



10-16 Pacific Drive, Port Macquarie  
Residential Development

## OPERATIONAL WASTE MANAGEMENT PLAN

4/05/2022  
Report No. SO855  
Revision E

Client

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## SCOPE

This waste management plan (WMP) only applies to the **operational** phase of the proposed development; therefore the requirements outlined in this WMP must be implemented during the operational phase of the site and may be subject to review upon further expansion for, and/or changes to the development.

The waste management of the **construction** and **demolition** phases of the development are not addressed in this report. It is EFRS's understanding that a construction and demolition WMP will be completed by a separate party appointed by the developer, and submitted separately to this report. Typically, the head contractor of the site will be responsible for removing all construction-related waste offsite in a manner that meets all authority requirements.

## REVISION REFERENCE

Revision	Date	Prepared by	Reviewed by	Description	Signed
A	16/02/2021	J Parker	A Armstrong	Draft	
B	19/03/2021	J Parker	A Armstrong	Final	
C	19/04/2022	J Parker	A Armstrong	Amendment	
D	27/04/2022	J Parker	A Armstrong	Amendment	
E	4/05/2022	J Parker	A Armstrong	Amendment	

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## GLOSSARY OF TERMS

TERM	DESCRIPTION
<i>Baler</i>	A device that compresses waste into a mould to form bales which may be self-supporting or retained in shape by strapping
<i>Chute</i>	A ventilated, vertical pipe passing from floor to floor of a building with openings as required to connect with hoppers and normally terminating at its lower end at the roof of the central waste room(s)
<i>Chute Discharge</i>	The point at which refuse exits from the refuse chute
<i>Chute Discharge Room</i>	A secure, enclosed area or room housing the discharge and associated equipment for the refuse chute
<i>Collection Area/Point</i>	The identified position or area where garbage or recyclables are actually loaded onto the collection vehicle
<i>Compactor</i>	A machine for compressing waste into disposable or reusable containers
<i>Composter</i>	A container/machine used for composting specific food scraps
<i>Crate</i>	A plastic box used for the collection of recyclable materials
<i>Garbage</i>	All domestic waste (Except recyclables and green waste)
<i>Green Waste</i>	All vegetated organic material such as small branches, leaves and grass clippings, tree and shrub pruning, plants and flowers
<i>Hopper</i>	A fitting into which waste is placed and from which it passes into a chute or directly into a waste container. It consists of a fixed frame and hood unit (the frame) and a hinged or pivoted combined door and receiving unit
<i>L</i>	Litre(s)
<i>Liquid Waste</i>	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)
<i>LRV</i>	Large rigid vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities as heavy rigid vehicle (HRV)
<i>Mobile Garbage Bin(s) (MGB)</i>	A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 360, 660, 1000 or 1100
<i>MRV</i>	Medium rigid vehicle
<i>Putrescible Waste</i>	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.

## OPERATIONAL WASTE MANAGEMENT PLAN

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<i>Recycling</i>	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
<i>Refuse</i>	Material generated and discarded from residential and commercial buildings including general waste, recyclables, green waste and bulky items
<i>SRV</i>	Small rigid vehicle as in AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities, generally incorporating a body width of 2.33

## INTRODUCTION

EFRS has been tasked to prepare the following waste management plan for Laurus Projects for the operational management of waste generated by the residential development located at 10-16 Pacific Drive, Port Macquarie.

Waste management strategies and auditing are a requirement for new developments to provide support for the building design, and promote strong sustainability outcomes for the building. It is EFRS's belief that a successful waste management strategy contains three key objectives:

- i. **Promote responsible source separation** to reduce the amount of waste that goes to landfill, by implementing convenient and efficient waste management systems
- ii. **Ensure adequate waste provisions and robust procedures** that will cater for potential changes during the operational phase of the development
- iii. **Compliance** with all relevant council codes, policies, and guidelines.

To achieve these objectives, this WMP identifies the different waste streams likely to be generated during the operational phase of the development. Associated information includes: how the waste will be handled and disposed of, details of bin sizes/quantities and waste rooms, descriptions of the proposed waste management equipment used and information on waste collection points and frequencies.

It is essential that this waste management plan is integral to the overall management of the building and clearly communicated to all relevant stakeholders.

## DEVELOPMENT SUMMARY

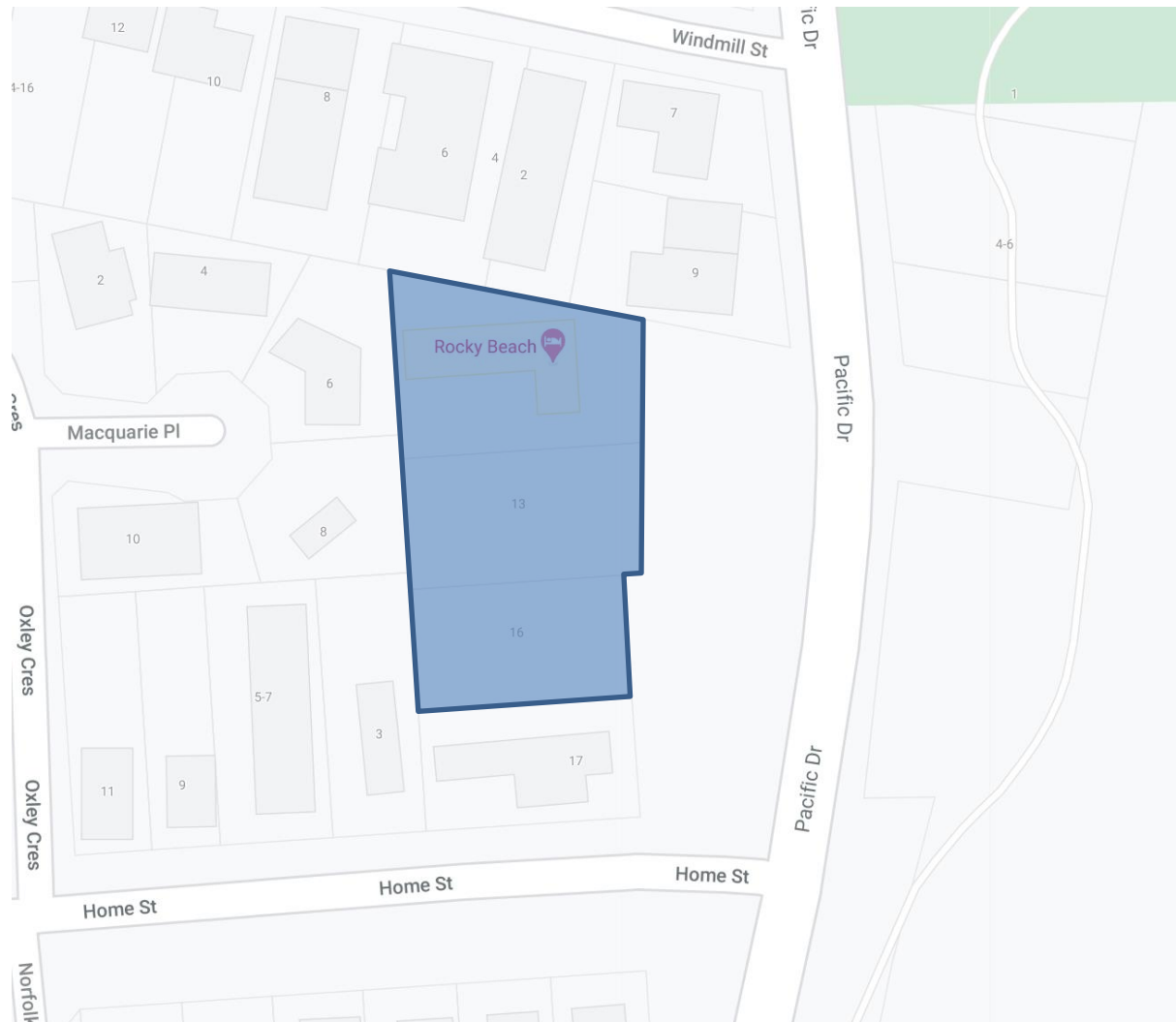
The proposed development falls under the LGA of Port Macquarie-Hastings Council, and consists of:

- 2 buildings, each of 6 residential levels over a shared basement and 44 residential units in total

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

## SITE LOCATION

The site is located at 10-16 Pacific Drive, Port Macquarie, as shown below. The site's only street frontage is to Pacific Drive, with vehicular access also via this street.



Source: Google Maps



## PORT MACQUARIE-HASTINGS COUNCIL

The garbage and recycling generated at this development will be guided by the services and acceptance criteria of Port Macquarie-Hastings Council. All waste facilities and equipment are to be designed and constructed to be in compliance with the Port Macquarie-Hastings Council *Developments, Public Place & Events Waste Minimisation and Management Policy* (2020), council advice, Australian Standards and statutory requirements.

### COUNCIL OBJECTIVES

- Reduce waste to landfill.
- Maximise source separation of general waste, recycling and food and garden organics.
- Embed circular economy principles by supporting the minimisation of waste and promoting the continual use of resources.
- Establish standard provisions for determining waste management requirements in developments.
- Ensure developments are designed with adequate storage, access and management of waste.
- Embed sustainable and effective waste management practices at public places and at public events.

## STAKEHOLDER ROLES AND RESPONSIBILITIES

The following table demonstrates the primary roles and responsibilities of the respective stakeholders:

*Table 1: Stakeholder Roles and Responsibilities*

Roles	Responsibilities
Strata/Management	<ul style="list-style-type: none"> <li>Ensuring that all waste service providers submit monthly reports on all equipment movements and waste quantities/weights;</li> <li>Organising internal waste audits/visual assessments on a regular basis; and</li> <li>Manage any non-compliances/complaints reported through waste audits.</li> </ul>
Building Manager/ Caretaker	<ul style="list-style-type: none"> <li>Ensuring effective signage, communication and education is provided to occupants, tenants and cleaners;</li> <li>Providing staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities;</li> <li>Ensuring site safety for residents, children, visitors, staff and contractors;</li> <li>Abiding by all relevant OH&amp;S legislation, regulations, and guidelines;</li> <li>Assessing any manual handling risks and prepare a manual handling control plan for waste and bin transfers;</li> <li>Preventing storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins)</li> <li>General maintenance and cleaning of chute doors on each level;</li> <li>Cleaning and transporting of bins as required;</li> <li>Organising, maintaining and cleaning the general and recycled waste holding area;</li> <li>Organising both garbage and recycled waste pick-ups as required;</li> <li>Organising replacement or maintenance requirements for bins;</li> <li>Organising bulky goods collection when required; and</li> <li>Investigating and ensuring prompt clean-up of illegally dumped waste materials.</li> </ul>
Residents/Tenants	<ul style="list-style-type: none"> <li>Dispose of all garbage and recycling in the allocated waste chutes and/or MGBs provided;</li> <li>Ensure adequate separation of garbage and recycling; and</li> <li>Compliance with the provisions of Council and the WMP.</li> </ul>
Council/Private Waste Contractor	<ul style="list-style-type: none"> <li>Provide a reliable and appropriate waste collection service;</li> <li>Provide feedback to building managers/residents in regard to contamination of recyclables; and</li> <li>Work with building managers to customise waste systems where possible.</li> </ul>
Gardening/Landscaping Contractor	<ul style="list-style-type: none"> <li>Removal of all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.</li> </ul>
Building Contractors	<ul style="list-style-type: none"> <li>Removing all construction related waste offsite in a manner that meets all authority requirements.</li> </ul>

## EDUCATION

Educational material encouraging correct separation of garbage and recycling items must be provided to each resident by building management to ensure correct use of the waste chute. This should include the correct disposal process for bulky goods (old furniture, large discarded items, etc.), and other appropriate materials (electronic, chemical waste, etc.). It is recommended that information is provided in multiple languages to support correct practises and minimise the possibility of chute blockages as well as contamination in the collective waste bins.

It is also recommended that the owners' corporation 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);
- How to dispose of bulky goods and any other items that are not garbage or recycling;
- Residents' obligations to whs and building management; and
- How to prevent damage or blockages to the chute (example below).

***To prevent damage or blockage to rubbish chute DO NOT*** dispose of any 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.

## LIMITATIONS

The purpose of this report is to document a Waste Management Plan (WMP) as part of a development application and is supplied by Elephants Foot Recycling Solutions (EFRS) with the following limitations:

- Drawings, estimates and information contained in this waste management plan have been prepared by analysing the information, plans and documents supplied by the client, 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 equipment and systems must be approved by the supplier.

## RESIDENTIAL WASTE MANAGEMENT

The Port Macquarie-Hastings Council *Developments, Public Place & Events Waste Minimisation and Management Policy* (2020) has been referenced to calculate the total number of bins required for the developments. Calculations are based on generic figures; waste generation rates may differ according to the residents' waste management practice.

### ESTIMATED WASTE VOLUMES AND PROVISIONS

The following table shows the estimated volume (L) of garbage and recycling generated by the development.

*Table 2: Calculated Garbage and Recycling Generation*

Building/ Core	# Beds	# Units	Garbage Generation Rate (L/unit/week)		Generated Garbage (L/week)	Recycling Generation Rate (L/unit/week)		Generated Recycling (L/week)
Building A	1	1	35		35	40		40
	2	15	70		1050	60		900
	3	8	120		960	120		960
	<b>TOTAL</b>	<b>24</b>			<b>2045</b>			<b>1900</b>
Building B	1	6	35		210	40		240
	2	10	70		700	60		600
	3	4	120		480	120		480
	<b>TOTAL</b>	<b>20</b>			<b>1390</b>			<b>1320</b>
<b>OVERALL TOTAL</b>		<b>44</b>			<b>3435</b>			<b>3220</b>
Collections			Garbage Bin Size (L)		1100	Recycling Bin Size (L)		240
			Garbage Collections per Week		1	Recycling Collections per Week		1
			Total Garbage Bins Required		4	Total Recycling Bins Required		14
Equipment			Number of Garbage Bins Per Building	Building A	2	Number of Recycling Bins Per Building	Building A	8
				Building B	2		Building B	6

*Table 3: Calculated Green Waste Generation*

Building/ Core	# Beds	# Units	Green Waste Generation Rate (L/unit/week)		Generated Green Waste (L/week)
Building A	1	1	40		40
	2	15	60		900
	3	8	80		640
	<b>TOTAL</b>	<b>24</b>			<b>1580</b>
Building B	1	6	40		240
	2	10	60		600
	3	4	80		320
	<b>TOTAL</b>	<b>20</b>			<b>1160</b>
<b>OVERALL TOTAL</b>		<b>44</b>			<b>2740</b>
Collections			Green Waste Bin Size (L)		240
			Green Waste Collections per Week		1
			Total Green Waste Bins Required		12
Equipment			Number of Green Waste Bins Per Building	Building A	7
				Building B	5

## HOUSEHOLD WASTE

Two garbage chutes will be installed with access provided on all residential levels of each building core. The chutes are to be used for the disposal of garbage only.

Garbage discharges into 1100L bins in the chute discharge rooms on the ground level. It is not intended for the garbage to be compacted at this site.

240L recycling bins will be situated in the waste compartment on each residential level for collection of recyclable items. The caretaker/cleaner is responsible for monitoring the capacity of recycling bins and exchanging them with empty bins from the bin holding room on the ground level once full.

Full garbage and recycling bins will be transferred, via the vehicle ramp, to the temporary bin holding/collection area on level 1 to await collection.

## COMMON AREAS

The lobbies, amenities and circulation areas will be supplied with suitably branded waste and recycling bins where considered appropriate. These areas generate minimal waste, however garbage and recycling receptacles should be provided and located in convenient locations.

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.

## SOURCE SEPERATION

Waste avoidance, recovery and reuse of discarded materials and responsible management of hazardous waste are all crucial elements of sustainable development. Effective waste management practices in residential developments significantly improve environmental, social, and economic outcomes on both a local and regional scale, and should be integrated into the waste management processes.

## GENERAL WASTE (GARBAGE)

Residents will be supplied with a collection area in each unit to deposit garbage suitable for one day's storage. This is typically located in the kitchen, under bench or in a similar alternate area. Residents should wrap or bag their garbage; bagged garbage should not exceed 3kg in weight or 35cm x 35cm x 35cm in dimension.

## RECYCLING

Residents will also be supplied with a collection area in each unit to collect recyclable material suitable for one day's storage.

***Recycling must not be bagged.*** It is recommended that residents use a crate or dedicated bin for collecting recyclables within the allocated residential space provided to ensure correct separation.

Cardboard furniture boxes or large cardboard containers should not be included in the garbage chute. Residents should be encouraged to deposit flattened cardboard into the 240L recycling bin on each level along with their other recyclable items.

## GREEN WASTE

It is anticipated that green waste from surrounding landscaped areas will be removed by the designated maintenance contractor. Green waste bins will also be provided in the bin holding room on the lower ground level for residents' use. Chute discharge equipment will be caged off to enable residents to safely access the room.

## BULKY GOODS

A room will be made available on the ground level for the storage of discarded residential bulky items (e.g. whitegoods, furniture, etc.). This room must have a minimum doorway width of 1.5m to allow for easy movement of large waste items in and out of the room. Bulky waste items will be transferred to the temporary bin holding/collection area on level 1 for collection. This will be organised so that it does not impact on the servicing of bins.

These areas are crucial to prevent residents from illegally dumping bulky waste on the footpath outside Councils scheduled collection times. Regular illegal dumping can attract other dumped waste, generate litter, detract significantly from the quality and appearance of the development and reduce amenity of the street.

Residents will be required to liaise with building management regarding the transportation and disposal of bulky goods. Ideally, bulky waste should be collected on a regular schedule so that the storage area does not become overfull and so that residents know when to place items in there for collection. Councils may arrange for more frequent collections of bulky waste for MUDs, however collection frequencies vary among different local government areas.

Donations to charitable organisations should be encouraged. Clean, sound furniture and household goods etc. are highly sought after to provide for the disadvantaged. Donations can be arranged with the assistance of the building manager/waste caretaker.

## ELECTRONIC WASTE

Electrical waste (e.g. fluorescent tubing, batteries, laptops etc.) can potentially contaminate soil and surrounding water bodies if not disposed correctly. These items must not be placed in standard garbage and recycling bins. Disposal or recycling of electronic waste will be organised with the assistance of the building caretaker. These items must not be placed in garbage or recycling bins due to safety and environmental factors. Residents and/or the building manager may choose to contact Council to find out about new/existing strategies for the disposal/collection of electronic waste.

## CHEMICAL WASTE

Chemical wastes (e.g. cleaning chemicals, paints, oils solvents) pose detrimental effects to human health and the environment and should be disposed of to a suitable licensed disposal facility. No liquid wastes or wash down waters should be disposed of via the storm water drainage system. Household Chemical CleanOut events are held at various locations throughout NSW on specified dates throughout the year. Locations and dates are subject to change; hence it is recommended that the building caretaker confirm these details with their local Council.

## ORGANIC WASTE AND COMPOSTING

Recycling organic waste onsite dramatically reduces the number of waste collections required as well as the quantity of waste being sent to land fill and thus reduces residents' ecological footprint. Compost material can also be returned to the soil as a rich fertilizer and improve plant growth and the overall health of surrounding vegetation. It is recommended that a space for composting and worm farming is made available for all residents in a communal facility or in small private courtyards (see *APPENDIX D.1*). Composting facilities are to be sited on an unpaved area with soil depth of at least 300mm. Residents may also choose to purchase and install apartment style compost bin where practical and self-manage these systems (see *APPENDIX D.2 and APPENDIX D.3*).

## MOVEMENT AND TRANSPORTATION OF BINS

The building manager/caretaker will be responsible for the transportation of bins from their designated operational locations on the ground level, to the temporary bin holding/collection area on level 1 prior to scheduled collection times, returning them once emptied to resume operational use.

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

The developer will be required to contact a bin-tug, trailer or tractor consultant to provide equipment recommendations. Examples of motorised bin moving equipment can be found in APPENDIX B.4 and APPENDIX B.5.

Bins may have to be fitted with hitches to enable the simultaneous transportation of multiple bins to the collection area. Council must be informed of any hitch attachments required to be installed on bins.

## COLLECTION OF WASTE

As Council's collection service only covers 240L bins collected from the kerbside (an arrangement that would not be feasible for this site), a private contractor will be engaged to service all waste streams. This report assumes that all waste streams will be serviced on a weekly basis.

Prior to collections, the building manager/caretaker will be responsible for transferring full bins from the bin holding room on the ground level, to the temporary holding/collection area at the loading area on level 1. The transfer of bins is to be carried out via the vehicle ramp using a suitable bin moving device.

On collection days, the waste collection contractor's vehicle will access the site from Pacific Drive and reverse into the truck loading area. Collection staff will then access the temporary bin holding area and service the bins.

Once servicing is complete, the vehicle will leave the site in a forward-facing direction. The building manager/caretaker will then be responsible for returning bins to the bin holding room on the lower ground level.

## COLLECTION AREA

It is Elephant Foot's understanding that the collection areas have been reviewed by a traffic consultant to confirm the swept paths, load requirements and clearances for waste collections.

## INSTALLATION EQUIPMENT AND DESIGN

### EQUIPMENT SUMMARY

Table 4: Equipment Summary

Component	Part	Qty	Notes
Chutes	Galvanised Steel / LLDPE Polyethylene Plastic 510mm or 610mm (for 20+ levels)	2	510/610mm diameter (See APPENDIX C.1 for Typical Chute Section)
Equipment	Suitable Bin Moving Equipment	1	(See APPENDIX B.4 & APPENDIX B.5 for Typical Bin Movers)

### WASTE ROOM AREAS

All waste discharge points should be caged off to ensure the safety of any personnel accessing the waste room. Access to waste discharge rooms should be provided to the building manager/waste caretaker **only**. Under no circumstances should access be provided to any residents, or waste collection staff.

Chute discharge requires a minimum of 3000mm distance from floor to ceiling and needs to be free of service pipes and other overhead obstacles within the immediate space around the chute discharge.

The areas allocated for waste storage and collections are detailed in Table 5 below. The areas provided are estimates only. Final areas will depend upon room and bin layouts.

Table 5: Waste Room Areas

Level	Waste Room Type	Equipment	Estimated Area (m <sup>2</sup> )
G	Waste Discharge Room A	2 x 1100L MGBs (Garbage)	8
	Waste Discharge Room B	2 x 1100L MGBs (Garbage)	8
	Bin Holding Room	4 x 1100L MGBs (Garbage) 14 x 240L MGBs (Recycling) 12 x 240L MGBs (Green Waste)	32
	Bulky Goods Waste Storage Room	N/A	12
1	Temporary Bin holding/Collection Area	4 x 1100L MGBs (Garbage) 14 x 240L MGBs (Recycling) 12 x 240L MGBs (Green Waste)	32



## 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;
- if 660L or 1100L bins are utilised, 2 x 820mm (minimum) door leafs must be used;
- all personnel doors are hinged, lockable 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 doors, walls and above all bins, clearly stating what type of waste or recyclables is to be placed in the bin underneath.

All chute doors on all residential levels will be labelled with signs directing chute operations and use of chute door.

### VENTILATION

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

- Mechanically - exhausting at a rate of 5L/m<sup>2</sup> 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.

## USEFUL CONTACTS

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

### **PORT MACQUARIE-HASTINGS COUNCIL CUSTOMER SERVICE**

Phone: 02 6581 8111

Email: [council@pmhc.nsw.gov.au](mailto:council@pmhc.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](mailto:sales@electrodrive.com.au)

### **RUD** (Public Place Bins, Recycling Bins)

Phone: 07 3712 8000

Email: [Info@rud.com.au](mailto:Info@rud.com.au)

### **CAPITAL CITY WASTE SERVICES** (Private Waste Services Provider)

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](mailto:information@nacro.org.au)

### **PURIFYING SOLUTIONS** (Odour Control)

Phone: 1300 636 877

Email: [sales@purifyingsolutions.com.au](mailto:sales@purifyingsolutions.com.au)

### **MOVEXX** (Bin Movers)

Phone: 1300 763 444

### **AUSCOL** (Recycling Oils & Animal Fats)

Phone: 1800 629 476

### **KOMPACT EQUIPMENT** (Equipment & Servicing Provider)

Phone: 1300 566 722

Email: [info@kompactequipment.com.au](mailto:info@kompactequipment.com.au)

### **ELEPHANTS FOOT RECYCLING SOLUTIONS** (Chutes, Compactors & eDiverter Systems)

44 – 46 Gibson Avenue

Padstow NSW 2211

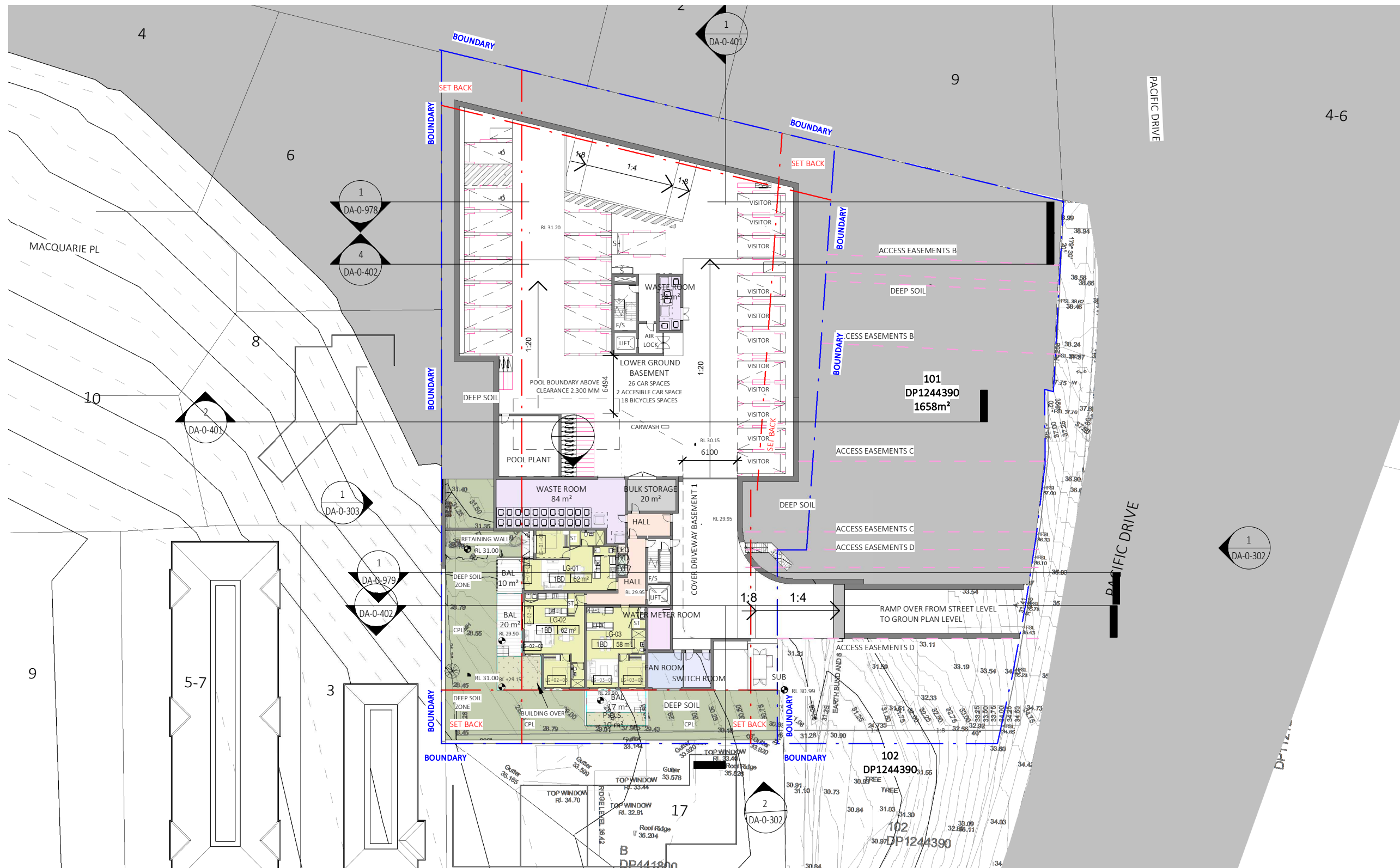
Phone: 1300 434 374

Email: [wmp@elephantsfoot.com.au](mailto:wmp@elephantsfoot.com.au)

## APPENDICES

### APPENDIX A ARCHITECTURAL DRAWING EXCERPTS

#### APPENDIX A.1 LOWER GROUND FLOOR WASTE ROOMS



Source: Dickson Rothschild, Drawing No. DA-0-211, Rev.E, 03/05/22 – Lower Ground Plan



This detailed site plan illustrates a residential development featuring two main buildings, a swimming pool, and various outdoor areas. The plan includes the following elements:

- Buildings:**
  - Building A:** Located on the left, containing units G-01 through G-05, a common area, and a swimming pool.
  - Building B:** Located on the right, containing units G-06 through G-10, a waste enclosure, and a truck landing area.
- Swimming Pool:** A rectangular pool situated between Building A and Building B, with a surrounding deck and a high block window.
- Outdoor Areas:**
  - Common Area:** Adjacent to the swimming pool.
  - Landscaping:** Various trees and shrubs are indicated throughout the site.
  - Roof Ridge:** Located at the top of the site, with a level of 47.873.
- Infrastructure:**
  - Retaining Walls:** Several retaining walls are shown, with levels ranging from 30.00 to 40.00.
  - Boundaries:** The site is bounded by a blue line, with setbacks of 6000 and 9000 indicated.
  - Access Easements:** Various easements are shown, including Access Easements B, C, and D.
  - Driveways:** A concrete driveway and a principal entrance driveway are shown.
  - Ramp to Basement 1:** A ramp with a 1:4 gradient is shown.
- Other Features:**
  - Unit Details:** Each unit is labeled with its type (e.g., G-01, G-02) and area (e.g., 13 m², 106 m²).
  - Levels:** Numerous spot levels are provided throughout the plan, ranging from 28.00 to 40.00.
  - Orientation:** The plan is oriented with North at the top, indicated by a north arrow.

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## OPERATIONAL WASTE MANAGEMENT PLAN

### APPENDIX B PRIMARY WASTE MANAGEMENT PROVISIONS

#### APPENDIX B.1 TYPICAL BIN SPECIFICATIONS

The most common bin sizes are provided below, although not all sizes are shown. These dimensions are a guide only and differ slightly between manufacturers.

Average dimension ranges for two-wheel mobile bins



Wheelie bin

Bin capacity	80L	120L	140L	240L	360L
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	530	540	735	820
Width (mm)	450	485	500	580	600
Approximate footprint (m <sup>2</sup> )	0.24	0.26–0.33	0.27–0.33	0.41–0.43	0.49
Approximate weight (kg)	8.5	9.5	10.4	15.5	23
Approximate maximum load (kg)	32	48	56	96	Not known

Sources include Sulo, Single Waste, Cleanaway, SUEZ, just wheelie bins and Perth Waste for two-wheel mobile bins

Average dimension ranges for four-wheel bulk bins



Dome or flat lid container

Bin capacity	660L	770L	1100L	1300L	1700L
Height (mm)	1250	1425	1470	1480	1470
Depth (mm)	850	1100	1245	1250	1250
Width (mm)	1370	1370	1370	1770	1770
Approx footprint (m <sup>2</sup> )	0.86–1.16	1.51	1.33–1.74	2.21	2.21
Approx weight (kg)	45	Not known	65	Not known	Not known
Approx maximum load (kg)	310	Not known	440	Not known	Not known

Sources include Sulo, Signal Waste, Cleanaway, SUEZ, Just Wheelie Bins and Perth Waste

Average dimension ranges for bulk bins over 1700L in capacity



Bulk bins greater than 1700L

Bin capacity)	1m <sup>3</sup>	1.5m <sup>3</sup>	2m <sup>3</sup>	3m <sup>3</sup>	4.5m <sup>3</sup>	6m <sup>3</sup>
Height (mm)	1000	910–1250	865–1000	1020–1580	1440–2014	1650
Depth (mm)	1000	905–1000	1300–1400	1470–1700	1605–1900	1900
Width (mm)	1400	1805–2010	1830–2000	1400–2010	1800–2010	2000
Approximate footprint (m <sup>2</sup> )	1.4	1.63–2.01	2.4–2.8	2.1–3.4	2.9–3.8	3.8

Sources include TORO Waste Equipment, SUEZ, Signal Waste, Perth Waste and ACT Industrial

Source: New South Wales Environmental Protection Authority *Better Practice Guide for Resource Recovery* (2019)

## 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 EPA (Environmental Protection Authority).

Examples of waste wall posters (EPA supplied)



Examples of bin lid stickers (EPA supplied)



### Problem Waste Signs

The EPA has also produced a range of images and signs that can be used for problem wastes, such as fluoro globes and tubes, household and car batteries, e-waste and smoke detectors. To access these resources, contact the NSW EPA. Some examples are shown below.



### Safety Signs

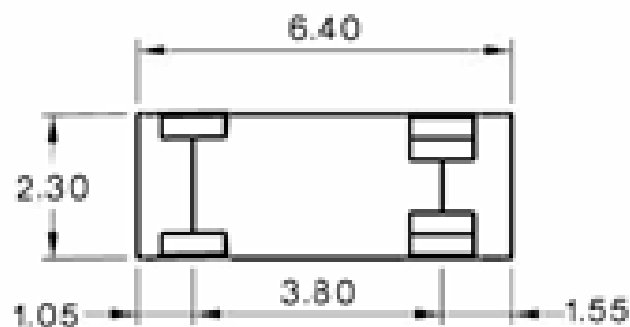
The use of safety signs for waste resource recovery rooms must comply with *AS1319 Safety signs for occupational environments*. Safety signs must be used to regulate and control safety related to behaviour, warn of hazards and provide emergency information, including fire protection information. Suitable signs should be decided for each development as required.

Example safety signs



Source: New South Wales Environmental Protection Authority *Better Practice Guide for Resource Recovery* (2019)

### APPENDIX B.3 TYPICAL COLLECTION VEHICLE INFORMATION



(a) Small rigid vehicle  
Clearance height 3.50  
Design turning radius 7.1

**TABLE 3.2**  
**MAXIMUM ROADWAY AND RAMP GRADES,**  
**AND RATES OF CHANGE OF GRADE**

Design vehicle	Roadway/ramp grade* (max.)	Rate of change of grade (max.)
SRV or smaller	1:6.5 (15.4%)	1:12 (8.3%) in 4.0 m of travel

**TABLE 4.1**  
**SERVICE BAY DIMENSIONS**

Vehicle class	Bay width (min.) m	Bay length (min.) m	Platform height m	Vertical clearance (min.) m
SRV	3.5	6.4	0.75 to 0.90	3.5



## APPENDIX B.4 TYPICAL MOTORISED BIN TUG

### Battery powered tug with a 1 or 2 tonne tow capacity



#### Features at a glance

One tonne (Evo 1T) or two tonne (Evo 2T) tow capacity

Auto latching hitch

Three speed motor with emergency stop

#### Typical applications

The Tug Evo is suitable for airports, factories, warehouses, apartment buildings or large facilities. This powered tug is also suitable for transporting medical carts around hospitals or moving heavy specialist equipment.

#### Features:

- 1 or 2 tonne tow capacity of inclines up to 6 degrees
- 500kg tow capacity if inclines up to 14 degrees
- CE Compliant
- 5 km/h max speed
- 2 x 12V 42Ah MK-gel batteries with 24V smart charger.
- Powerful transaxle

#### Safety Features:

- Intuitive control with standard automatic safety brake, forward and reverse drive.
- Emergency stop button.

Emergency back-off button

Source: <http://www.electrodrive.com.au/products/tugs/tug-evo.aspx>



## APPENDIX B.5 TYPICAL SEATED BIN MOVER

# SITECRAFT

MATERIALS HANDLING EQUIPMENT



17 Macquarie Drive, Thomastown, VIC 3074

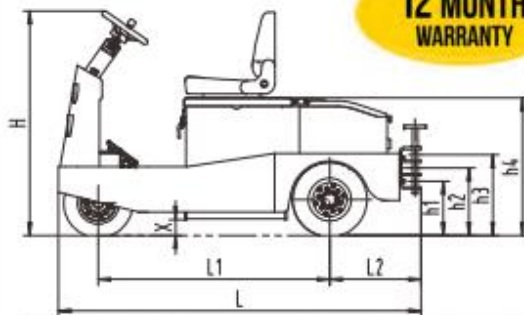
Phone: 1300 363 152

Fax: 1300 722 383

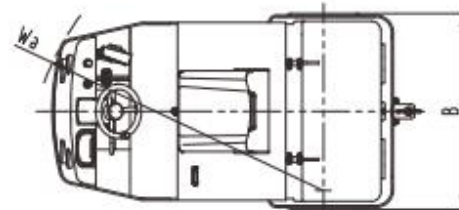
E: [sales@sitecraft.com.au](mailto:sales@sitecraft.com.au) ABN: 36 423 328 526

### SITECRAFT HEAVY DUTY ELECTRIC TOW TRACTOR

- > Towing capacities from 2000 kg to 6,000 kg
- > **Full AC electric system** has a brake-releasing function, making the unit easy and effortless to operate; The maintenance-free motor completely solves the issues of DC motor carbon brush.
- > Batteries located in the lowest part of frame ensures excellent stability
- > Quick open back service cover for easy maintenance and part replacement
- > CANbus technology reduces wiring complexity and increases reliability
- > H type axle design provides excellent stability
- > New high-range steering design; light steering and easy to maintain.
- > New large-screen instrument display provides information clearly and directly to the operator.



**12 MONTH  
WARRANTY**



Model		ST-2000AC	ST-3000AC	ST-5000AC	ST-6000AC
Towing Capacity	Kg	2000	3000	5000	6000
Drawbar Centre Height	h1/h2/h3 mm	280/350/420	280/350/420	280/350/420	280/350/420
Motor	Kw / V	3Kw / 36V	3Kw / 36V	5Kw / 48V	5Kw / 48V
Total Size	L x B x H mm	1720 x 968 x 1270	1720 x 968 x 1270	1975 x 1100 x 1270	1975 x 1100 x 1270
Total Weight (With Batteries)	Kg	740	780	1240	1280
Wheel Size	Solid Rubber	15"4-8	15"4-8	15"4-8	15"4-8
Wheelbase	L1 mm	1055	1055	1280	1280
Rear Hanging Distance	L2 mm	382	382	500	500
Seat Height	h4 mm	910	910	910	910
Ground Clearance	X mm	90	90	90	90
Turning Radius	Wa mm	1500	1500	1650	1650
Maximum Speed	Km/h	10	8	14	12
Battery	V/Ah	36/200	36/250	48/360	48/400
Battery Weight	Kg	200	250	610	650
Charger	On-board V/Ah	36/30	36/30	48/50	48/50

# SITECRAFT

MATERIALS HANDLING EQUIPMENT



17 Macquarie Drive, Thomastown, VIC 3074

Phone: 1300 363 152

Fax: 1300 722 383

E: sales@sitecraft.com.au ABN: 36 423 328 526

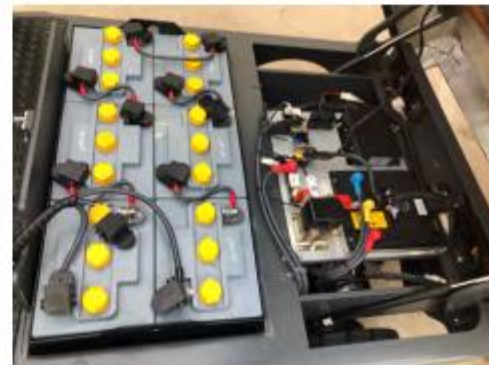
## SITECRAFT HEAVY DUTY ELECTRIC TOW TRACTOR



Sitecraft ST3000-AC tow tug moving 660 & 1100 litre bins



Sitecraft ST3000-AC tow tug moving 660 & 1100 litre bins



ST3000-AC tow tug complete with 6 x 250AH heavy duty batteries

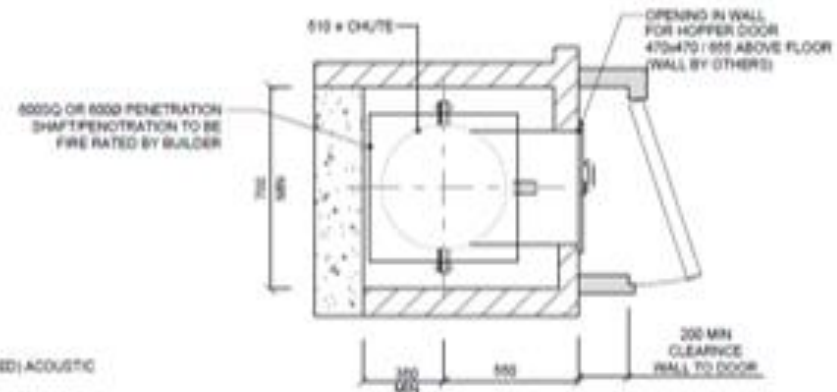
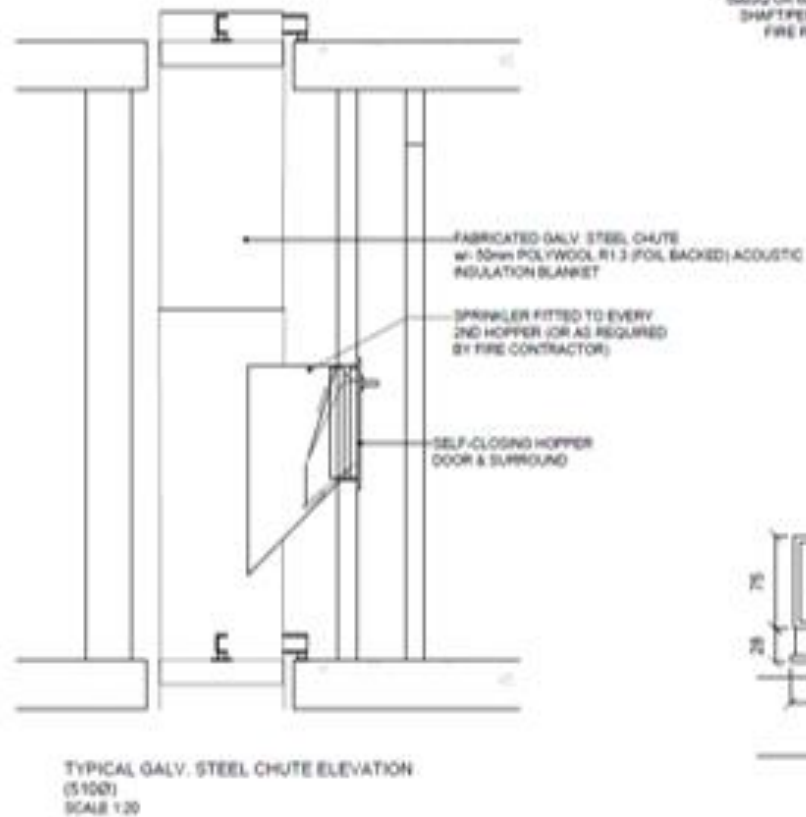


Optional steel / aluminium trailers for moving waste bins, linen trolleys, food trolleys, delivery boxes, etc ...

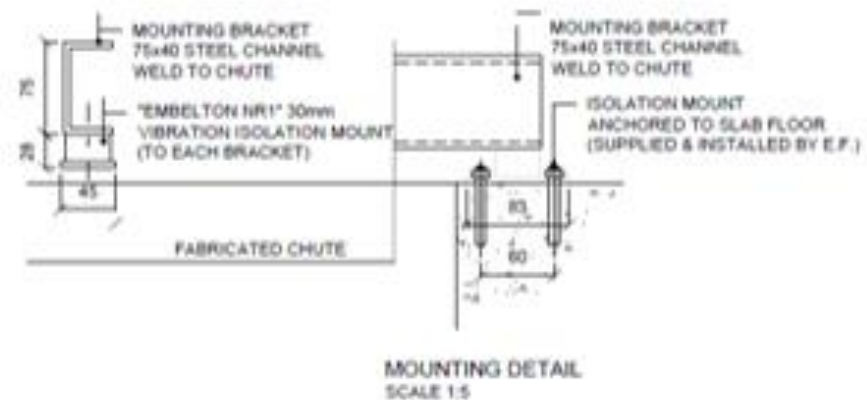
Source: <https://www.sitecraft.net.au/materials-handling/tow-tugs-powered-vehicles/electric-tow-vehicles/>

## APPENDIX C INSTALLATION EQUIPMENT

### APPENDIX C.1 TYPICAL SINGLE CHUTE LAYOUT

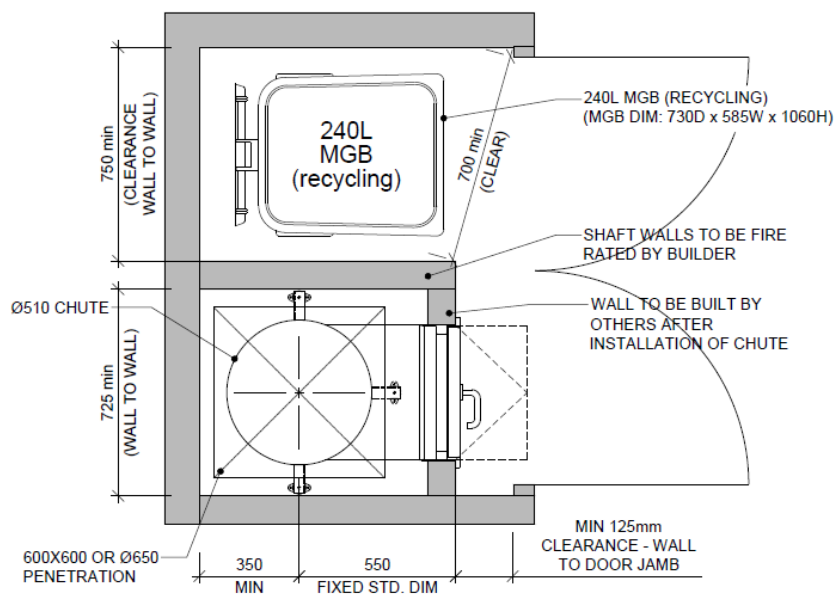


NOTE: ENCLOSURES ARE REQUIRED IF THE CHUTE OPENS DIRECTLY TO A CORRIDOR OR IS NOT LOCATED IN A WASTE ROOM




*Please Note: this is an example only – please refer to supplier's information and specification.*

## APPENDIX C.2 EXAMPLE CHUTE AND RECYCLING BIN LAYOUT



TYPICAL GALV. STEEL SINGLE CHUTE LAYOUT (510Ø)  
w/ADDED ENCLOSURE & RECYCLING CUPBOARD  
SCALE 1:20

NOTE: ENCLOSURES ARE REQUIRED IF THE CHUTE OPENS  
DIRECTLY TO A CORRIDOR OR IS NOT LOCATED IN A WASTE ROOM.

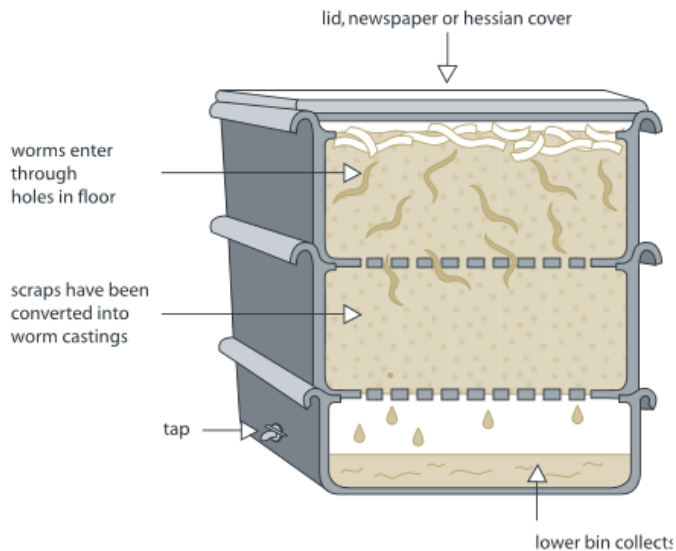
				 <p>44-46 Gibson Ave Padstow NSW 2211 Ph 02 9780 3500 info@elephantsfoot.com.au Free Call 1800 025 073 Fax 02 9707 2686</p>		Client SAMPLE LAYOUT	
						Project	
						Title	
				Designed & Drawn JWILTON 13.06.17		The	
				checked BATME		TYPICAL WASTE/RECYCLING CHUTE CONCEPT	
				Sheet Size A3		Job Number INFO	
				Scale 1:100		Drawing Number P-01	
				DO NOT SCALE FROM DRAWINGS		Revision A	

Please Note: this is an example only – please refer to supplier's information and specification.

## APPENDIX D SECONDARY WASTE MANAGEMENT PROVISIONS

### APPENDIX D.1 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 D.2 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 D.3 ELECTRIC ORGANIC COMPOST BIN



### Product Specifications

Decomposition Method	Fermentation by microorganisms
Decomposition Capacity	2 metric tonnes per year* (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 d 400 mm 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

<http://www.closedloop.com.au/domestic-composter>

## Karam

---

**From:** Troy Pemberton <troy.pemberton@jrrichards.com.au>  
**Sent:** Wednesday, 4 May 2022 9:34 AM  
**To:** Karam; forwarded email - GreggMcDonald  
**Cc:** Felicity Bitmead; 'Paul Oreshkin'; 'Donna Clarke'  
**Subject:** RE: 10 - 16 Pacific Dr Port Mcquarie  
**Attachments:** image011.wmz

Hi Karam

JR Richards can service this property with a small rigid vehicle.

Regards

Troy



**Troy Pemberton**  
Head of Operations – Northern Region

**JR Richards & Sons | Waste & Recycling Services**  
53 Jindalee Rd • PORT MACQUARIE • NSW • 2444  
T: 02 6580 3300 | M: [0401 719 369](tel:0401719369)  
E: [troy.pemberton@jrrichards.com.au](mailto:troy.pemberton@jrrichards.com.au) | [www.jrrichards.com.au](http://www.jrrichards.com.au)



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---

**From:** Karam <Karam@laurusprojects.com.au>  
**Sent:** Tuesday, 3 May 2022 10:58 AM  
**To:** Troy Pemberton <troy.pemberton@jrrichards.com.au>; forwarded email - GreggMcDonald <Gregg.McDonald@jrrichards.com.au>  
**Cc:** Felicity Bitmead <Felicity.Bitmead@jrrichards.com.au>; 'Paul Oreshkin' <poreshkin@dicksonrothschild.com.au>; 'Donna Clarke' <donna.clarke@ldynamics.com.au>  
**Subject:** RE: 10 - 16 Pacific Dr Port Mcquarie

Hi Troy,

I tried touching base with you through the office land line but wasn't able to reach you.

We are working on our updated design for our development at 10-16 Pacific Drive, Port Macquarie which JR Richards will be servicing in the future.

Can you please confirm if JR Richards have a Small Rigid Vehicle (SRV) that they can service the development with rather than a medium rigid vehicle? The number of apartments has been reduced significantly from the original drawings (from 67 to 44).

Please come back to us ASAP as we are relying on this to finalise our design.