

## WASTE MANAGEMENT PLAN

**Prepared for:** Costco Wholesale Australia Pty Ltd

**Project Site:** 15-21 Parramatta Road  
Lidcombe NSW

**Date of Issue:** 26<sup>th</sup> June 2009

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## WASTE MANAGEMENT PLAN

This waste management plan is based on the following conditions:

- On-going use of the premises (does not include demolition or construction stages).
- The project consists of:
  - Supermarket/General Retail/Bulky Retail, 12,091 m<sup>2</sup>, estimated;
  - Cafe, 300 m<sup>2</sup>, estimated;
- Figures and calculations are based on drawings and information supplied by Costco Wholesale and Mulvanny Architecture.
- Waste volume figures are estimates only and will be influenced by the operator's disposition toward waste disposal and recycling. Refer to the enclosed tables for rates and assumptions.
- All waste facilities and equipment shall be in compliance with council codes, BCA, Australian Standards, and statutory requirements.

## EXCLUSIONS

- Hard rubbish and liquid waste have been excluded from this plan (disposal shall be organised by the operator via an appropriate contractor).

## SCOPE OF REPORT

### **Description: Waste Management Plan for the Costco Lidcombe NSW Development:**

Wastech Engineering will:

- review building layout drawings and documentation and provide a waste management plan including the following:
- Calculation of weekly waste and recyclable volumes for the development
- Provide recommendations for compaction, storage and transportation of waste and recyclables within the site
- Include technical brochures and drawings for equipment recommended
- Traffic flow advice based on our industry experience and knowledge
- Provide recommendation for vehicle collection type
- Detail underground and overhead clearance issues for truck access
- Reference collection companies and /or council collection/disposal services
- Provide a bound, hard copy and electronic version of the report

All recommendations and equipment shall be in compliance with council codes, BCA, Australian Standards and statutory requirements

Exclusions:

- Formal traffic management plan
- Design and drafting to resolve site specific issues

NOTE: All exclusions can be provided. On request, a quotation can be prepared to suit individual requirements

## GENERATED WASTE VOLUME ESTIMATE

The enclosed waste estimates (expressed in uncompacted cubic metres per week) are summarised as follows (refer to the enclosed Waste Estimates):

<b>WASTE</b>	Garbage	Cardboard	Soft Film Plastics	Containers
Supermarket	143.88	33.85	17.77	-
Cafe	4.20	1.18	-	3.15
<b>Total (m<sup>3</sup>/wk uncompacted)</b>	<b>148.08</b>	<b>35.03</b>	<b>17.77</b>	<b>3.15</b>
<b>Bin</b>	compactor	compactor	baler	240 litre bins

## WASTE MANAGEMENT

The following is proposed:

### **Waste Streams**

Waste shall be sorted on-site into the following streams and associated bins:

- Garbage;
- Soft Film Plastic;
- Containers (PET, HDPE, steel, aluminium etc) and;
- Cardboard.

All garbage shall be placed in tied plastic bags prior to transferring into the collection bins.

### **Supermarket/General Retail/Bulky Retail**

Suitable garbage bins shall provided throughout the centre. Cleaning staff shall periodically clear garbage using a cleaner's trolley or similar, and transfer this waste to the transportable / integrated compactor located in the loading dock at the second floor level for garbage disposal.

Staff shall transfer soft film plastics using a cleaner's trolley or similar to the plastics baler located in the loading dock at the second floor level for disposal.

Cardboard shall be flattened by staff and transferred to the cardboard compactor, utilising a cleaners trolley or similar, located in the loading dock at the second floor level for disposal.

### **Cafe**

Suitable garbage bins shall provided for the cafe. Cleaning staff shall periodically clear garbage using a cleaner's trolley or similar, and transfer this waste to the transportable / integrated compactor located in the loading dock at the second floor level for garbage disposal.

Container recycling bins, 240 litre capacity, shall be provided. Staff shall transfer full container recycling bins to the bin store room located in the loading dock at the second floor level for disposal. Staff shall deposit full bin into bin store and collect clean empty bin for return to the cafe.

Cardboard shall be flattened by staff and transferred to the cardboard compactor, utilising a cleaners trolley or similar, located in loading dock at the second floor level for disposal.

## **Garbage & Recycling Collection**

The store / operations manager shall coordinate removal of the transportable / integrated general waste compactor with collection vehicle arrival so that vehicle access to loading dock area is not impeded. The collection shall be carried-out by a private contractor, to be confirmed by Costco, within the building's second floor loading bay area. Twice weekly collection of the transportable / integrated general waste compactor is envisaged.

The store / operations manager shall coordinate removal of the stationary cardboard compactor with collection vehicle arrival so that vehicle access to loading dock area is not impeded. The collection shall be carried-out by a private contractor, to be confirmed by Costco, within the building's second floor loading bay area. Fortnightly collection of the stationary cardboard compactor is envisaged.

The store / operations manager shall prepare baled soft film plastics for collection and coordinate with collection vehicle arrival so that vehicle access to loading dock area is not impeded. The collection shall be carried-out by a private contractor, to be confirmed by Costco, within the building's second floor loading bay area. Weekly collection of baled soft film plastics is envisaged.

The store / operations manager shall prepare the 240 litre container recycling bins for collection and coordinate with collection vehicle arrival so that vehicle access to loading dock area is not impeded. The collection shall be carried-out by a private contractor, to be confirmed by Costco, within the building's second floor loading bay area. Twice weekly collection of 240 litre recycling bins is envisaged.

Minimum overhead clearance height for collection of the transportable / integrated compactor is 5.0m. Traffic management consultants to confirm collection vehicle manoeuvring within loading dock area to collection point is acceptable.

## WASTE HANDLING EQUIPMENT

The following waste handling equipment is recommended:

### Compactor

A transportable / integrated garbage compactor may be utilised, such as the T1000 25m<sup>3</sup> transpacker with compaction ratio of 3:1, as supplied by Wastech Engineering, or equivalent.

**Quantity required = one (1)**

GARBAGE		
Weekly <b>Garbage</b> Volume	148.08	cubic metres
Compacted Volume (ratio 3:1)	49.36	cubic metres
Bin Type	25	cubic metre
Frequency of collection	2	per week
Bins required for collection	1	
<b>Garbage</b> Total bins required	1	

Note: to be operated by cleaning staff and store / operations manager and collected by private contractor

### Cardboard compactor

A stationary cardboard compactor may be utilised, such as the S1500 31m<sup>3</sup> compactor with compaction ratio of 3:1, as supplied by Wastech Engineering, or equivalent.

**Quantity required = one (1)**

CARDBOARD		
Weekly <b>Cardboard</b> Volume	35.03	cubic metres
Compacted Volume (ratio 3:1)	11.68	cubic metres
Bin Type	31	cubic metre
Frequency of collection	1	fortnightly
Bins required for collection	1	
<b>Cardboard</b> total bins required	1	



Note: to be operated by cleaning staff and store / operations manager and collected by private contractor

### Soft Film Plastics Baler

Bramidan 4-X 30 baler with compaction ratio of 3:1, as supplied by Wastech Engineering or equivalent, to reduce volume of soft film plastics for collection by contractor.

**Quantity required = one (1)**

SOFT FILM PLASTICS		
Weekly Soft Film Plastics Volume	17.77	cubic metres
Baled Volume (ratio 3:1)	5.92	cubic metres
Frequency of collection	1	per week

Note: to be operated by staff and store / operations manager and collected by private contractor

CONTAINERS		
Weekly Container Volume	3.15	cubic metres
Bin Type	240	litre
Frequency of collection	2	per week
Bins required for collection	7	
Spare bins required	1	
Container Total bins required	8	

## ADDITIONAL WASTE MANAGEMENT INFORMATION

As bins and cleaner's trolley would be "wheeled" throughout the building, any ramps would require a maximum gradient of 1:14 to meet regulatory requirements (steps not permitted).

Items unsuitable for disposal via garbage or recycling bins would need to be disposed with the assistance of the store / operations manager. This would include: large, heavy, and liquid waste items.

To minimise security, vandalism, odour/visual impact, and health/safety issues, the following shall be considered:

- Ensure all bins are clean. Provide a tap and drain in the waste room;
- Transferring waste and shifting bins shall require the minimum possible manual handling (others to assess manual handling risk as per regulatory requirements);
- Provide signage and usage labels for the garbage and recycling bins; \* provided by the bin supplier
- Make the bin store secure and vermin proof;
- Ensure adequate ventilation of the bin store;
- A bin wash area and sink with tap shall be located within the bin store area;
- Store / operations manager shall keep clean the bin store;
- Store / operations manager to wash bins regularly and keep bin lids closed;
- Ensure prompt return of empty bins once collection has occurred;
- Store / operations manager shall prepare operational instructions and an operational health and safety procedure for site staff;
- An adequate traffic management plan and collection-vehicle safe operation procedure shall be prepared and implemented by the operator(s) of the development, the relevant equipment supplier(s), traffic management consultant(s), and the waste removal contractor(s) and,
- It is suggested that bins are labelled and colour-coded.

## Contact information:

### **Auburn Council**

PO Box 118  
Auburn 1835  
Ph 02 9735 1222  
[auburncouncil@auburn.nsw.gov.au](mailto:auburncouncil@auburn.nsw.gov.au)

### **Wanless Enviro Services**

16-71 Clifton Avenue  
Kemps Creek NSW 2178  
Ph 02 8784 8000  
[sales.sydney@wanless.com.au](mailto:sales.sydney@wanless.com.au)

### **Veolia Environmental Services**

Cnr Unwin & Shirley Sts  
Rosehill NSW 2142  
Ph: 132 955  
E: [nsw@veolia.com.au](mailto:nsw@veolia.com.au)

**Eco-Safe Technologies** (odour control equipment supplier)  
C/o Wastech Engineering

### **Wastech Engineering Pty. Ltd.**

Waste Equipment Designer & Manufacturer  
Alan Barclay  
Sales Manager  
33 Wedgewood Road, Hallam VIC 3803  
Ph 03 8787 1600  
[alan@wastech.com.au](mailto:alan@wastech.com.au)



## WASTE ESTIMATE Commercial

<b>Job:</b>	<b>Costco - Lidcombe</b>	<b>Date:</b> 26 <sup>th</sup> June 09
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Supermarket/General Retail/Bulky Retail			
Floor Area (m <sup>2</sup> , estimated)	<b>12091</b>	Usage: 7 days per week	
Garbage for Disposal (m <sup>3</sup> /wk uncompacted):	143.88	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.170
Soft Film Plastic (m <sup>3</sup> /wk uncompacted):	17.77	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.021
Cardboard (m <sup>3</sup> /wk uncompacted):	33.85	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.040
Cafe			
Floor Area (m <sup>2</sup> , estimated)	<b>300</b>	Usage: 7 days per week	
Garbage for Disposal (m <sup>3</sup> /wk uncompacted):	4.20	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.200
Containers (m <sup>3</sup> /wk uncompacted):	3.15	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.150
Cardboard (m <sup>3</sup> /wk uncompacted):	1.18	(Rate: m <sup>3</sup> /day/100m <sup>2</sup> area) <sup>1</sup>	0.056
TOTAL			
<b>Garbage (m<sup>3</sup>/wk uncompacted):</b>	<b>148.08</b>		
<b>Soft Film Plastic (m<sup>3</sup>/wk uncompacted):</b>	<b>17.77</b>		
<b>Containers (m<sup>3</sup>/wk uncompacted):</b>	<b>3.15</b>		
<b>Cardboard (m<sup>3</sup>/wk uncompacted):</b>	<b>35.03</b>		

**References/Notes:**

Brisbane City Council - "Draft" Development Applications - Waste Management and Resource Recovery Guidelines 2007

Combined Sydney Region of Councils - Draft Waste Management Guidelines 2005

## Transportable Compactor



### Transportable Compactors for compaction & containment of medium to large volumes of wet & general waste

The transportable compaction head is joined to the compaction container to suit wet or food type wastes. When full, the whole unit is transported off site for emptying. The units can be Hand, Bin Lifter or Chute loaded and comply with all Australian Safety Standards. Superior compaction forces provide high payloads to reduce transport costs to landfill.

#### Features

- A raised packer floor repels liquids from the compaction area.
- Rolled container walls reduce tare weight and improves cleanliness.
- Large compaction chamber to suit high throughput and larger product.
- Remote mounted power pack and controls to reduce tare weight and prevent shock loads during transport.
- Dual action rear door seal and turn buckle lock for maximum liquid retention.

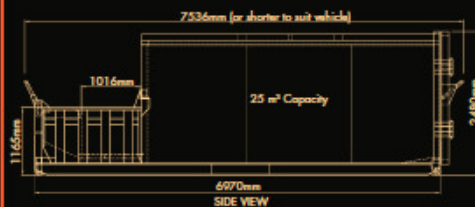
#### Options

- Various Feed Hoppers
- Remote SMS Monitoring
- Odour Control System
- Mobile Bin Lifters
- Reversible pick up
- Custom sized units

### Technical specifications

\* other models and technical specifications available

MODEL	BLADE PAK	AUG-PAK
Swept Volume	1.0m <sup>3</sup>	1.0m <sup>3</sup>
Clear Top Opening	1500 x 1000	1300 x 1000
Machine Throughput m <sup>3</sup> /hr	105	120
Cylinder Size	2 x 102mm	N/A
Blade Penetration into Bin	200mm	350mm
Cycle Time	33seconds	Continuous
Normal Packing Force	158 kpa	Variable
Max. Packing Force	196 kpa	19,000 nm torque
Max. Hyd. Pressure	159 bar.	N/A
Pump Displacement	38 l/min	Gear Driven
Electric Motor Size	7.5 kw	7.5 kw
Volts/Amps Required	415volt / 20amp	415volt / 20amp



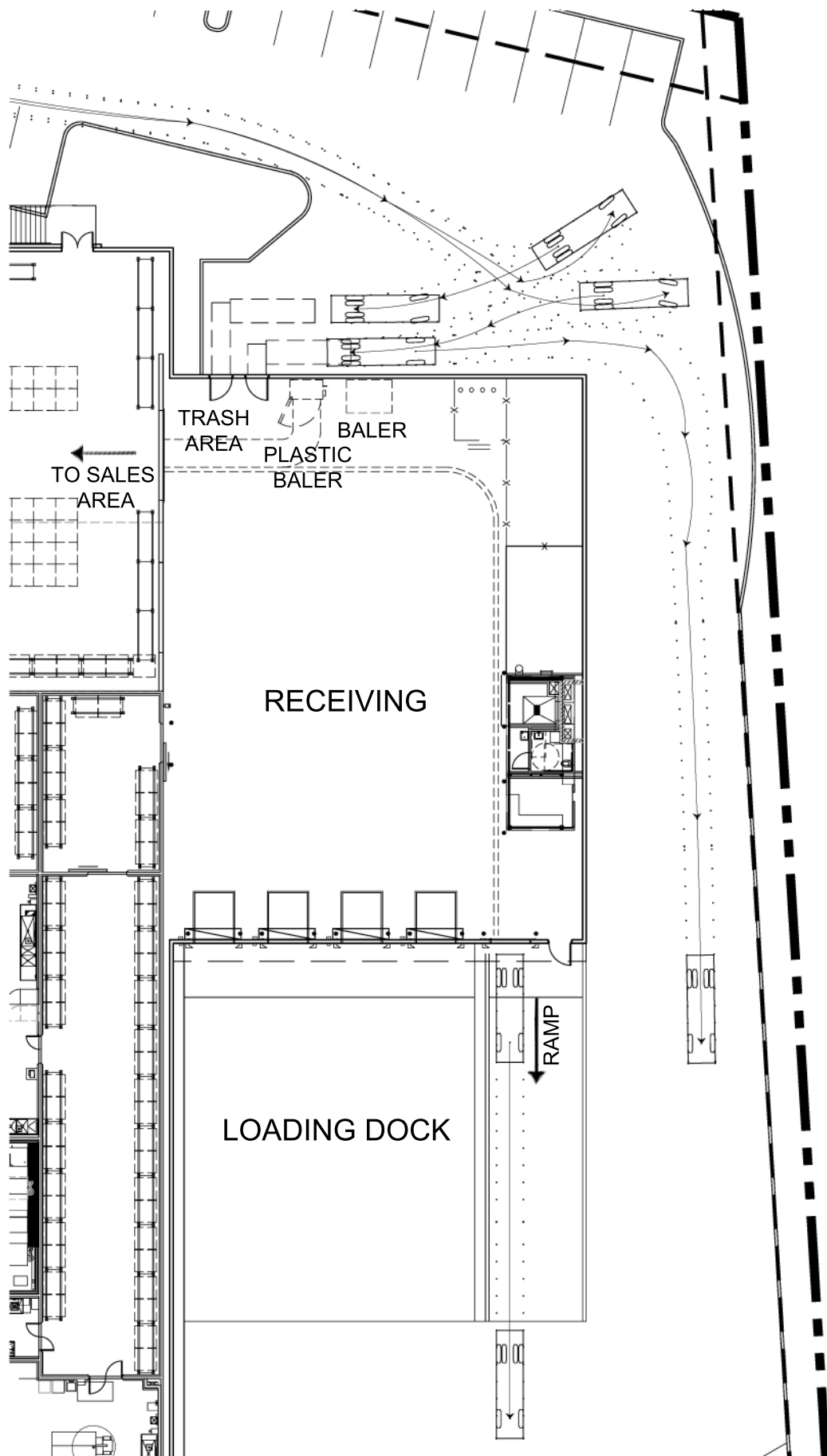
General arrangement drawing - Model Bladepak

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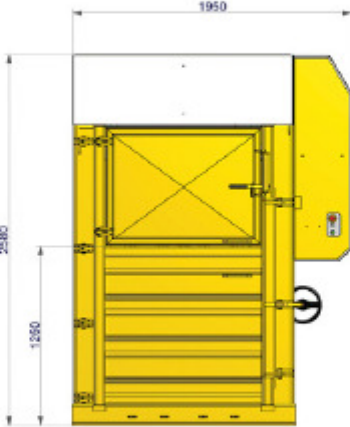
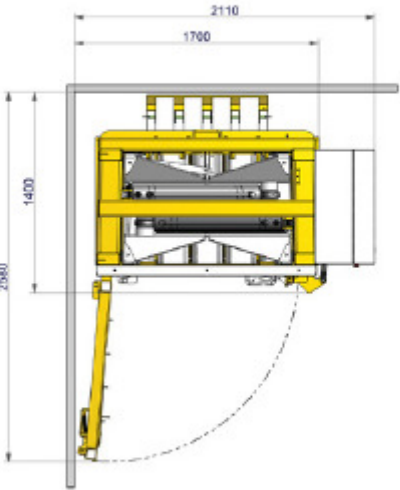
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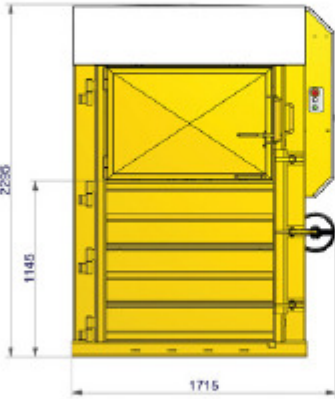
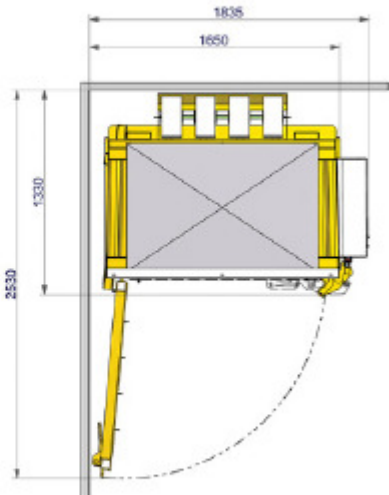
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