Appendix No. 3
WASTE MANAGEMENT PLAN

WASTE MANAGEMENT PLAN

NEW WAREHOUSE, SHOWROOM AND OFFICE

AT

LOT 34 OF DP1036699
60 JACK WILLIAMS DRIVE
PENRITH NSW 2750

FOR

CREST OFFICE FURNITURE

JUNE 2013

DUTAILLIS | ARCHITECTS
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What information does Council Require?

The following table summarises Council's submission requirements for specific activities.

Land Use or Activity Proposed	Is a Site Waste Management Plan (WMP) Required?	Specific Details to be Provided on Plan Drawings
Subdivision or demolition, including vegetation removal, excavation and major renovations	Yes, Section 1 only of the Waste Management Plan outline	On-site sorting and storage areas. Access for collection vehicles. Vegetation to be removed or retained.
Placing a waste storage container (a skip) in a public place, e.g. on the road or footpath	Yes, Section 1 only of Waste Management Plan outline	Proposed location relative to subject property, footpath and street alignment or intersections.
Single dwellings, terraces, villa homes, Class 1a buildings	Yes, Section 2 only of Waste Management Plan outline	Waste cupboard space. Location of waste storage and recycling areas. Provision for composting or worm farming facilities.
Multi unit dwellings, town houses, and residential flat buildings. Class 2 buildings and boarding houses	Yes, Sections 2, 3 and 4 of Waste Management Plan outline	Waste cupboard space. Waste storage and recycling area or garbage and recycling room. A collection area, chute system or volume reduction equipment (compactor), where appropriate. Access for collection vehicles. Provision for composting or worm farming facilities.
Hotels, motels, schools, large boarding houses	Yes. Sections 2,3 and 4 of Waste Management Plan outline	Waste cupboard space, e.g. in staff kitchen. Waste storage and recycling area or garbage and recycling room. A collection area, chute system or volume reduction equipment, where appropriate. Access for collection vehicles. Provision for composting or worm farming facilities

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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 Dutaillis Architects Pty Ltd 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 Development Control Plan (DCP).

If space is insufficient in the table please provide attachments.

Outline of Proposal

Site Address: Lot 34 DP1036699, 60 Jack Williams Drive, PENRITH NSW 2750

Applicants name and address: Crest Office Furniture PO Box 1039, GOULBURN NSW 2580

Phone: 02 4821 8373 **Fax:** 02 4822 1305

Building and other structures currently on the site: Nil

Brief description of Proposal: Construction of a new warehouse, showroom and office with related carparking and landscaping.

STAGE ONE – DEMOLITION

This is the stage with the greatest potential for waste minimisation, particularly where there are high levels of development, relatively high tipping charges and where alternative quarry materials are located a considerable distance from the site.

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.

Councils are 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).

Applicants should demonstrate project management which seeks to:

- Re-use 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,
- Re-use bricks, tiles and concrete on-site as appropriate, or recycled off-site,
- Re-use plasterboard in landscaping on-site, or returned to supplier for recycling,
- Re-use framing timber 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 and Recycle		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. $2m^3$	*e.g. clean & reuse for footings and broken bricks behind retaining walls	*e.g. sent by *XXZ Demolis* to *ABC Recycling Company*	*e.g. nil to landfill
Excavation Material	NIL	N/A	N/A	N/A
Green Waste	NIL	N/A	N/A	N/A
Bricks	NIL	N/A	N/A	N/A
Tiles	NIL	N/A	N/A	N/A
Concrete	NIL	N/A	N/A	N/A
Timber – please specify	NIL	N/A	N/A	N/A
Plasterboard	NIL	N/A	N/A	N/A
Metals	NIL	N/A	N/A	N/A
Asbestos	NIL	N/A	N/A	N/A
Other waste e.g. ceramic tiles, paints, plastics, PVC tubing, cardboard	NIL	N/A	N/A	N/A

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-constructors, on-going checks by site supervisors, separate area set aside for sorted wastes, clear signage for waste areas etc.

N/A

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 – 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,
- 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 and 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 amounts of waste into your 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	=	0.5 tonnes per m^3
Concrete	=	2.4 tonne per m^3
Bricks	=	1.0 tonne per m^3
Tiles	=	0.75 tonne per m^3
Steel	=	2.4 tonne per m^3

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.

The Waste Management Plan amounts of waste may be stated in – m^2 or m^3 or tonnes (t).

Construction Stage Two – for proposals involving construction

Materials On-Site		Destination		
		Reuse and Recycle		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. $2m^3$	e.g. clean & reuse for footings and broken bricks behind retaining walls	e.g. sent by *XXZ Demolishers to ABC Recycling Company*	e.g. nil to landfill
Excavation Material	$100m^3$	Re-used for fill on-site where possible excess for disposal	Excess by Skipmaster to ECWRC	Surplus to landfill disposal handled by Skipmaster to ECWRC..
Green Waste	$5m^3$	N/A	Removal by Skipmaster to EMWRC	N/A
Bricks	Nil	N/A	N/A	N/A
Tiles	Nil	N/A	N/A	N/A
Concrete	1 Tonne	N/A	Recycled if practical handled by Skipmaster to Boral.	Surplus to landfill disposal by Skipmaster to ECWRC.
Timber – please specify	0.2 Tonne (Studs, battens, sheet bracing, particle board)	N/A	Recycled if practical handled by Skipmaster to Boral.	Surplus to landfill disposal by Skipmaster to ECWRC.
Plasterboard	0.5 Tonne	N/A	N/A	To landfill disposal by Skipmaster to ECWRC.
Metals	0.25t (sheet roofing, flashings, barges)	N/A	Excess by Skipmaster to ECWRC	Nil to landfil
Other waste e.g. ceramic tiles, paints, plastics, PVC tubing, Cardboard	All other wastes. 0.5 Tonne	N/A	N/A	To landfill disposal handled by Skipmaster to ECWRC.

Eastern Creek Waste & Recycle Centre – Wallgrove Road Eastern Creek NSW
(Referred to as ECWRC)

Boral Recycling Centre – Cnr Davis Road and Windemere Road Wetherill Park NSW
(Referred to as Boral)

Skipmaster Waste Management – 14 Airds road Minto NSW
(Referred to as Skipmaster)

How will waste be separated and/or stored onsite for reuse and recycling?

All waste will be separated and stored in bins or specified stockpiles that willbe located on the site during construction.

How will site operations be managed to ensure minimal waste creation and maximum reuse and recycling?

All sub-contractors will be required to adhere to safe work practices and conditions addressing matters such as; Staff training, recycled materials used in construction, waste management requirements stipulated in contracts, on-going checks by site supervisor, separate area set aside for sorted wastes, and clear signage of waste areas etc. Additionally it is considered that this issue can also be addressed by appropriate conditions of development consent.

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.

ON-GOING MANAGEMENT

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

- On going operation will generate waste associated with the office (paper products) the lunch rooms (food) and site maintenance (garden waste).
- The factory area will generate packing waste (for recycling where possible, excess to landfill)
- Crest Office Furniture will arrange contracts with a waste disposal contractor to remove waste and recycling on-site bin locations.

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 & 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 builder 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 TREATEMENT FACILITIES	DESTINATION
Please specify. For Example: glass, paper, food waste, offcuts etc.	Litre or m^3	For example: • waste storage & recycling area • garbage chute • on-site composting • compaction equipment	• recycling • disposal • specify contractor
N/A			
N/A			

ESSENTIALS FOR WASTE MANAGEMENT IN MULTI UNIT DWELLINGS (M.U.D)

Many of the issues for good waste management are common across all M.U.D.

The following is the bare minimum that needs to be considered for all M.U.D.

1. Council

a. What regulations apply?
b. What are the current Council garbage and recycling services?
   i. Will Council service the development?
   ii. If No – seek consultation through a Private Contractor for the best solution for the development.
c. Are there plans to change the service in the future?
d. Include Waste Management Plan in the Development Application pre-lodgement meetings.

2. Space

a. The anticipated volume of waste must be calculated and appropriate waste service selected.
b. Sufficient space must be allocated for the containers and for manoeuvring bins, including frontage area, etc.

3. Access – for Residents and Collectors

a. Collection vehicles must be able to service the development efficiently and effectively from kerb within confines of the allotment frontage with no need to reverse.
b. The maximum carting distance between the storage and collection points must be no more than 75m, and no more than 50m for aged persons and persons with a disability.
c. The bin carting grade must not exceed 1:14.
d. Bins must not need to be wheeled over steps.
e. Bulk bins must not need to be manually manoeuvred by a single person to be serviced.

4. Amenity

a. Noise and odour must be minimised.
b. Waste areas must be able to be washed, with wash water discharging to sewer.
c. Vermin must be prevented from entering waste areas and containers.
d. Equipment must be protected from theft and vandalism.
e. Waste storage areas must blend in with the development.

5. Management

a. Signage must be posted in all communal waste storage areas.
b. Bins must be clearly and correctly labelled.
c. Responsibility for cleaning of waste storage areas must be determined when designing the system.
d. Responsibility for transfer of bins must be determined when designing the system.

Council's Regulations

Council will only service up to 30 units/townhouses.
Council supplies 1 x 140 litre bin for general waste (1 bin per unit/townhouse).
Council supplies 1 x 240 litre bin for recycling to be shared (1 between 2 units/townhouses).
A 240 litre bin is provided for green waste upon request from strata management.
No services are available to private roads.

Commercial Services

Under the current contract, Council does not automatically offer services to this industry and is not in the business of removing trade waste.

Services are available to small business where a limited amount of waste is generated - Option of 140 or 240 litre bins.

CBD is serviced 6 days/per week, however, charges are calculated on the number of weekly services.

Retail and Food industries that generate large volumes of waste generally use the services of private contractors.

No Council Recycling Services are available to this sector under the current contract, however, this could change from 1/7/06.

Council's Waste Service Collection

General waste collected weekly.
Recycling collected alternate fortnights.
Green waste collected alternate fortnights.

Standard general waste bin size can be increased to a 240 litre bin, however, this will incur an additional charge and is required in writing from the strata management or owner.

Bin Dimensions:

140 litre bin:

Normal volume:	140 litres
Net weight:	approx 10.4kg
Maximum load:	56 kg
Permitted total weight:	70 kg
Height:	925mm
Width:	535mm
Depth:	615mm

240 litre bin:

Normal volume:	240 litres
Net weight:	approx 12.3kg
Maximum load:	96kg
Permitted total weight:	110kg
Height:	1060mm
Width:	585mm
Depth:	730mm