

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



Table 3: Waste Types and Handling Demolition Phase

Materials On Site	Waste Estimate - Volume (m3) or Weight (T)	On-site Reuse	Off-site Recycling	Off-site Disposal (In accordance with DECCW)
Bricks	TBA			
Ceramic Tiles	TBA			
Timber	TBA			
Concrete	TBA			
Metals	TBA			
Other	TBA			

The Demolition reuse/recycling/disposal information will be advised at CC Stage.

Construction Phase

Materials On Site	Waste Estimate - Volume (m3) or Weight (T)	On-site Reuse	Off-site Recycling	Off-site Disposal (In accordance with DECCW)
Bricks	TBA			
Ceramic Tiles	TBA			
Timber	TBA			
Concrete	TBA			
Metals	TBA			
Other	TBA			

The Construction reuse/recycling/disposal information will be advised at CC Stage.



Appendix A – Waste Management Contacts

Materials:	Company Name	Company Address	Contact Details
Excavation Material / Soil Waste	Enviroguard	Cnr Mamre & Erskine Park 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 Road North Parramatta	9630 2974
Roof Tiles	Obsolete Tiles	3 South St Rydalmere	9684 6333
Door Fittings	Recycling Works	45 Parramatta Road Annandale	9517 2711
Plastics	Chromford	120-122 Ballandella Road, Pendle Hill	9631 6644
Plasterboard	Ecocycle	155 Newton Road Wetherill Park	9757 2999
Fibro Containing Asbestos	Enviroguard	Cnr Mamre & Erskine Park Rds, Erskine Park	9834 3411