WASTE MANAGEMENT PLAN

DEMOLITION, CONSTRUCTION AND USE OF PREMISES

The applicable sections of this table must be completed and submitted with your Development Application.

Completing this table will assist you in identifying the type of waste that will be generated and will advise Council of how you intend to reuse, recycle or dispose of the waste.

The information provided on the form (and on submitted plans) will be assessed against the objectives of the DCP.

If space is insufficient in the table please provide attachments.

Outline of Proposal

Site Address: 2 Orchard Street, Warriewood

Applicant's name and address: Mepstead & Associates Pty Ltd
PO Box 208, Pennant Hills NSW, 1715

Phone: (02) 9875 4500 Fax: (02) 9875 4833

Building and other structures currently on the site: There is one fibro dwelling and six metal sheds.

Brief description of Proposal: This Waste Management Plan relates to the demolition and removal of the six metal sheds. A seperate WMP was submitted for the Fibro Dwelling.

The details provided on this form are the intentions of managing waste relating to this project.

Signature of Applicant: A. Gray Date: 29.11.13

PITTWATER COUNCIL
COMPLYING DEVELOPMENT CERTIFICATE
Number: CDC 0159/13
This is a copy of submitted plans, documents or Certificates associated with the issue of the Complying Development Certificate.
Endorsed by: K.W
Date: 10 DEC 2013

STAGE ONE – DEMOLITION

This is the stage with 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.

Applicants should consider is 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.

Council is seeking to move from the attitude of straight demolition to a process of selected deconstruction, ie. 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).

Applicants should demonstrate project management which seeks to:

- re-use of excavated material on-site and disposal of any excess to an approved site;
- greenwaste 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.

The following table should be completed by applicants proposing any demolition work. The following details should be shown on your plans.

- Location of on-site storage space for materials (for re-use) and containers for recycling and disposal.
- Vehicle access to the site and to storage and container areas.

Demolition Stage One – To be completed for proposals involving demolition

Materials On-Site		DESTINATION		
		REUSE & RECYCLING		DISPOSAL
Type of Material	Estimated Volume (m3) or Area (m2) or weight (t)	**ON-SITE** Specify how materials will be reused or recycled on-site	**OFF-SITE** Specify the contractor and recycling outlet	Specify the contractor and landfill site
EXAMPLE *e.g. bricks	*e.g. 2m3	*e.g. clean & reuse for footings and broken bricks behind retaining walls	*e.g. sent by XYZ Demolishers to ABC Recycling Company	*e.g. nil to landfill
Excavation Material	Negligable. Will be lost on site.			
Green Waste	none			
Bricks	none			
Tiles	none			
Concrete	14.9t		Kimbricki by ABAX	
Timber – please specify	none.			
Plasterboard	none.			
Metals	375m² approx 11 tonne		offsite by Recyclecorp	
Asbestos	none.			
Other waste e.g. ceramic tiles, paints, plastics, PVC tubing, cardboard.	none.			

Demolition Stage One - continued

How will waste be separated and/or stored onsite for reuse and recycling? How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling?

e.g. Staff training, selected deconstruction v. straight demolition, waste management requirements stipulated in contracts with sub-contractors, on-going checks by site supervisors, separate area set aside for sorted wastes, clear signage for waste areas etc.

The metal sheets and frame components will be dismantled and loaded directly to Recyclecorp.

The concrete slabs will be excavated and broken down and loaded directly to Kimbriki.

There will be full time supervision of the above. ABAX contracting are the contractor for the works and will be the point of contact.

ABAX Contracting
126 Toongabbie Road
Girraween
Ph: 9631 0711
Fax: 9896 1171

Note: Details of the site area to be used for on-site separation, treatment and storage (including weather protection) should be provided on plan drawings accompanying your application.

WASTE MANAGEMENT PLAN

DEMOLITION, CONSTRUCTION AND USE OF PREMISES

The applicable sections of this table must be completed and submitted with your Development Application.

Completing this table will assist you in identifying the type of waste that will be generated and in advising Council now you intend to reuse, recycle or dispose of the waste.

The information provided on the form (and on your plans) will be assessed against the objectives of the DCP.

For a copy of the Western Sydney Recycling Directory or if you would like any assistance completing your waste management plan, please contact Councils Waste Management Project Officer on Ph: (02) 9762 1112.

If space is insufficient in the table please provide attachments.

Outline of Proposal

Site Address: 2 Orchard St, Warriewood

Applicant's name and address: Abax Contracting Pty Ltd

126 Toongbbie Rd, Girraween

Phone: 9631 0711 Fax: 9896 1171

Buildings and other structures currently on the site: 2 bedroom fibro house

Brief Description of Proposal: Demolition of dwelling

The details provided on this form are the intentions for managing waste relating to this project.

Signature of Applicant: _____ Date: 15/11/2013.

PITTWATER COUNCIL
COMPLYING DEVELOPMENT CERTIFICATE
Number: CDC0159/13
This is a copy of submitted plans, documents or Certificates associated with the issue of the Complying Development Certificate.
Endorsed by: K.W
Date: 10 DEC 2013

Estimating Waste Quantities

In order to develop an effective waste management plan it is necessary to determine how much waste will be involved. Excavation material and green waste need only be estimated once in either the demolition or the construction section.
If both demolition and construction is occurring then estimates for building waste such as bricks, roof tiles, timber etc must be given separate estimates in each section.

The tables below can be used as guides to assist in making estimations based on the size and type of building.
A close study of waste expectations may assist in reducing the amount of waste created through careful purchasing of materials.

DEMOLITION (tonnes)

Building Type	Sandstone	Concrete	Bricks	Timber/ Gyprock	Steel	Roof Tiles	Other
2 B/room Town House (100m²)	67	4	3	18	0.7	N/A	3
3 B/room brick house (120m²)	90	4	123	13	0.7	9	0
Blocks of flats 1000m²	N/A	813	655	22	9	33	26
Factory per 1000m²	N/A	448	205	4	23	N/A	18
Office Block per 1000m²	N/A	7410	1485	124	29	N/A	155

CONSTRUCTION (tonnes)

Building Type	Timber	Concrete	Bricks	Gyprock	Sand/ Soil	Metal	Other
2 B/room	0.25	0.35	0.55	0.20	1.30	0.05	0.30
3 B/room brick house 120m³	0.35	0.40	0.75	0.20	2.50	0.10	0.44
Block of Flats Per 1000m²	0.70	6.70	3.20	1.30	28.70	1.30	0.60
Factory per 1000m²	0.25	2.10	1.65	0.45	4.80	0.60	0.50
Office Block per 1000m²	5.10	18.8	8.50	8.60	8.80	2.75	5.0

(Source: McGregor Environmental Services (2000) Predicting C&D waste quantities in the Inner Sydney Waste Board)

The above tables should be used as a guide only. The waste generated depends on the type of building being demolished or constructed, the materials present and the company employed to conduct works.

STAGE ONE – DEMOLITION

This is the stage with 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.

Applicants 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.

Council is seeking to move from the attitude of straight demolition to a process of selected deconstruction i.e. from "trashing the building" to "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).

Applicants 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 the Workcover Authority and EPA requirements
- location 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.

The following table should be completed by applicants proposing any demolition work. The following details should be shown on your plans

- location of on-site storage space for materials (for re-use) and containers for recycling and disposal.
- vehicle access to the site and to storage and container areas

Demolition Stage One – To be completed for proposals involving demolition

Materials On-Site		DESTINATION		
		REUSE & RECYCLING		DISPOSAL
Type of Material	Estimated Volume (m^3) or Area (m^2) or weight (t)	ON-SITE • specify how materials will be reused or recycled on-site	OFF-SITE • specify the contractor and recycling outlet	• specify the contractor and landfill site
***EXAMPLE** *e.g. bricks	*e.g. 2m3	*e.g. clean & reuse for footings and broken bricks behind retaining walls	*e.g. sent by XYZ Demolishers to ABC Recycling Company	*e.g. nil to landfill
Excavation Material	16m3	Lose onsite		
Green Waste	1t		Kimbriki by Abax	
Bricks				
Tiles				
Concrete	1t		Kimbricki by Abax	
Timber - please specify	3t		Kimbriki by Abax	
Plasterboard				
Metals	2t		Offsite by Recyclecorp	
Asbestos	0.5t		Offsite by Basset Demolition Workcover Demo Licence: 200532DE2 Disposal at Kimbriki EPA approved site	
Other Waste e.g. ceramic tiles, paints,	1t		Kimbriki by Abax	

Materials On-Site		DESTINATION		
		REUSE & RECYCLING		DISPOSAL
Type of Material	Estimated Volume (m^3) or Area (m^2) or weight (t)	ON-SITE • specify how materials will be reused or recycled on-site	OFF-SITE • specify the contractor and recycling outlet	• specify the contractor and landfill site
plastics, PVC tubing, cardboard.				

Please explain how waste will be separated and/or stored onsite for reuse and recycling? How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling?

{ e.g. Staff training, selected deconstruction v. straight demolition, waste management requirements stipulated in contracts with sub-contractors, on-going checks by site supervisors, separate area set aside for sorted wastes, clear signage of waste areas etc }.

Initial selective demolition will occur to remove timbers and recyclable materials and separated in to separate stockpiles

Demolition of General Solid Waste will be loaded directly to Kimbriki

Full time supervisor will ensure no cross contamination of materials to ensure that the materials will be recycled or disposed of correctly

Asbestos and Fibro to be carefully removed with proper Asbestos licensed Labourers Disposal of these materials to be done in a careful manner to an EPA approved site nominated as Kimbriki

Note: Details of the site area to be used for on-site separation, treatment and storage (including weather protection) should be provided on plan drawings accompanying your application.

STAGE TWO - CONSTRUCTION

Stage Two – Potential for Waste Minimisation During Construction Stage

Consider the following measures that may also save resources and minimise waste at the construction stage.

- Purchasing Policy – considering measures such as 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;
- Co-ordination/sequencing of various trades.

How to Estimate Quantities of Waste

- There are many simple techniques to estimate volumes of construction and demolition waste. The information below can be used as a guide by builders, developers & homeowners when completing a waste management plan:

To Estimate Your Waste:
- ii. Quantify materials for the project
- iii. Use margin normally allowed in ordering
- iv. Copy these amount of waste into you waste management plan

- When estimating waste the following percentages are building "rule of thumb" and relate to renovations and small home building:

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%

Converting Volume into Tonnes : A Guide for Conversion

Timber = 1.1 tonne per m3
Concrete = 1.1 tonne per m3
Bricks = 1.3 tonne per m3
Tiles = 1.3 tonne per m3
Steel = 2-4 tonne per m3
Plaster board = 0.8 tonne per m3
Fill = 1.3 tonne per m3
Mixed C&D Waste = 1 tonne per m3
Green Waste = 1 tonne per m3

To provide more reliable figures:
- Compare your projected waste quantities with actual waste produced;
- Conduct waste audits of current projects;
- Note waste generated and disposal methods;
- Look at past waste disposal receipts;
- Record this information to help estimate future waste management plans.
- On a waste management plan amounts of waste may be stated in - m2 or m3 or tonnes (t).

Construction Stage Two – For Proposals Involving Construction

Materials On-Site		DESTINATION		
		REUSE & RECYCLING		DISPOSAL
Type of Material	Estimated Volume (m^3) or Area (m^2) or weight (t)	ON-SITE • specify how materials will be reused or recycled on-site	OFF-SITE • specify the contractor and recycling outlet	• specify the contractor and landfill site
***EXAMPLE** *e.g. bricks	*e.g. 2m3	*e.g. clean & reuse for footings and broken bricks behind retaining walls	*e.g. sent by ABC Demolishers to XYZ Recycling Company	*e.g. nil to landfill
Excavation Material				
Green Waste				
Bricks				
Tiles				
Concrete				
Timber - please specify				
Plasterboard				
Metals				
Other Waste e.g. ceramic tiles, paints,				

Materials On-Site		DESTINATION		
		REUSE & RECYCLING		DISPOSAL
Type of Material	Estimated Volume (m^3) or Area (m^2) or weight (t)	ON-SITE • specify how materials will be reused or recycled on-site	OFF-SITE • specify the contractor and recycling outlet	• specify the contractor and landfill site
plastics, PVC tubing, cardboard.				

Please explain how waste will be separated and/or stored onsite for reuse and recycling? How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling?

{ e.g. Staff training, recycled materials used in construction, waste management requirements stipulated in contracts with sub-contractors, on-going checks by site supervisors, separate area set aside for sorted wastes, clear signage of waste areas etc }.

Note: Details of site area to be used for on-site separation, treatment and storage (including weather protection) must be provided on plan drawings accompanying your application.

STAGE THREE – DESIGN OF FACILITIES

The following details should be shown on your plans:

- Location of temporary storage space within each dwelling unit;
- Location of Waste Storage and recycling Area(s), per dwelling unit or located communally onsite. In the latter case this could be a Garbage and Recycling room;
- Details of design for Waste Storage and Recycling Area(s) or Garbage and Recycling Room(s) and any conveyance or volume reduction equipment; and
- Location of communal composting area.
- Access for vehicles.

Every building shall be provided with a Waste Storage and recycling Area which is flexible in size and layout to cater for future changes in use. The size is to be calculated on the basis of waste generation rates and proposed bin sizes.

Stage 3 - Design of Facilities – To be completed if designing waste facilities for the proposed development

TYPE OF WASTE TO BE GENERATED	EXPECTED VOLUME PER WEEK	PROPOSED ON-SITE STORAGE AND TREATMENT FACILITIES	DESTINATION
Please specify. For example: glass, paper food waste, offcuts etc.	Litre or m3	For example: • waste storage & recycling area • garbage chute • on-site composting • compaction equipment	• recycling • disposal • specify contractor

Note: Details of on-site waste management facilities should be provided on the plan drawings accompanying your application.

ON-GOING MANAGEMENT

This section will enable you to describe how you intend to ensure on-going management of waste on-site (eg. lease conditions, care-taker/manager on site).

Describe how you intend to ensure on-going management of waste on-site (eg. lease conditions, caretaker/manager on-site).

For a copy of the Western Sydney Recycling Directory or if you would like any assistance completing your waste management plan, please contact Council's Waste Management Officer on ph (02) 9762 1112.