

WASTE MANAGEMENT PLAN

MERITON GROUP

MIXED DEVELOPMENT
RIVERSIDE APARTMENTS
330 CHURCH STREET
PARRAMATTA NSW 2150

AMENDED MARCH 2014



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ABOUT ELEPHANTS FOOT

Elephants Foot Recycling Solutions is a family owned Australian company whose philosophy is providing quality recycling and waste solutions through product innovation. We are Australia's leading supplier of garbage, recycling and laundry chute systems.

Our team of experts has been proudly assisting architects, builders and developers with advice on how best to solve waste management and odour issues in dwellings since 1976. We have a long history of completed projects within the Australian building environment.

If you require any further information please do not hesitate to call me on 02 9780 3500.

Regards

A handwritten signature in black ink that reads 'Saidi'.

Eddy Saidi
Director

REVISIONS

Revision	Copy No.	Date	Prepared by	Reviewed by	Approved by	Remarks
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Authorised By:
Date:

A handwritten signature in black ink that reads 'Saidi'.

25 March 2014

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EXECUTIVE SUMMARY

This waste management plan covers the ongoing management of waste generated by the mixed development located at 330 Church Street, Parramatta NSW 2150.

Waste audit and management strategies are recommended for new developments to provide support for the building design and promote strong sustainability outcomes for the building. All recommended waste management plans will comply with council codes and any statutory requirements. The waste management plan had the following key objectives:

- i. **Ensure waste is managed to reduce the amount of waste and recyclables to land fill** by assisting residents to segregate appropriate materials that can be recycled; displaying signage to remind and encouraging recycling practices; and through placement of recycling and waste bins in the retail precinct to reinforce these messages.
- ii. **Recover, reuse and recycle** generated waste and manage appropriately and efficiently.
- iii. **Compliance** with all relevant codes and policies and assist in achieving Federal and State Government waste minimisation targets.
- iv. **Encourage building design that will minimise waste over the lifetime of the building**
- v. **Place waste storage facilities in appropriate locations so as not to impact negatively on streetscapes**

The residential waste and recycling will be guided by the services and acceptance criteria of Parramatta City Council.

The residential, retail and serviced apartment waste and recycling will be collected by private waste service provider.

To assist in the provision of well-segregated material, it is essential that this waste management plan is integral to the overall management of the development and clearly communicated to all residents, occupants and tenants of the buildings.

INTRODUCTION

The following waste management plan pertains to the complete mixed located at 330 Church Street, Parramatta NSW. This waste management plan is an operational waste management plan and will address the phases of the completed residential and serviced apartment development and make recommendations for the management of retail waste.

The plan outlines measures to achieve the following objectives:

- avoid the generation of unnecessary waste;
- minimise the quantities of wastes generated ending up as landfill;
- recover, reuse and recycle waste generated onsite where possible; and
- aim to achieve Federal and State Government waste minimisation targets in accordance with regional waste plans.

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

- two towers of 15 level building with common basement levels
- 666 serviced apartment and residential units in total (see unit mix below)
- 2,394 sqm of retail space

Table 1 – Unit Mix

Unit Type	RES	%	SERV APART	%	TOTAL	%
Studio	0	0%	0	0%	0	0%
1 Bed	69	18%	243	84%	312	47%
2 Bed	286	76%	20	7%	306	46%
3 Bed	20	5%	28	10%	48	7%
TOTAL	375	100%	291	100%	666	100%

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 Parramatta City Council DCP 2011 – *Part 3.3 point 3.3.7 Waste Management*, Department of Environment and Climate Change – *Model Waste Note DCP 2008*, Australian Standards and statutory requirements.

WASTE

This assessment of waste volumes is an estimate only and will be influenced by the development's management and occupants' attitude to waste disposal and recycling.

CONSTRUCTION AND DEVELOPMENT WASTE

The head contractor will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements. Please refer to the separate waste management plan to be submitted for construction waste as part of the Development Application.

WASTE DEFINITION

Garbage: All domestic wastes (except recyclables and green waste)

Recycling: Glass bottles and jars - PET, HDPE and PVC plastics;

Aluminium, aerosol, and steel cans; milk and juice cartons, soft drink, milk, and shampoo containers; paper, cardboard, junk mail, newspapers and magazines.

WASTE CARETAKER/S

It is assumed that the developments management will appoint full time waste caretaker/s (assisted by maintenance personnel/cleaners) who will carry the overall responsibility for staffing and managing all waste generated by the buildings.

All equipment movements in the development are managed by the appointed waste caretakers/cleaners at all times. No residents or tenants will be allowed to transport waste or recyclables to the central waste room and loading dock; residents will transport waste and recycling to the chutes on each residential level; tenants will only transport their waste to the areas allocated.

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

- General maintenance and cleaning of the residential chute doors on each level (Frequency will be dependent upon waste generation and will be determined based upon building 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 building operation)
- Educating and updating all residents and tenants on sorting methods for recycled waste into appropriate receptacles, ensuring all waste drop-off points safe and accessible to residents and tenants at all times
- Transporting bins as required
- Organising both garbage and recycled waste pick-ups as required
- Cleaning and exchanging all bins

NOTE: It is the responsibility of the building manager to monitor the number of bins required for the development. As waste volumes may change according to the development's management and occupants' attitude to waste disposal and recycling, bin numbers and sizes may require altering to suit the building operation.



REPORTING

It is recommended that building management ensure that all waste service providers submit monthly reports on all equipment movements and weights of any waste and recycling products removed from the development. Regular reviews of servicing should take place to ensure operational and economic best practise and to assist with sustainability reporting.

EDUCATION

Educational material encouraging correct separation of garbage and recycling items must be provided to each resident to ensure correct use of the recycling chute and to ensure an understanding of the chute's use. This should include the correct disposal process for bulky goods (old furniture, large discarded items etc.) It is recommended that information is provided in multiple languages to support correct practises and minimise contamination in the collection MGB as well as chute blockages.

It is also recommended that the developments website contain information for residents to refer to regarding use of the chute. Information should include:

- Directions on using the chute doors
- Recycling and garbage descriptions (Council provides comprehensive information)
- Disposing of bulky goods and any other items that are not garbage or recycling
- The residents obligations to WHS and building management
- How to prevent damage or blockages to the chute (example below)

TO PREVENT DAMAGE OR BLOCKAGE TO RUBBISH CHUTE DO NOT place newspapers, umbrellas, bedding, cigarettes, cartons, coat hangers, brooms, mops, large plastic wrappings from furniture, white goods, any sharp objects, hot liquid or ashes, oil, unwrapped vacuum dust, syringes, paint and solvents, car parts, bike parts, chemicals, corrosive and flammable items, soil, timber, bricks or other building materials, furniture, etc DOWN THE CHUTE.

It is expected that leasing arrangements with commercial/retail operations contain direction on waste management services and expectations.

GENERATED WASTE VOLUMES

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

CONSTRUCTION AND DEVELOPMENT WASTE

The head contractor will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements. Please refer to the separate waste management plan submitted for construction waste as part of the Development Application.

RESIDENTIAL AND SERVICED UNITS WASTE

Using Model Waste Not DCP Chapter 2008 waste generation rates, the total waste generated by the development is calculated using the following rates:

Table 2 Waste Generation Rates

Type	Garbage	Recycling
Residential:	80 litres (L) per unit/week	40 litres (L) per unit/week
Serviced Apartments:	5L/bed/day	2L/bed/day

Table 3 – Residential Bin Requirements (total waste generated/week)

Note: Private Contractor specifications 1100L garbage; 240L MGB recycling

Units	Recycling (L)	Garbage (L)	Garbage Compaction (2:1)	Waste 3/weekly 1100L	Recycling 2/weekly 240L
375	15,000	30,000	15,000	5	32
375	15,000	30,000	15,000	5	32

Table 4 – Serviced Apartment Bin Requirements (total waste generated/week)

Note: Private Contractor specifications 1100L garbage; 240L MGB recycling

Units	Recycling (L)	Garbage (L)	Waste weekly 1100L	Recycling 2/weekly 240L
291	4,074	1,450	2	9
291	4,074	1,450	2	9

The above assumptions have been made and used to calculate the above figures and meet current best practice, optimise space, reduce bin numbers and meet Council requirements:

1. Garbage is compacted 2:1 at the base of the east tower chute via the Carousel compactor system;
2. Recycling is not compacted; and
3. Number of bins have been rounded up for best operational outcome
4. Garbage bin numbers based on 3 collections weekly/recycling collected twice weekly
5. It is also assumed the development will use 1100L MGB for garbage and contract a

private waste services provider for collections as per the recommended schedule

LOCATION, EQUIPMENT AND SYSTEMS USED FOR MANAGING WASTE

The waste management system is summarised as follows:

- Apartment receptacles (under bench kitchen bins for garbage and recycling)
- Retail receptacles (BOH, for work/amenity areas)
- Residential waste compartments (located at every residential level, both towers)
- Garbage chute (with residential level intakes and bin store discharge)
- Residential and retail bins stores (located at level 00)

RESIDENTIAL WASTE MANAGEMENT SYSTEM

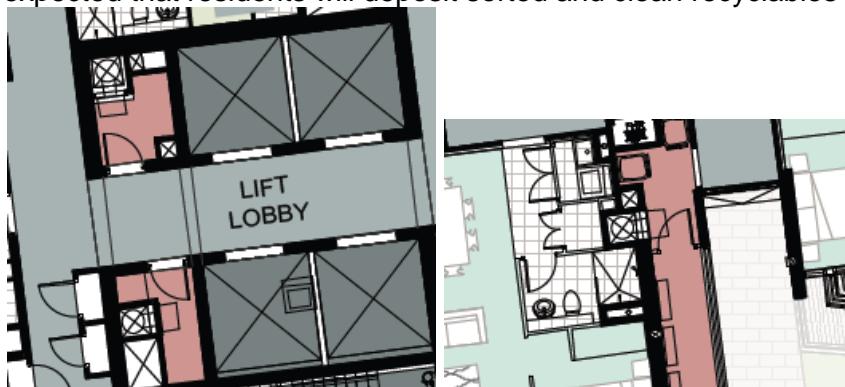
As per the drawings, there is one waste chute servicing each residential level in the west and two chutes servicing the east tower with waste discharging into a compactor carousel located in each waste room located on level 00. Bins in the east tower will be rotated and compacted on a 2:1 ratio and full bins will be transferred to the collection area on the same level.

Recycling bins will be situated in the waste compartment on each residential level for collection of recyclable items.

RESIDENTIAL WASTE HANDLING

All residents will be supplied with a collection area in each unit (generally in the kitchen) to deposit waste and collect recyclable material suitable for one day's storage. Residents must wrap or bag their waste before depositing into the waste chute. Bagged garbage should not exceed 3kg in weight.

Recycling must not be bagged. All recyclables are to be sorted prior to being emptied into the recycling bins located in the waste compartment (See below) on each residential level. It is expected that residents will deposit sorted and clean recyclables into the collection bins.



Typical waste compartments

Part of the caretaker/cleaner's duty will be to exchange or empty recyclable bins and store them in the main bin storage room located on level 00, ready for collection. The caretaker/cleaner will also be required to check the 1100L MGB collecting waste from each chute, rotate full bins to the storage and collection area, and replace empty 1100L MGB under each chute operation.



SERVICED APARTMENT WASTE HANDLING

All serviced apartments will be supplied with a collection area in each unit (generally in the kitchen) to deposit garbage and sort and collect recyclable material suitable for one day's storage. Garbage bins supplied should be plastic lined so garbage is bagged when deposited into the waste chute by either the guest or the cleaner. Recycling must be sorted prior to being emptied into the recycling bins located in the serviced apartment refuse room located on loading each level. Recycling items are not permitted to be bagged or wrapped.

It is important that each serviced apartment contain instructions on using the garbage chute correctly and driving good recycling practises.

The building manager will be required to check the 1100L MGB collecting waste from each chute, rotate full bins to the storage and collection area, and replace empty 1100L MGB under each chute operation.

WASTE CHUTES

The waste and recycling chute for the residential areas are supplied in either 510mm galvanised steel or 510mm recycled LLDPE polyethylene plastic with stainless steel 2-hour fire rated doors.

Galvanised steel chutes hoppers are wrapped with 50mm poly-wool R1.3 noise insulation foil to assist in noise reduction.

Penetrations on each building level at vertically perpendicular points with minimum penetration dimensions 600mm x 600mm (square or round) are required to accommodate the chute installation.

Each chute is supplied with a vent exiting at the top of each chute and wash down system which should be utilised on a weekly basis.

Council and product suppliers prefer that all chutes are installed without offsets to achieve best operational outcome for both buildings.

The chute system for the East Tower will be fitted with a carousel track to rotate full bins and place an empty bin under the chute outlet. A compacting device (2:1) will also be attached to reduce waste volume and bin numbers.

RESIDENTIAL AND SERVICED APARTMENT CHUTE SUMMARY

Galvanised steel or recycled LLDPE polyethylene plastic chutes, as supplied by Elephants Foot Recycling Solutions (or similar): Three chute systems required; two discharging into collections bins and the third fitted with one carousel compactor (2:1) system suitable for 1100L MGB.



CARDBOARD

It is recommended that a baler suitable for baling cardboard be allocated in the loading dock area. Building management will be responsible for baling cardboard and storage of bales awaiting collection. Recyclers may collect bales at no cost or offer a product rebate if the generation rate is sufficient. Removal of cardboard from the waste stream may reduce recycling bin numbers.

It is recommended that building management ensure this facility is available on occupation of the building to ensure baling of furniture and large cardboard boxes. Specifications of recommended baling equipment detailed. (See *Appendix 7 - Cardboard baler*)

The cardboard baler recommended has a footprint of H2420 x W1220 x D1030 with a feed opening 530mm x 900mm.

RETAIL WASTE

Table 3 below shows the amount of retail garbage and recycling capacity required using Model Waste Not DCP Chapter 2008 as required by Council.

As the retail mix is unconfirmed at this time, generic food premises rates have been used to indicate maximum bin and disposal requirements.

Table 5 Retail Waste Generation

Retail Type	GFA sqm	Waste Generation 7 day cycle	Non recyclable	Recyclable
Proposed outlets	2,103	80ltrs/100m2/day – waste 50ltrs/100m2/day - recycle	11,777L	7,361L

Retail bin requirements:

*Waste: 11 x 1100L MGB collected 2/weekly requires 6 x 1100L MGB

*Recycling (commingled): 12 x 660L MGB collected 2/weekly requires 6 x 660L MGB

It is recommended that:

- All waste should be bagged and waste bins should be plastic lined
- Bagging of recyclables is not permitted
- All waste collections located BOH during operations and waste and recycling removed to the retail bin room on a daily basis
- Collection services will be contracted to a private recycling and waste service providers and collected from the retail bin collection area by arrangement
- Individual recycling programs are recommended for retailers to ensure commingled recycling is separated correctly
- Any food and beverage tenant will make arrangements for storing used cooking oil in a bunded area and for its collection by a recycler
- The operator will organise grease interceptor trap servicing
- *Subject to the stakeholders preference/capability (and as built constraints), bin sizes and quantities can be changed. Also, recyclable can either commingled or split into bins for separate recycling streams
- Additional collections of retail bins may be required to reduce odour therefore a private contractor will be engaged to conduct more frequent collections. The operator shall choose a waste collection provider, negotiate a service agreement, and pay for these services.

GREEN WASTE

There will be green waste generated by the buildings landscaped and garden areas. Any green waste will be collected and removed from site by the maintenance contractor.



COMPOSTING

Council suggests that space should also be made available for a home unit worm farm or compost bin, to allow residents to compost their own food scraps however this is considered impractical for this development. Residents, however, may choose to install small home worm farms where practical and self manage these systems.

OTHER WASTE STREAMS

Disposal of bulky goods, hard, electronic, liquid waste and home detox (paint/chemicals) etc shall be organised with the assistance of the building caretaker.

Building management will work to identify opportunities to expand the range of material collected and opportunities for recycling e.g. toner cartridges, mobile phones, fluorescent lamps and electronic waste and arrange for regular clearance to suit the amounts collected.

If retail tenants already have their own programs in place, opportunities to collaborate in a building-based collection system to assist other tenants to become involved and reduce overall transport impacts for the site.

Residents/tenants should be updated so they know about any system upgrades e.g. new materials that can be recycled so continuing recycling and disposal streams can be addressed.

COMMON AREAS

The retail and common areas on Podium levels, circulation areas and outdoor terraces will be supplied with suitably branded waste and recycling bins. Building management will monitor use and ensure bins are exchanged and cleaned. (See *Appendix 2 – Waste Equipment Specifications*)

WASTE ROOM AREAS

Each garbage room will need to hold all the bins generated weekly, and allow enough room to clean and manoeuvre bins.

Table 6 – Bin Storage Area required (in sqm)

Note: Contractor collection

Building	Raw (Bins Only)	Including access and Manoeuvring (sqm)
Residential	23.7	34
SA	7.6	18
Retail	14.9	25
Total	46.2	77



COLLECTION OF WASTE

All bins will be stored in the waste bin room located on level 00 and collected from the loading dock located on the same level. Bins will be moved to the loading bay when full with collections by private waste and recycling contractor/s.

The waste collections will be carried out by private contractor rear lift vehicles typical and typical specifications for medium rigid vehicles have been included in Appendix 3.

All Access and egress details including a swept path analysis for all vehicle movements on site will be provided by the traffic consultants report.

Residential bins:

- Prior to the scheduled collection/s, the bins will be transferred to the loading dock area and returned into the building once the collection is completed

Retail bins:

- A private contractor will collect waste and recycling from the loading dock area during off-peak traffic periods on a scheduled basis
- The waste collections will be carried out by rear lift vehicles.

GARBAGE ROOMS CONSTRUCTION AND REQUIREMENTS

The garbage room will be required to contain the following facilities to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area:

- Waste room floor to be sealed with a two pack epoxy
- Waste room walls and floor surface is flat and even
- All corners coved and sealed 100 mm up, this is to eliminate build-up of dirt
- A hot and cold water with mixing facility and hose cock provided for washing the bins
- Tap height of 1.6m
- Drain to sewer in accordance with the appropriate Water Board
- Storm water access preventatives (grate)
- All walls painted with light colour and washable paint
- Equipment electric outlets to be installed 1700mm above floor levels
- The room must be mechanically ventilated
- Light switch installed at height of 1.6m
- Waste rooms must be well lit (Sensor lighting recommended)
- Optional automatic odour and pest control system installed to eliminate all pest types. This process generally takes place at building handover – building management will contract their system and supplier. Please note that odour systems spraying product directly onto galvanised steel surfaces may cause corrosion.
- All personnel doors are hinged and self-closing
- Appropriate signage prominently displayed on walls and above all bins clearly stating what type of waste or recyclable is to be placed in the bin underneath
- Building management/caretaker is responsible for waste room signage and further education after building handover
- Waste collection area must hold all bins – bin movements should be with ease of access
- Following waste collection activities, bins shall be returned to the storeroom areas as quickly as practicable.
- Design and construction of waste facilities will conform to the Building Code of Australia, Australian Standards and local laws
- Childproofing and public/operator safety shall be assessed and ensured
- Signage directing chute operations regarding waste and recycling will be posted on each chute door
- All waste bins hidden from external view and stored in the designated onsite areas
- Transfer of waste and all bin movements require minimal manual handling therefore the operator must assess manual handling risks and provide any relevant documentation to building management.
- Appropriate safety signage erected at each waste room
- All chute doors on all levels will be labelled with signs encouraging occupants to recycle and minimise their waste.
- A sign stating '**GARBAGE ONLY IN THE CHUTE**' will be posted.
- Separate signage instructing residents on how and where to place recycling will also be placed on each level by building management.

VENTILATION

Waste and recycling rooms must have their own exhaust ventilation system exhausting at a rate of 5L/m² floor area, with a minimum rate of 100L/s minimum or permanent, unobstructed natural ventilation openings direct to the external air, not less than one-twentieth (1/20) of the floor area. Mechanical exhaust systems shall comply with AS1668 and not cause any inconvenience, noise or odour problem.

PREVENTION OF STORMWATER POLLUTION AND LITTER REDUCTION

Building management shall be responsible for the following to minimise dispersion of site litter and prevent stormwater pollution to avoid impact to the environment and local amenity:

- Promoting adequate waste disposal into the bins
- Securing all bin rooms (whilst affording access to staff/contractors)
- Prevent overfilling of bins, keep all bin lids closed and bungs leak-free
- Taking action to prevent dumping or unauthorised use of waste areas
- Require collection contractor to clean-up any spillage that may occur when clearing bins

ADDITIONAL INFORMATION

Transfer of waste and all bin movements require minimal manual handling therefore the operator must assess manual handling risks and provide any relevant documentation to building management.

LIMITATIONS

The purpose of this report is to document a Waste Management Plan as part of a development application and is supplied with the following conditions:

- Drawings and information supplied by the project architect
- The figures presented in the report are an estimate only. The actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building management's approach to waste management.
- The building manager will make adjustments as required based on actual waste volumes (if waste is greater than estimated) and increase the number of bins and collections accordingly.
- The report will not be used to determine or forecast operational costs or prepare any feasibility study or to document any safety or operational procedures.



USEFUL CONTACTS

Parramatta City Council
Customer Service and after hours emergency: 02 9806 5050

Capital City Waste Services Pty Ltd
(Private Waste, recycling and secure destruction service provider)
Phone: 1300 965 067

SULO MGB (MGB, Public Place bins, tugs and bin hitches)
Phone: 1300 364 388

RUD (Public place bins, recycling bins)
Phone: 07 3712 8000
Info@rud.com.au

VISY RECYCLING (All recycling including glass)
Phone: 1300 368 479 (Australia)

REMONDIS (Private Waste Services Provider)
Phone: 13 73 73

SITA ENVIRONMENTAL (Private Waste Services Provider)
Phone: 13 13 35

ELECTRODRIVE PTY LTD
(Bin tug and trailer supplier – for bin movement)
Phone: 03 9357 7699

Note: Elephants Foot Recycling Solutions does not warrant or make representation for goods or services provided by suppliers.

Elephants Foot Recycling Solutions (Chutes, compactor and eDiverter systems)
Natalie Beattie
44 – 46 Gibson Avenue
Padstow NSW 2211
Free call: 1800 025 073
Email: Natalie@elephantsfoot.com.au

APPENDIX 1 – STANDARD SIGNAGE

WASTE SIGNS - Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the Department of Environment and Climate Change NSW.

Example wall posters



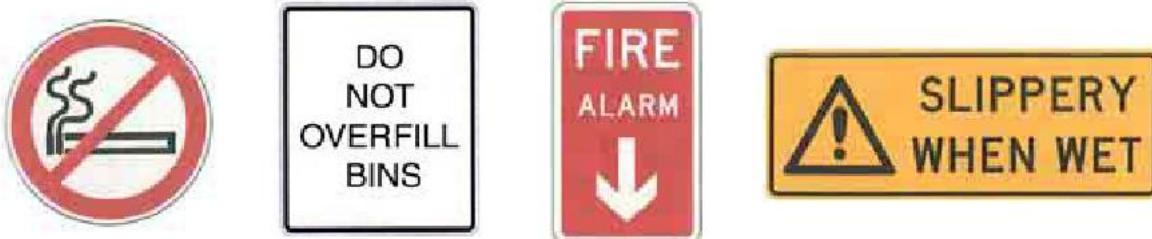
Example bin lid stickers



SAFETY SIGNS

The design and use of safety signs for waste rooms and enclosures should comply with AS 1319 Safety signs for the occupational environment. Safety signs should be used to regulate and control safety related to behaviours, warn of hazards and provide emergency information, including fire protection information. Below are some examples. Each development will need to decide which signs are relevant for its set of circumstances and services provided.

Examples of Australian Standards:



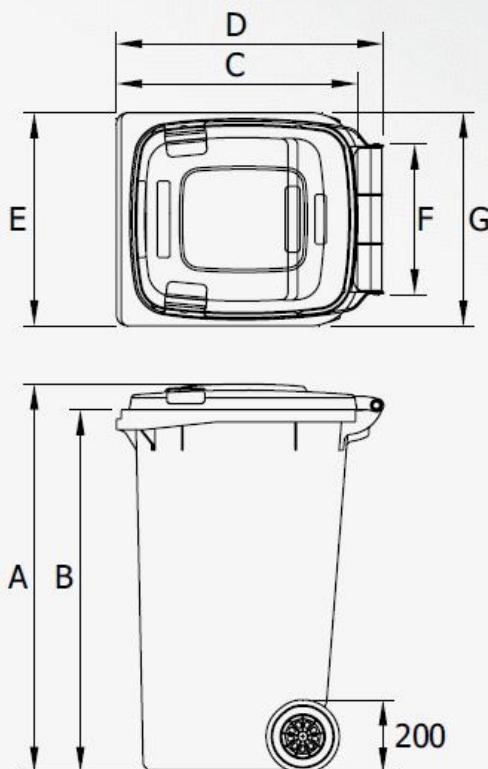
Source: Department of Environment and Climate Change NSW, Better Practice Guide for Waste Management in Multi-Unit Dwellings(2008)

APPENDIX 2 – TYPICAL WASTE & RECYCLING EQUIPMENT

Dimensions - Weights - Standards

■ Nominal volume:	240 litres				
■ Net weight:	approx 13 kg				
■ Max load:	96 kg				
■ Permitted total weight:	110 kg				
■ A	1060 mm	■ D	730 mm	■ G	550 mm
■ B	990mm	■ E	585 mm		
■ C	660 mm	■ F	400 mm		

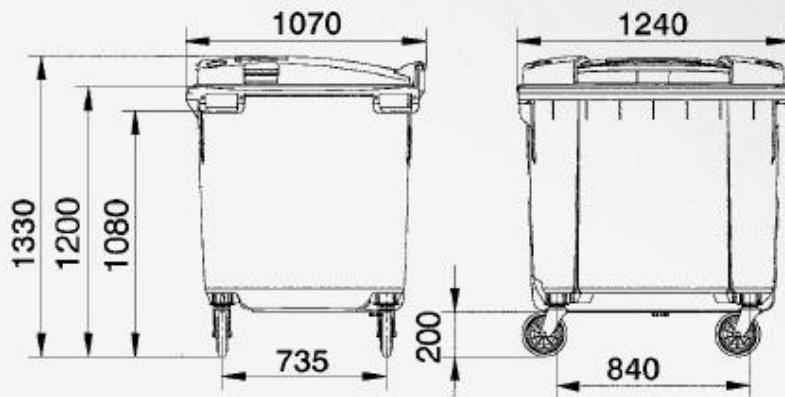
Measurements to be used as a guide only – variations will occur



Dimensions - Weights - Standards

■ Nominal volume:	1100 litres
■ Net weight:	approx. 65 kg
■ Max. load:	440 kg
■ Permitted total weight:	510 kg

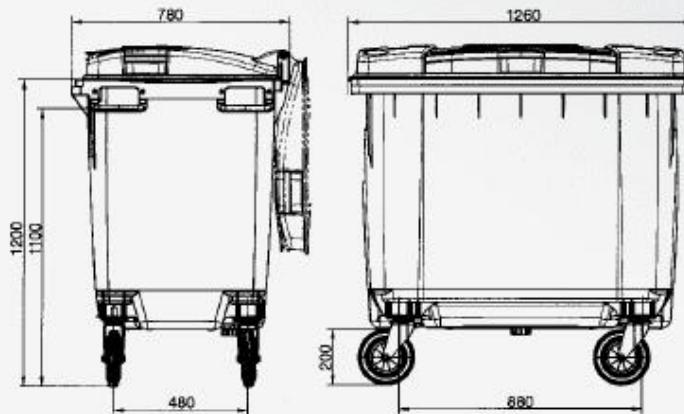
Measurements to be used as a guide only -variations will occur



Dimensions - Weights - Standards

■ Nominal volume:	660 litres
■ Net weight:	43 kg
■ Max. load:	265 kg
■ Permitted total weight:	310 kg

Measurements to be used as a guide only - variations will occur



TECHNICAL INFORMATION

Nexus 30
 Amount of A4 Paper
 Number of 330ml Cans
 Number of 500ml Plastic Bottles

30 Litres
 6kg
 35
 25

Body and Aperture
Nexus 30 Wall Mounted

2.8kg
 3.5kg

Height
Depth
Width

626mm
 308mm
 335mm

Open Top
Cans & Bottles
Paper
Open Top complete with coloured lid

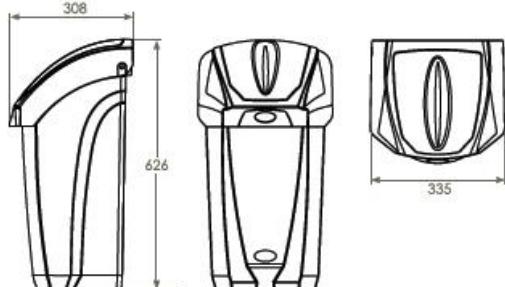
Red, Yellow, Green & Blue
 Yellow & Red
 Blue
 Red, Yellow, Green & Blue



Nexus® 30

- Original – Light Grey (as pictured)
- Gun barrel Grey
- C-Thru
- Product can be wall mounted

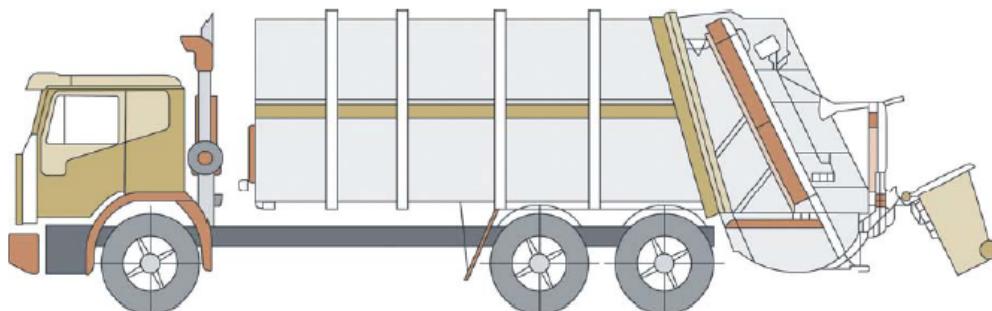
• Made from 44% recycled content



APPENDIX 3 – TYPICAL MRV VEHICLE SPECIFICATIONS

Council

Typical Council Garbage Truck used for Domestic Waste Collection	
Length overall	8.0 metres
Width overall	2.5 metres
Operational height	4.3 metres
Travel height	4.3 metres
Weight (vehicle and load)	22.5 tonnes
Weight (vehicle only)	13 tonnes
Turning Circle	25.0 metres



rearloader garbage truck

Example of a Council garbage truck.

Source of diagram: *Better Practice Guide for Waste Management in Multi-Unit Dwellings*, DECC 2008.

MEDIUM REARLIFT

Vehicle	Medium Rearlift		
Weights	TARE	GVM	Payload
	9170kgs	15000kgs	4558kgs
Measurements	Height	Load Height	Length
	2.7m	2.7m	8.02
Turning Circle			14.8
Lift Capacity			600kgs



REARLIFT

Vehicle	Rearlift		
Weights	TARE	GVM	Payload
	13800kgs	27000kgs	8500kgs
Measurements	Height	Load Height	Length
	3.3m	3.3m	9.7m
Turning Circle			17m
Lift Capacity			600kgs



(Source: Remondis)

APPENDIX 4 – CAROUSEL & LINEAR



CAROUSEL



CAROUSEL



LINEAR



LINEAR

BIN COMPACTOR + CAROUSEL OR LINEAR

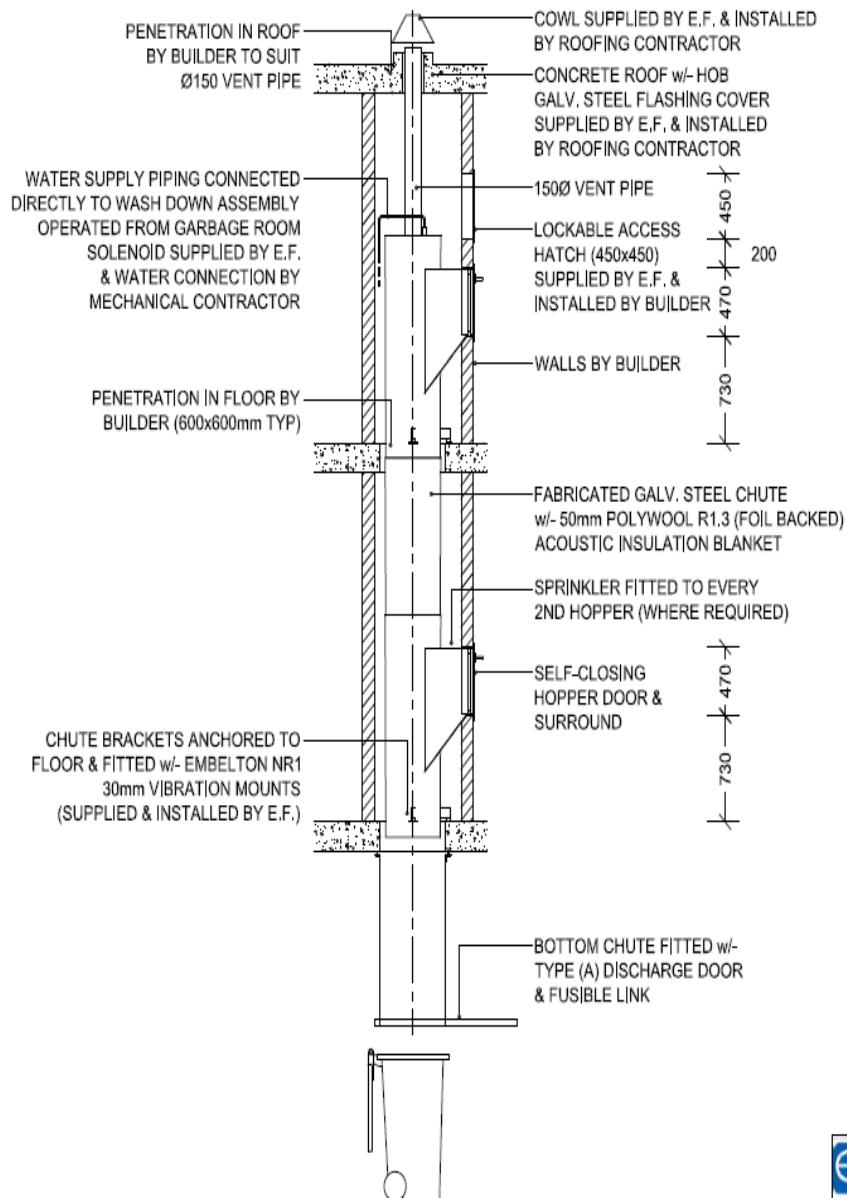
- Built for under chutes systems in high rise building
- Waste falls directly into bins
- Fits over carousel or linear system
- Compacts into, 240, 660, 1100 standard bins
- Fully automatic, compaction ratio 2:1
- Minimise strata cost
- Low cost maintenance
- 415 Volts - 10Amp

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



APPENDIX 5 TYPICAL CHUTE SECTION



APPENDIX 6 LOADING DOCK AREA



Tony Caro Architecture P/L Drawing No. A100, Plan Level 00 Retail dated 20 Mar 14

APPENDIX 7 CARDBOARD BALER

EF51



This small footprint baler offers maximum volume reduction for minimum cost and floor space. It produces an excellent bale of cardboard up to 70kg. It can bale a range of materials including loose paper, cardboard and plastic film.

Product information

- HxWxD (mm): 2180x810x810
- Feed opening (mm): 540x720
- Weight (kg): 375
- Cycle Time (sec): 45
- Compaction force(T): 4
- Power Supply (V): 240
- Motor (kW): 1.1
- Noise Level (dBA): 65

Benefits:

- Low height baler – easy to transport and install
- Produces up to 70kg bale of cardboard
- Automatic cycle saves labour time
- Door mounted tape cutter & easy tie system saves time
- User friendly push button controls
- Robustly constructed for long life
- CE Marked
- IP55 rated so machine can be situated outside

Bale Dimensions:

- HxWxD (mm): 600x715x500
- Bale Weight (kg): Up to 70 (cardboard)

Standard EF51 is supplied with:

- Trolley for bale discharge
- 2 rolls of baling cord

Optional extras:

- Vandal proof control cover
- Extra trolley