



Waste management report

Project –Rozelle Village Victoria Rd, Darling St, Waterloo St, ROZELLE

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Date: 9/02/12

1.0 INTRODUCTION

The waste management plan pertains to the complete development located in Rozelle Village. This waste management plan is an operational waste management plan and will address the operational phases of the development.

The plan outlines measures to achieve the following objectives:

- Avoid the generation of unnecessary waste
- Minimising the quantities of wastes generated ending up as landfill;
- Recovering, reusing and recycling waste generated onsite where possible.

For the purpose of this report the proposed development will consist of;

Units break down:

112 x 1 br residential units

178 x 2 br residential units

14 x 3 br residential units

Total of 304 residential units

Retail area	7,832m²
Commercial area:	4,867m²
Leagues club:	2,240m²
Child care:	672 m²

All break up details are listed below

Each section of this development has been examined individually within this report; however the waste management process must be effectively coordinated between all sections for the system to work.

All figures and calculations are based on area schedules as advised by our client and shown on architectural drawings.

All waste facilities and equipment are to be designed and constructed to be in compliance with Leichhardt Council Codes, BCA, Australian Standards and Statutory Requirements.

2.0 GENERATED WASTE VOLUMES

This assessment of waste volumes is an estimate only and will be influenced by the development's management and occupant's attitude to waste disposal and recycling. We have based our calculations on a seven- (7) day operating week.

2.1 Residential units

Using standard industry waste generation rates and Leichhardt Council DCP 38 **WASTE – AVOID, REUSE, RECYCLE**, the total waste generated by the residential section of the development can be calculated as follows:

General waste: **80ltr per 1 br unit**
 100 ltr per 2 br unit
 120 ltrs per 3 br unit.

Recycling: **60 ltrs per unit.**

Residential units:

112 units @ 80 ltr per week	8960 ltrs.
178 units @ 100 ltr per week	17800 ltrs.
14 units @ 120 ltr per week	1,680 ltrs.

Total waste volume: 28,440 ltr of un-compacted equals to 29 x 1100 ltr bins

Compacted with ratio of 2:1 the bins will be reduced to 15 per week

Recycling 18,240 ltr p/week equal 17 x 1100 ltr bins

Total bin numbers for buildings:

Waste bins: 15 x 1,100 ltr bins
Recycling bins: 17 x 1,100 ltr bins

2.2 Retail area

Calculation for retail area broken to types:

GFA	Waste Generation	Non recyclable (seven day cycle)	Recyclable
Type & Sqm	ltr/100m2/day	ltr/week	m3/week
Food court/ takeaway 1963m	80 l/100m2/day waste 120L/100m2/day recycle	10,993 ltr	16,490ltr
<i>Coles 3315m</i>	<i>They have their own waste management system</i>	<i>Coles do manage all recycling and waste with compactors and balers</i>	<i>An area for compactor is made ready for Coles to use as well as a loading dock area</i>
All retail none food 2554m	50L/100m2/day waste & recycle	8,940 ltr	8,940 ltr
Total for retail		19,932 ltr	25,430 ltr

2.3 Club area

Calculation for club area:

GFA	Waste Generation	Non recyclable (Five day cycle)	Recyclable
Type & Sqm	ltr/100m2/day	ltr/week	m3/week
Bistro / bar areas 600m	50L/100m2/day waste & recycle	2,100 ltr	2,100 ltr
Gaming and other areas 1640m	10L/100m2/day waste & recycle	1,148	1,148
Total for club		3,248	3,248

2.4 Commercial area

Calculation for commercial area:

GFA	Waste Generation	Non recyclable (Five day cycle)	Recyclable
Type & Sqm	ltr/100m2/day	ltr/week	m3/week
Commercial including a gym 4460m	10L/100m2/day waste & recycle	3,122	3,122
Child care / community centre 600m	10L/100m2/day waste & recycle	420 ltr	420 ltr
Total for commercial		3,542 ltr	3,522 ltr

Grand total for the above section:

Waste: 26,722 ltrs Recyclable Products: 32,200 ltr

All Waste: Will be managed by placing an *ECO Smart Compactor*, this unit will be placed in the loading dock area for the retail occupants to compact their waste. This unit is designed to be a charge as you go system where tenant will maximize recycling instead of paying to dump it, (full details and brochure at the end of this report)

All Recycling: A retail recycling is allocated in the loading dock area, this room will have a recycling baler for all paper, cardboard & plastic products, all glass, cans & PET bottles will be placed in bins and collected by a recycling service provider. Recycling services are usually free all subject to volumes

2.5 Coles Supermarket waste

This tenant will manage their own waste collection services for all products, general and recyclable waste within their tenancy area.

Residential Waste management system:

As shown on the drawings each building has a single waste chute servicing with inlet doors on every residential level.

Residential Waste handling.

The building is designed with the E-Diverter system for the residential component of the facility. A single chute used for waste and recycling, leading down to the garbage room.

Residential Operation.

All residents will deposit their garbage in the chute located in a designated cupboard on each level. This occurs by choosing the garbage button on the E-Diverter system, once garbage is chosen the diverter flap will open the garbage dis-charge and shut off the recycling then release the door lock on the level, the resident will drop the garbage down the chute.

With the number of bins generated weekly & to reduce management cost, we recommend to compact all the garbage under the chutes with an Elephant's Foot 1100 ltr bin compactor & linear or carousel system or similar.

As for the recycling, the residents will perform the same motion as the garbage but they will choose the recycling button. All operations are the same.

At the base of the chute, the E-Diverter is fully automatic, it is set to default on garbage until recycling is pressed.

The garbage will lead into a linear and compactor.

The recycling will lead into a linear with no compactor

3.0 WASTE MANAGEMENT

Residential units

3.1 Garbage Waste

All residential waste will be placed in the chutes allocated on every level. This will fall directly into the waste bin then be compacted. Compaction is recommended to reduce the number of bins generated weekly. Compaction ratio of 2:1 is used.

On collection day the service truck collects the waste from the loading dock with management assisting with the process. The principal is reviewing the options as to whether this removal of garbage will be carried out by Council all private contractors. This decision will be made during the next stages of the project

3.2 Recyclable Waste

All residents will deposit the recyclables in the chute by choosing the recycling bin on the diverter system. The recycling will drop into a 1100 ltr bins positioned

on a linear system, once the first bin is full the conveyor will replace it with an empty one

Advantages of the E-Diverter system:

- 1- No bins are required to be stored on each level.
- 2- Strata management cost reduction
- 3- Eliminate odour from each individual room and corridors
- 4- With proper management and education sorting at source will increase recycling,
- 5- Reduction in lift usage and electricity to run lifts.
- 6- Reduction in fire hazard from combustible material left on each level such as paper and cardboard

3.3 Residential Waste Caretaker

All equipment movements in the room are managed by the building manager / cleaners at all times, no residents will be allowed to transport waste or recyclables to the waste room.

The building manager / cleaner duties would include but are not limited to the following:

- Generally maintaining and cleaning the garbage areas.
(Frequency will be dependent upon waste generation and will be determined based upon centre operation)
- Organising, maintaining and cleaning the general and recycled waste holding areas.
(Frequency will be dependent upon waste generation and will be determined based upon centre operation)
- Educating & updating all tenants on sorting methods for recycled waste into appropriate receptacles. Making all waste drop off points safe & accessible to tenants at all times
- Organising for both Garbage and Recycled Waste pick-ups as required.
- Cleaning and exchanging all bins.

4.0 WASTE EQUIPMENT & BIN

The following waste equipment and quantity recommendations have been made based on expected waste generation quantities.

4.1 Residential

General Waste

As indicated above all general waste will be compacted with The Elephants Foot bin compactor or similar.

Qty Required – 2 Bin compactor with linear under each chute, total 4

E-Diverter systems: 2 sets one for each building

Compacted Waste bins: 15 x 1100 ltr bins for collection, and two spares on each linear system

Total : 19 x 1100 ltr bins

Recyclable Waste

Based on the previously stated waste generation our recommendations for waste handling equipment are as follows:

Collection Containers- Based on the previously calculated “waste generated”, **17 x 1100L plastic wheeled bin for commingle recycling.**

Commingled recycling: means cans, plastic bottles, cardboard, paper, glass all mixed up:

5.0 GARBAGE ROOMS AND GARBAGE AREAS

There is a compactor room where the linear system is located under each chute Each room will store all bins generated by each building, these rooms are large enough to accommodate all bins required as shown on drawing.

Bulky goods area or hard waste room minimum of **4m²**. This will be available in the large tower garbage room.

Garbage rooms construction requirements:

All garbage and waste room will be required to contain the following facilities to minimize odours, protect surrounding areas & make it a user friendly & safe area:

- 1- The room floor to be sealed with a two pack epoxy
- 2- All corners coved and sealed 100 mm up, this is to eliminate build up of germs.
- 3- A hot & cold water facility provided for washing all the bins.
- 4- A bucket trap type floor waste installed where all concrete levels are to direct the water to.

- 5- All walls painted with light colour & washable paint.
- 6- Equipment electric outlets to be installed 1700 mm above Floor level.
- 7- The room must be mechanically ventilated
- 8- Optional automatic odour pest control system installed to eliminate all pest types. "This can be done after hand over where management can install if needed"
- 9- All hinged doors are to be self closing, roller doors must be key operated with only access to authorised personnel.
- 10- Appropriate signage placed on walls & above all bins clearly stating what type of waste or recyclable is to be placed in the bin underneath. This is the duty of the building manager to place after occupation.
- 11- Garbage collection area, must hold bins, all bin movements should be with ease of access. No garbage is to be placed on public footpaths or building colonnade areas.

Please note: This waste management system is only indicative & is calculated using councils estimates.

If you require any further information please do not hesitate to call me on 9780 3500.

Regards,



Eddy Saidi



ELEPHANTS FOOT WASTE COMPACTORS CAROUSEL & LINEARS



CAROUSEL



CAROUSEL



LINEAR



LINEAR

BIN COMPACTOR + CAROUSEL OR LINEAR

Built for under chutes systems in high rise building

Waste falls directly into bins

Fits over carousel or linear system

Compacts into, 240, 660, 1100 standard bins

Fully automatic, compaction ratio 2:1

Minimise strata cost

Low cost maintenance

415 Volts - 10Amp

LINEAR NO COMPACTOR

Built to minimise strata cost

Can be fitted with 240, 660 or 1100 litre bins

Fully automatic

Designed for building where no compaction required

Minimises bin movement

Low maintenance

415 Volts - 10Amp



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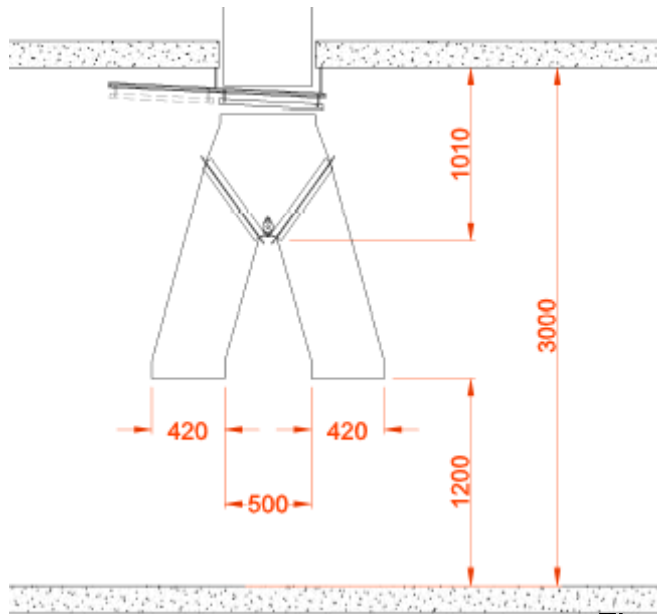
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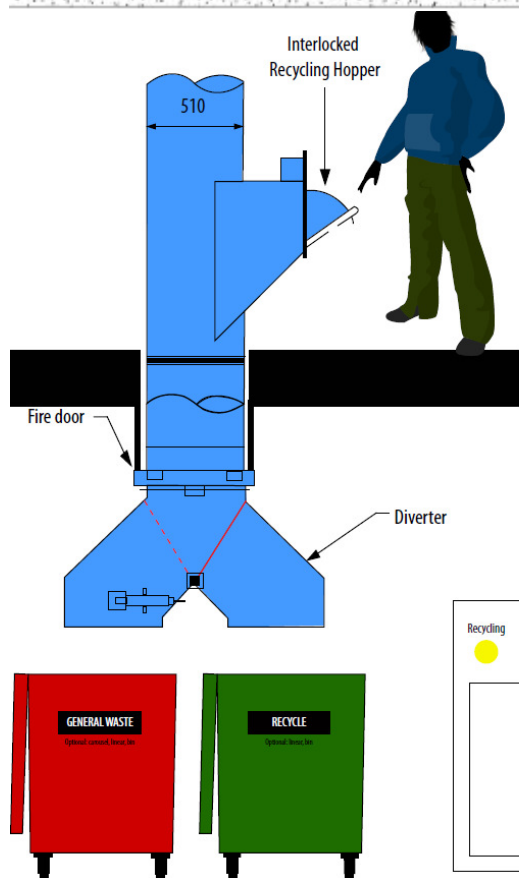
Recommended equipment for residential waste and recycling:

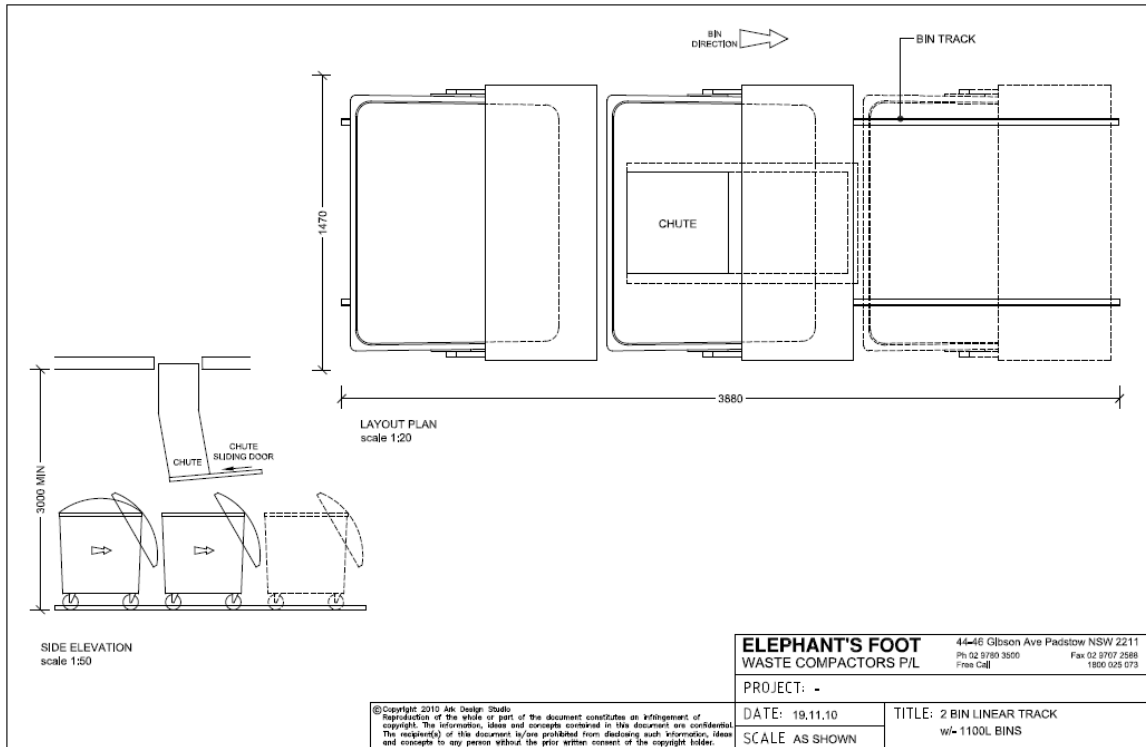


The Elephants Foot waste & recycling diverter system is designed to aid residents in high-rise buildings to recycle more effectively.

The garbage chute door is designed with an easy to use LED panel where the user selects what type of rubbish they are placing in the chute.

The waste and recycling diverter system can be combined with multiple carousel and linear configurations.





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**Recommended equipment for retail & commercial waste and recycling:
ECO SMART COMPCTOR:**



Odour control
automatically
sprays

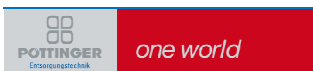


Did you know?
All major waste companies already have the
fleet of equipment and vehicles required to
service this equipment?



Transponder system

- Transponder card or key fob
- Transponder programmer
- Administration and software via Internet
- Import of data or accounting via WIP Internet (GPRS)



ECO@internet – The latest waste disposal concept

14 m3 ECO press container in Bergen (Norway) roll-off container (12 - 16 m3)



ECO@internet – The latest waste disposal concept

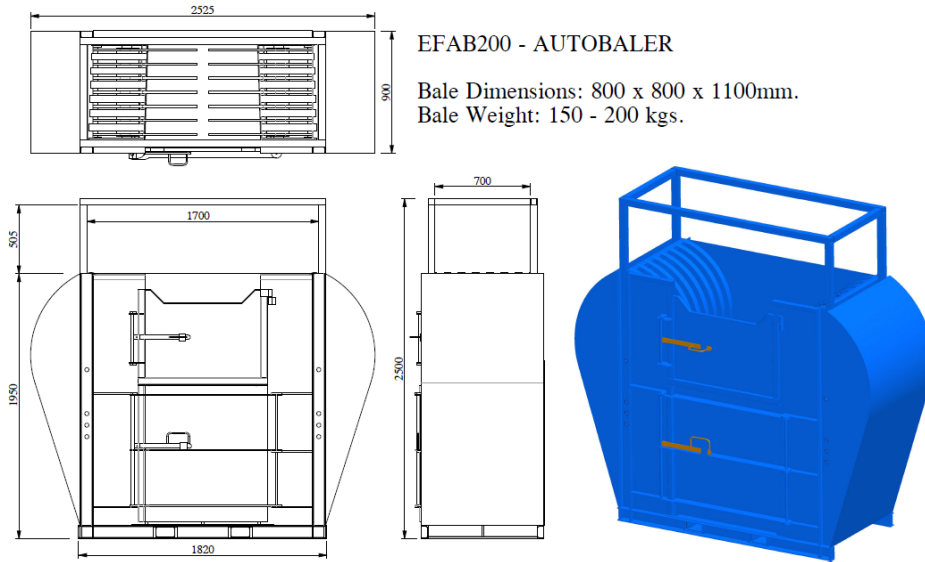
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Baler for recycling EFAB-200



Appendix F Waste Management Equipment

Crates

Bin Type	50L Crate	70L Crate	90L Crate
Height	320 mm	335 mm	420 mm
Length	575 mm	575 mm	450 mm
Width	445 mm	445 mm	450 mm



Mobile Garbage Bins (MGBs)

Bin Type	120L MGB	140L MGB	240L MGB	1000L MGB
Height	940 mm	1065 mm	1080 mm	1350 mm
Length	540 mm	540 mm	735 mm	1160 mm
Width	485 mm	500 mm	580 mm	1360 mm

