# WASTE MANAGEMENT PLAN

565-609 Luddenham Road
Luddenham, NSW
Commercial Development

PREPARED FOR
Celestino

ON BEHALF OF
FJMT Studio

13/02/2017

EDDY SAIDI
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## REVISIONS

| Revision | Copy No. | Date | Prepared by | Reviewed by | Approved by | Remarks |
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| A | 1 | 28/11/2016 | J Elliot | A Armstrong | N Beattie | Draft |
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| | | | | | | |

## DISTRIBUTION LIST

| Recipient Name | Company | Revision | Copy No. |
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| Eddy Saidi | Elephants Foot Recycling Solutions | C | 1 |
| Michelle Ho | FJMT Studio | C | 2 |
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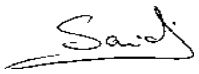
Authorised By: 

Eddy Saidi

Date: 13/02/2017

# EXECUTIVE SUMMARY

This waste management plan covers the ongoing management of waste generated by the commercial development located at 565-609 Luddenham Road, Luddenham NSW.

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 has three key objectives:

i. ***Ensure waste is managed to reduce the amount of waste and recyclables to land fill***

ii. ***Recover, reuse and recycle*** generated waste wherever possible.

iii. ***Compliance*** with all relevant codes and policies.

To assist in providing clean and well-segregated waste material, it is essential that this waste management plan is integral to the overall management of the building and clearly communicated to tenants.

# TABLE OF CONTENTS

# GLOSSARY OF TERMS

| TERM | DESCRIPTION |
|---|---|
| *Baler* | A device that compresses waste into a mould to form bales which may be self-supporting or retained in shape by wire ties and strapping |
| *Collection Area/Point* | The position or area where waste or recyclables are actually loaded onto the collection vehicle |
| *Compactor* | A Machine for compressing waste into disposable or reusable containers |
| *Composter* | A container/machine used for composting specific food scraps |
| *Crate* | A plastic box used for the collection of recyclable materials |
| *Garbage* | All domestic waste (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 |
| *Green* | Garden organics such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers, and weeds |
| *L* | Litre(s) |
| *Liquid Waste* | Non-hazardous liquid waste generated by commercial premises that is supposed to be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste) |
| *Mobile Garbage Bin(s) (MGB)* | A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 660, 1000 or 1100 |
| *Putrescible Waste* | Component of the waste stream liable to become putrid. Usually breaks down in a landfill to create landfill gases and leachate. Typically applies to food, animal and organic products. |

# LIST OF TABLES

# INTRODUCTION

The following waste management plan pertains to the commercial development located at 565-609 Luddenham Road, Luddenham NSW. This waste management plan is an operational waste management plan and will address the phases of the completed development.

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

- 1 6-storey building
    - Total NLA of 8910 $m^2$

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

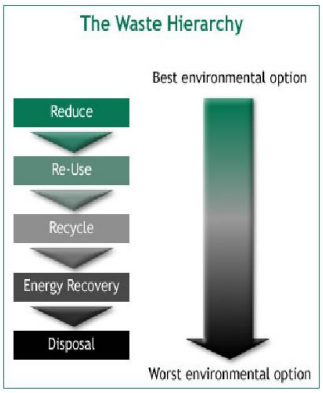
# PENRITH CITY COUNCIL

The 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.

The residential waste and recycling will be guided by the services and acceptance criteria of the Penrith City Council. The residential waste and recycling will be collected by council. The retail and commercial waste will be collected by private contractor.

All waste facilities and equipment are to be designed and constructed to be in compliance with the Penrith City Council, Australian Standards and statutory requirements.

## OBJECTIVES




- Facilitate sustainable waste management within the City of Penrith in accordance with the principles of Ecologically Sustainable Development
- Manage waste in accordance with the 'Waste Hierarchy' to:
    - avoid producing waste in the first place;
    - minimise the amount of waste produced;
    - re-use items as many times as possible to minimise waste;
    - recycling once re-use options have been exhausted; and
    - dispose of what is left, as a last resort, in a responsible way to appropriate waste disposal facilities
- Assist in achieving Federal and State Government waste minimisation targets as set out in the *Waste Avoidance and Resource Recovery Act 2001* and *NSW Waste Avoidance and Resource Recovery Strategy 2007*
- Minimise the overall environmental impacts of waste by:
    - encouraging development that facilitate ongoing waste avoidance and complements waste services offered by both Council and/or private contractors;
    - requiring on-site source separation and other design and siting standards which assist waste collection and management services;
    - encouraging building designs and construction techniques that minimise waste generation;
    - maximising opportunities to reuse and recycling building and construction materials as well as other wastes in the ongoing use of a premise; and
    - reducing the demand for waste disposal.

# GENERATED WASTE VOLUMES

The assessment of projected waste volumes is a calculated estimate only and will be influenced by the development's management and occupant's waste disposal and recycling practices.

## 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.

## BUILDING MANAGER/WASTE CARETAKER

All waste equipment movements are to be managed by the building manager/cleaners at all times. No tenants or residents will be allowed to transport waste or recyclables from the waste room; tenants and residents will only transport their waste to the allocated bin room.

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

- organising, maintaining and cleaning the general and recycled waste holding areas (Frequency will depend on waste generation and will be determined based upon building operation);
- transporting of bins as required;
- organising both garbage and recycled waste pick-ups as required;
- cleaning and exchanging all bins;
- ensure site safety for residents, children, visitors, staff and contractors;
- abide by all relevant OH&S legislation, regulations, and guidelines;
- assess any manual handling risks and prepare a manual handling control plan for waste and bin transfers; and
- provide to staff/contractors equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities

*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' attitudes to waste disposal and recycling, bin numbers and sizes may need to be altered 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

Building management is responsible for creating and managing the waste management education process.

Educational material encouraging the correct separation of garbage and recycling items must be provided to each resident to ensure the correct disposal of waste, including bulky goods (old furniture, large discarded items, etc.) It is recommended that information is provided in multiple languages to support correct practises and minimise the possibility of contamination in the collective waste bins.

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

# COMMERCIAL WASTE PLAN

Penrith City Council's *Development Control Plan* has been referenced to calculate the total number of bins required for the retail areas. Please note that calculations are based on generic figures; waste generation rates may differ according to the tenants' waste management practice. Please note that if food tenants are placed, the waste generation rates will require adjustment. A seven day operating week has been assumed.

***Table 1:*** *Calculated Waste Generation – Commercial*

| Level | Type | NLA ($m^2$) | Waste Calculation ($L/100m^2/day$) | Generated Waste (L/week) | Recycling Calculation ($L/100m^2/day$) | Generated Recycling (L/week) |
|---|---|---|---|---|---|---|
| G | *Office* | 477 | 10 | 333.9 | 10 | 333.9 |
| 1 | *Office* | 1302 | 10 | 911.4 | 10 | 911.4 |
| 2 | *Office* | 1378 | 10 | 964.6 | 10 | 964.6 |
| 3 | *Office* | 1395 | 10 | 976.5 | 10 | 976.5 |
| 4 | *Office* | 1421 | 10 | 994.7 | 10 | 994.7 |
| 5 | *Office* | 1454 | 10 | 1017.8 | 10 | 1017.8 |
| 6 | *Office* | 1483 | 10 | 1038.1 | 10 | 1038.1 |
| **TOTAL** | | **8910** | | **6237** | | **6237** |

## BIN SUMMARY

Garbage: 6 x 1100L MGBs collected **weekly**

Recycling: 6 x 1100L MGBs collected **weekly**

*NOTE*: Subject to the stakeholders preference/capability (and as built constraints), bin sizes and quantities may be changed. As waste volumes may change according to the development's type, bin numbers and collection frequencies may be altered to suit the building operation.

## WASTE MANAGEMENT

Typically, one or more bins for paper or waste are positioned next to each workers desk or work station. One or both of these bins are emptied by contract cleaners. The cleaners circulate around the workplace after normal office hours and also perform other cleaning tasks. Generally vacuuming and cleaning toilets. Bins for general waste and recyclables are also located centrally in each office, generally in the kitchen area and printer room.

Cleaners empty the bins into bags which they transport around the office/s in a cart which is also used to store cleaning products, spare bags, PPE and consumables.

Bags of waste and/or recycling are placed in a central location by the cleaners (often outside the goods lift/s) and transported to the collection bins by another cleaner.

### COMINGLE RECYCLING

Any staff tea points will be supplied with a dedicated commingled MGB for the collection of all recyclable glass, aluminium, steel and plastic items. Staff will be responsible for sorting this material and allocating recyclables into the correct collection facility.

### WASHROOM FACILITIES

Washroom facilities should be supplied with collection bins for paper towels (if used). Sanitary bins for female restroom facilities must also be arranged with an appropriate contractor.

Please note that all collection receptacles and bins should be branded with the appropriate stickers and the use of the Mobius loop or similar identifying recycling equipment.

### OTHER COMMERCIAL WASTE

Tenants usually make their own arrangements for the disposal and recycling of toner cartridges and batteries. Disposal of hard, electronic, liquid waste and any detox (paint/chemicals) shall be organised with the assistance of the building management/cleaners.

## WASTE ROOM AREAS

*The bin store must hold all the waste bins generated weekly, and allow enough room to clean and safely manoeuvre bins. A bin wash down area is provided in this area.*

The areas allocated for the commercial waste room are detailed in Table 2 below. The areas provided are considered suitable for purpose.

***Table 2:*** *Waste Room Areas*

| **Location** | **Waste Room Type** | **Allocated Area** ($m^2$) |
|---|---|---|
| **Ground floor** | Commercial waste room | 32 |
| | | |

# COLLECTION OF WASTE

## COMMERCIAL

The commercial waste will be collected by a private contractor via a wheel-in, wheel-out arrangement from the waste room which is located adjacent to the loading dock.

## COLLECTION AREA

It is Elephant Foot's understanding that the collection areas have been reviewed by a traffic consultant (or equivalent) to confirm the swept paths for waste collections, access and egress, internal manoeuvring to assume parked position for loading and to exit, load requirements as well as collection vehicle. It must be ensured that that the collection vehicle (and other trucks if required) can enter and exit the building in a forward direction. The final number of truck movements will depend on management of waste contract; final configuration of waste and recycling arrangements therefore number of bin lifts and additional irregular truck movements for hard waste.

# GARBAGE ROOMS

## CONSTRUCTION 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 100mm up, this is to eliminate build-up of dirt;
- for residential: a hot and cold water facility with mixing facility and hose cock must be provided for washing the bins;
- for retail/commercial: a cold water facility with hose cock must be provided for washing the bins;
- any waste water discharge from bin washing must be drained to sewer in accordance with the relevant water board. (Sydney Water);
- tap height of 1.6m;
- 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 and assist with odour reduction – this process generally takes place at building handover – building management make the decision to install;
- all personnel doors are hinged and self-closing;
- waste collection area must hold all bins – bin movements should be with ease of access;
- conform to the Building Code of Australia, Australian Standards and local laws; and
- childproofing and public/operator safety shall be assessed and ensured

## SIGNAGE

The building manager/caretaker is responsible for waste room signage including safety signage (*see APPENDIX B.2*). Appropriate signage must be prominently displayed on walls and above all bins, clearly stating what type of waste or recyclables is to be placed in the bin underneath.

## VENTILATION

Waste and recycling rooms must have their own exhaust ventilation system either;

- Mechanically - exhausting at a rate of 5L/m² floor area, with a minimum rate of 100L/s minimum; or
- Naturally - permanent, unobstructed, and opening 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.

## STORM WATER PREVENTION & 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:

- promote adequate waste disposal into the bins;
- secure all bin rooms (whilst affording access to staff/contractors);
- prevent overfilling of bins, keep all bin lids closed and bungs leak-free;
- take action to prevent dumping or unauthorised use of waste areas; and
- ensure collection contractors 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. If required, a bin-tug, trailer or tractor consultant should be contacted to provide equipment recommendations. Hitches may require installation to move multiple bins to the collection area. Council must be informed of any hitch attachments required to be installed on bins.

## 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, estimates and information contained in this waste management plan have been prepared by analysing the information, plans and documents supplied by you and third parties including Council and government information. The assumptions based on the information contained in the WMP is outside the control of EFRS;
- 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 managements approach to educating residents and tenants regarding waste management operations and responsibilities;
- 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;
- The report has been prepared with all due care however no assurance or representation is made that the WMP reflects the actual outcome and EFRS will not be liable to you for plans or outcomes that are not suitable for your purpose, whether as a result of incorrect or unsuitable information or otherwise;
- EFRS offer no warranty or representation of accuracy or reliability of the WMP unless specifically stated;
- Any manual handling equipment recommended should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply;
- Design of waste management chute equipment and systems must be approved by the supplier.

## USEFUL CONTACTS

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

**Penrith City Council Customer Service**
Phone: (02) 4732 7777 Email: council@penrithcity.nsw.gov.au

**SULO MGB (MGB, Public Place Bins, Tugs and Bin Hitches)**
Phone: 1300 364 388

**CLOSED LOOP (Organic Dehydrator)**
Phone: 02 9339 9801

**ELECTRODRIVE (Bin Mover)**
Phone: 1800 333 002 Email: sales@electrodrive.com.au

**RUD (Public Place Bins, Recycling Bins)**
Phone: 07 3712 8000 Email: Info@rud.com.au

**CAPITAL CITY WASTE SERVICES**
Phone: 02 9359 9999

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

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

**NATIONAL ASSOCIATION OF CHARITABLE RECYCLING ORGANISATIONS INC. (NACRO)**
Phone: 03 9429 9884 Email: information@nacro.org.au

**PURIFYING SOLUTIONS (Odour Control)**
Phone: 1300 636 877 Email: sales@purifyingsolutions.com.au

**Elephants Foot Recycling Solutions (Chutes, Compactors and eDiverter Systems)**
44 – 46 Gibson Avenue
Padstow NSW 2211
Free call: 1800 025 073
Email: natalie@elephantsfoot.com.au

# APPENDICES

## APPENDIX A DRAWING EXERPTS

### APPENDIX A.1 WASTE ROOM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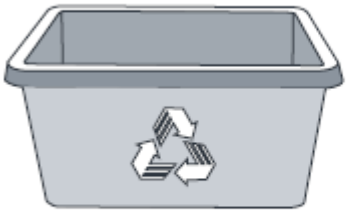
**Website**: www.elephantsfoot.com.au | **Email**: info@elephantsfoot.com.au
Offices in Victoria & Queensland – **Toll Free**: 1800 025 073

# APPENDIX B BETTER PRACTICE GUIDE FOR WASTE MANAGEMENT SPECIFICATIONS

## APPENDIX B.1 BIN DIMENSIONS

### Crates



| Crate size | 50L Crate | 70L Crate | 90L Crate |
|---|---|---|---|
| Height | 320 mm | 395 mm | 420 mm |
| Length | 575 mm | 575 mm | 450 mm |
| Width | 445 mm | 445 mm | 450 mm |

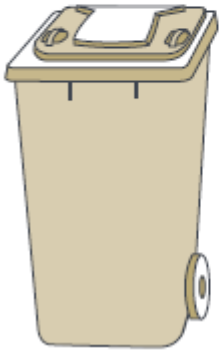
The above dimensions are indicative only of common crate sizes

### Mobile garbage bins (MGBs)

MGBs with capacities up to 1700L should comply with the Australian Standard for Mobile Waste Containers (AS 4123). AS 4123 specifies standard sizes and sets out the colour designations for bodies and lids of mobile waste containers that relate to the type of materials they will be used for.

Indicative sizes only for common MGB sizes are provided below. Note that not all MGB sizes are shown; the dimensions are only a guide and differ slightly according to manufacturer, if bins have flat or dome lids and are used with different lifting devices. Refer to AS 4123 for further detail.

Mobile containers with a capacity from 80L to 360L with two wheels



| Bin Type | 80 Litre MGB | 120 Litre MGB | 140 Litre MGB | 240 Litre MGB | 360 Litre MGB |
|---|---|---|---|---|---|
| Height | 870 mm | 940 mm | 1065 mm | 1080 mm | 1100 mm |
| Depth | 530 mm | 560 mm | 540 mm | 735 mm | 885 mm |
| Width | 450 mm | 485 mm | 500 mm | 580 mm | 600 mm |

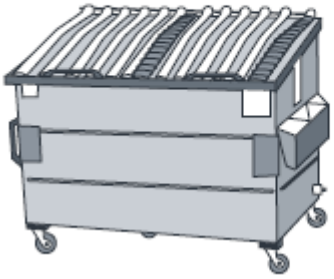
Mobile containers with a capacity from 500L to 1700L with four wheels

**Dome or flat lid containers**

| Bin Type | 660 Litre MGB | 770 Litre MGB | 1100 Litre MGB | 1300 Litre MGB | 1700 Litre MGB |
|---|---|---|---|---|---|
| Height | 1250 | 1425 | 1470 | 1480 | 1470 |
| Depth | 850 | 1100 | 1245 | 1250 | 1250 |
| Width | 1370 | 1370 | 1370 | 1770 | 1770 |

## Bulk bins greater than 1700L capacity

The following bulk bin dimensions are a guide only and may differ slightly according to manufacturer.
Not all available bulk bin sizes are shown.



| Bin Type | 2.0 m³ Skip | 3.0 m³ Skip | 4.5 m³ Skip |
|---|---|---|---|
| Height | 865 mm | 1225 mm | 1570 mm |
| Depth | 1400 mm | 1505 mm | 1605 mm |
| Width | 1830 mm | 1805 mm | 1805 mm |

## APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS

### WASTE SIGNS

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the Department of Environment and Heritage.


### SAFETY SIGNS

The design and use of safety signs for waste rooms and enclosures should comply with AS1319 Safety Signs for Occupational Environment. Safety signs should be used to regulate and control safety behaviour, 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 service provided.


*Source: Better Practice Guide to Waste Management in Multi-Unit Dwellings, 2008, DECC*

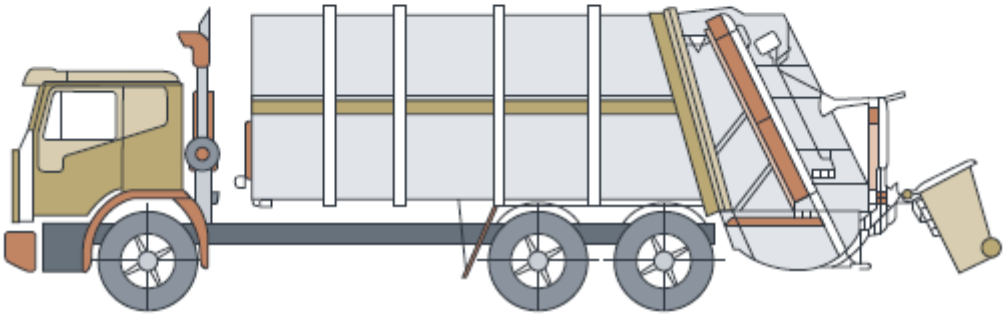
## APPENDIX B.3 TYPICAL COLLECTION VEHICLE INFORMATION

# Collection vehicles

Waste collection vehicles may be side loading, rear-end loading, front-end loading or crane trucks. The size of vehicle varies according to the collection service. Thus it is impossible to specify what constitutes the definitive garbage vehicle. Developers should consult the local council and/or relevant contractors regarding the type of vehicle used in that area.

The following characteristics represent the typical collection vehicle, however, these are only for guidance.

It may be possible to engage a collection service provider to use smaller collection vehicles to service developments with narrow roadways and laneways, or for on-site collections. However, as the availability of smaller vehicles to make services varies between councils and private contractors, wherever possible the development should be designed to accommodate vehicles of a similar size to that reported below.

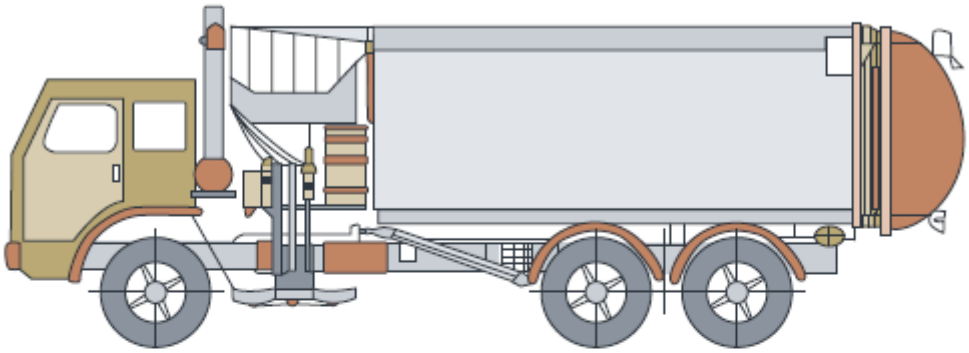


## Rear loading collection vehicle

This is commonly used for domestic garbage and recycling collections from MUDs. It can be used to collect waste stored in MGBs or bulk bins, particularly where bins are not presented on the kerbside.

| Rear loading collection vehicle | |
|---|---|
| Length overall | 10.24m |
| Width overall | 2.5m |
| Operational height | 3.5m |
| Travel height | 3.5m |
| Weight (vehicle only) | 12.4 tonnes |
| Weight (payload) | 9.5 tonnes |
| Turning circle | 18.0m |

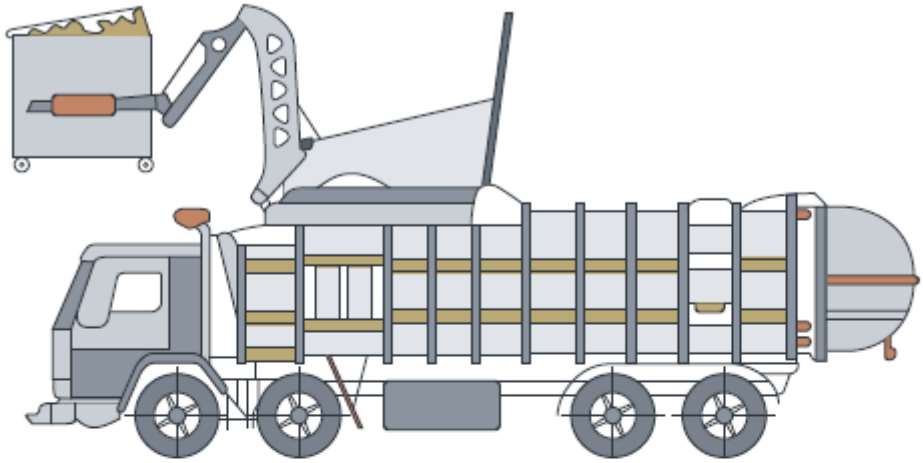
## Side-loading collection vehicle



| Side-loading collection vehicle | |
|---|---|
| Length overall | 9.64m |
| Front overhang | 1.51m |
| Wheelbase | 5.20m |
| Rear overhang | 2.93m |
| Turning circle kerb to kerb | 17.86m |
| Turning circle wall to wall | 20.56m |
| Front of vehicle to collection arm | 3.8m |
| Maximum reach of side arm | 3.0m |
| Travel height | 3.63m |
| Clearance height for loading | 3.9m |

This is the most commonly used vehicle for domestic garbage and recycling collections. It is only suitable for collecting MGBs up to 360 litres in size.

## Front-lift loading collection vehicle



| Front-lift loading collection vehicle | |
|---|---|
| Length overall | 10.52m |
| Front overhang | 1.51m |
| Wheelbase | 5.84m |
| Rear overhang | 3.17m |
| Turning circle kerb to kerb | 22.10m |
| Turning circle wall to wall | 23.66m |
| Travel height | 3.82m |
| Clearance height for loading | 6.1m |

This is mainly used for collecting commercial and industrial waste, and is only suitable for bulk bins with front lift pockets (not MGBs).

## APPENDIX C WASTE MANAGEMENT EQUIPMENT SPECIFICATIONS

### APPENDIX C.1 TYPICAL WHEELIE BIN COMPACTOR

120 - 240 LITRE
BIN COMPACTOR

**SPECIFICATIONS**

- Machine Size: 120/240 Litre bins **W900 x D860 x H2400mm**
  660 Litre bins **W1500 x D1100 x H2850mm**
- Compaction Ratio: **2:1 up to 5:1**

**FEATURES & BENEFITS**

- 240 Volt power, standard power point required with a "D" type circuit breaker
- 12 Months warranty with reliable after sale service
- Fully automatic compaction
- 40 Second cycle time
- Manufactured in Australia using quality local parts
- All Elephants Foot equipment complies with Australian Safety Standards

## APPENDIX C.2 TYPICAL BIN MOVER


Typical applications:

- Move trolleys, waste bin trailers and 660litre/1100 litre bins up and down a ramp incline. Ideal for Apartment Buildings (to move waste bins located at a basement level to road level).
- Quiet, smooth operation with zero emissions and simple to use, no driver's licence required

Features:

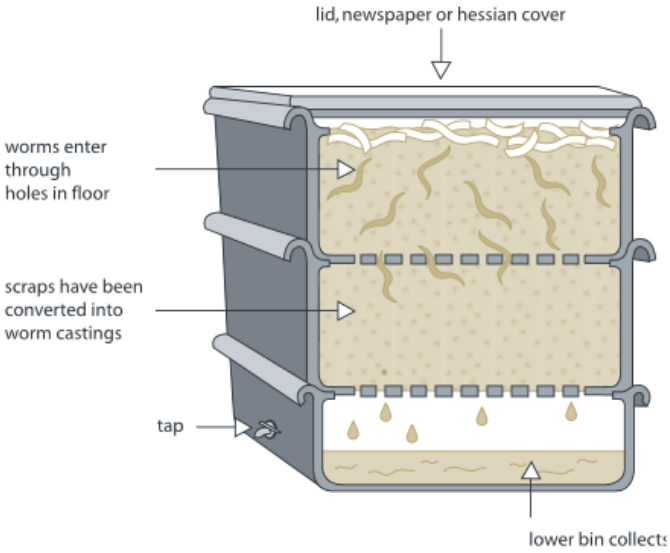
- Up to 1 Tonne on a ramp surface (depending on ballast and incline)
- Anti-rollback system on slopes
- Foot print: 1548L x 795W x 1104H (handle in the drive position)
- Pin Hitch is standard however alternate hitching options may be available to suit your specific application (e.g. tow ball)

Safety Features:

- Intuitive paddle lever control
- Stops and repels the unit if activated when reversing.
- Site assessment recommended to assess ramp incline steepness *(See Useful Contacts)*

## APPENDIX C.3 TYPICAL WORM FARM SPECIFICATIONS

### Worm farms




Space requirements for a typical worm farm for an average household:

Height – 300mm per level

Width – 600mm

Length – 900mm

There are many worm farm arrangements. The above dimensions are indicative only.

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

## APPENDIX C.4 TYPICAL APARTMENT STYLE COMPOST BINS

Apartment Style Compost bin – available from hardware stores

Suitable for:

- Vegetables
- Coffee grounds and filters
- Tea and tea bags
- Crushed eggshells (but not eggs)
- Nutshells
- Houseplants
- Leaves
- Cardboard rolls, cereal
- Boxes, brown paper bags
- Clean paper
- Shredded newspaper
- Fireplace ashes
- Wood chips, sawdust,
- Toothpicks, burnt matches
- Cotton and wool rags
- Dryer and vacuum cleaner lint
- Hair and fur
- Hay and straw

## APPENDIX C.5 ELECTRIC ORGANIC COMPOST BIN

CLOSED LOOP
LOVE WHAT YOU DO
CLO'ey


### Product Specifications

| | |
|---|---|
| Decomposition Method | Fermentation by microorganisms |
| Decomposition Capacity | 2 metric tonnes per year*<br>(4 kg per day*) |
| Rating | 220–240 V 50/60 Hz – 1.1 A |
| Decomposition Time | 24 hrs |
| Operating Temperature | 0C and 40C.** |
| Deodorisation Method | Nano-Filter system |
| Maximum Power | 210 W |
| Power Usage | Average 1 kwh per day |
| Weight | 21 kgs |
| External Dimensions | w 400 mm<br>d 400 mm<br>h 780 mm |

* Food Waste Handling Capacity – based on an optimal operating environment.
** Ambient temperature range of area where unit may be installed.

SOURCE: *Closed Loop Domestic Composter – See Useful Contacts*

## APPENDIX C.6 TYPICAL PUBLIC PLACE WASTE BINS


** Products and specifications may change according to manufacturer.*

SOURCE: *SULO Environmental Technology*