



Stage 2, 11-17 Columbia Lane, Homebush
Residential Development

OPERATIONAL WASTE MANAGEMENT PLAN

16/07/2020
Report No. SO289
Revision F

Client

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Architect

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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
A	1/08/2019	A Armstrong	E Saidi	DRAFT
B	8/08/2019	A Armstrong	E Saidi	FINAL
C	23/08/2019	A Armstrong	E Saidi	AMENDMENT
D	27/11/2019	A Armstrong	E Saidi	AMENDMENT
E	10/07/2020	A Armstrong	E Saidi	AMENDMENT
F	16/07/2020	D Trinder	E Saidi	AMENDMENT

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TABLE OF CONTENTS

GLOSSARY OF TERMS.....	i
LIST OF TABLES.....	ii
INTRODUCTION	1
STRATHFIELD COUNCIL.....	2
COUNCIL OBJECTIVES.....	2
STAKEHOLDER ROLES AND RESPONSIBILITIES.....	3
EDUCATION.....	4
LIMITATIONS	4
RESIDENTIAL WASTE MANAGEMENT.....	5
ESTIMATED WASTE VOLUMES AND PROVISIONS	5
HOUSEHOLD WASTE.....	5
COMMON AREAS	5
SOURCE SEPERATION.....	6
GENERAL WASTE (WASTE).....	6
RECYCLING	6
GREEN WASTE.....	6
BULKY GOODS	6
ELECTRONIC WASTE.....	7
CHEMICAL WASTE	7
ORGANIC WASTE AND COMPOSTING	7
CLOTHING WASTE	7
MOVEMENT AND TRANSPORTATION OF BINS	8
COLLECTION OF WASTE.....	8
INSTALLATION EQUIPMENT AND DESIGN	9
EQUIPMENT SUMMARY.....	9
WASTE ROOM AREAS	9
WASTE ROOMS.....	10
CONSTRUCTION REQUIREMENTS	10
SIGNAGE.....	10
VENTILATION.....	10
USEFUL CONTACTS	11

APPENDICES.....	12
APPENDIX A ARCHITECTURAL DRAWING EXERPTS	12
APPENDIX A.1 TYPICAL LEVEL DISPLAYING CHUTE LOCATION	12
APPENDIX A.2 BASEMENT 1 DISPLAYING WASTE ROOMS.....	13
APPENDIX A.3 GROUND LEVEL BIN HOLDING/COLLECTION AREA.....	14
APPENDIX B PRIMARY WASTE MANAGEMENT PROVISIONS	15
APPENDIX B.1 STRATHFIELD COUNCIL BIN SPECIFICATIONS	15
APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS	16
APPENDIX B.3 TYPICAL COLLECTION VEHICLE INFORMATION	17
APPENDIX B.4 TYPICAL SEATED BIN MOVER.....	18
APPENDIX C INSTALLATION EQUIPMENT AND WASTE ROOM LAYOUTS	21
APPENDIX C.1 TYPICAL DUAL WASTE CHUTE SPECIFICATIONS.....	21
APPENDIX C.2 TYPICAL LINEAR TRACK SYSTEM	22
APPENDIX C.3 TYPICAL CAROUSEL SYSTEM	23

GLOSSARY OF TERMS

TERM	DESCRIPTION
<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>Waste</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>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

LIST OF TABLES

Table 1: Stakeholder Roles and Responsibilities.....	3
Table 2: Calculated Waste Generation – Residential	5
Table 3: Equipment Summary.....	9
Table 4: Waste Room Areas	9

INTRODUCTION

This report has been prepared to accompany a Development Application (DA) for the redevelopment of vacant land at 11-17 Columbia Lane, Homebush. The DA seeks consent for:

- Construction of a mixed-use residential development comprising:
 - Maximum GFA of 30,763sqm;
 - A 25 storey (Building A) and 26 storey (Building B) mixed-use building (two tower elements) with an 8 storey podium which includes a total of 360 apartments (inclusive of 3 ground floor live/work suites) and 2 retail suites.
 - 4 levels of basement car parking accommodating 381 car parking spaces.
- Landscaping works including the embellishment of a new communal open space area located in the north-eastern portion, a communal open space (courtyard) at ground level (western portion) and roof terraces above podium levels 7 and 8.
- Provision of a public domain and new road corridor which includes an extension of Nipper Street to the south, providing a connection between Gramophone Lane and Columbia Lane.

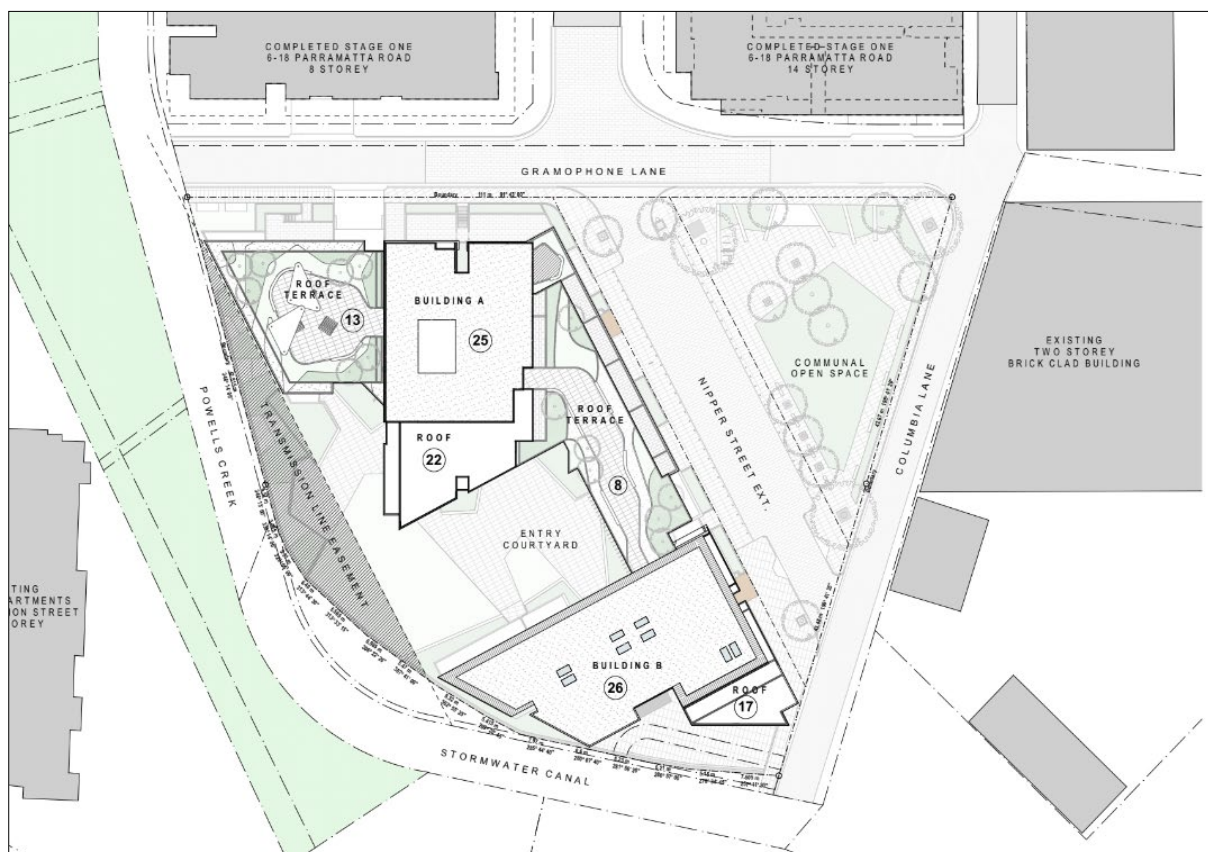


Figure 1: Site Layout Plan

STRATHFIELD COUNCIL

The residential waste and recycling will be guided by acceptance criteria of the Strathfield Council. It is proposed that waste collections will be undertaken by both Council and an allocated private waste contractor. All waste facilities and equipment are to be designed and constructed to be in compliance with the Strathfield Council's *Strathfield Consolidated Development Control Plan 2005 – Part H Waste Minimisation and Management Plan*, Australian Standards and statutory requirements.

COUNCIL OBJECTIVES

- a) To maximise reuse and recycling of building and construction materials, household generation waste, industrial and commercial waste.
- b) To assist in achieving Federal and State Government waste minimisation targets.
- c) To minimise the overall environmental impacts of waste and to provide advice to the community on how to prepare Waste Management Plans, detailing actions to minimise waste generation and disposal.
- d) To provide advice to the community on matters to be considered when assessing the waste implications of applications made under the Environmental Planning and Assessment Act 1979 and the Local Government Act 1993.
- e) To require source separation and other design and location standards which complement waste collection and management services offered by Council and private operators.
- f) To provide advice to the community on how to reduce and handle waste during the demolition and construction phase.
- g) To encourage building designs and construction techniques that will minimise future waste generation.
- h) To provide details for the design and construction of waste handling storage facilities in buildings.
- i) To prevent large quantities of bins from being placed on street frontages and detracting from the visual amenity of the area by requiring onsite collection.
- j) To facilitate safe and practical collection options in new development for Council collection staff and contractors.
- k) To ensure that medium and high density development in the Parramatta Road Corridor are adaptable for future connection to an automated waste collection system.

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	Ensuring that all waste service providers submit monthly reports on all equipment movements and waste quantities/weights; Organising internal waste audits/visual assessments on a regular basis; and Manage any non-compliances/complaints reported through waste audits.
Building Manager/Waste Caretaker	Ensuring effective signage, communication and education is provided to occupants, tenants and cleaners; Providing staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities; Ensuring site safety for residents, children, visitors, staff and contractors; Abiding by all relevant OH&S legislation, regulations, and guidelines; Assessing any manual handling risks and prepare a manual handling control plan for waste and bin transfers; Preventing storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins) If a blockage is evident, building management or cleaning staff must immediately take steps to identify the level concerned and clear the blockage General maintenance and cleaning of chute doors on each level; Cleaning and transporting of bins as required; Organising, maintaining and cleaning the general and recycled waste holding area; Organising both waste and recycled waste pick-ups as required; Organising replacement or maintenance requirements for bins; Organising bulky goods collection when required; and Investigating and ensuring prompt clean-up of illegally dumped waste materials.
Residents/Tenants	Dispose of all waste and recycling in the allocated waste chutes and/or MGBs provided; Ensure adequate separation of garbage and recycling; and Compliance with the provisions of Council and the WMP.
Council/Private Waste Contractor	Provide a reliable and appropriate waste collection service; Provide feedback to building managers/residents in regards to contamination of recyclables; and Work with building managers to customise waste systems where possible.
Gardening/Landscaping Contractor	Removal of all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.
Building Contractors	Removing all construction related waste offsite in a manner that meets all authority requirements.

EDUCATION

Educational material encouraging correct separation of waste 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, 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 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:

- Council are subject to changing waste and recycling policies and requirements at their own discretion.
- The works agreed to in the fee proposal includes a review of the waste management plans and up to three amendments. Any revisions subsequent to the third amendments will be charged at an hourly rate.
- 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 adjust 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.

RESIDENTIAL WASTE MANAGEMENT

The *Strathfield Consolidated Development Control Plan 2005 – Part H Waste Minimisation and Management Plan* has been referenced to calculate the total number of bins required for the site. 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 waste and recycling generated by the residential component of the development.

Table 2: Calculated Waste Generation – Residential

Building/ Core	# Units	Garbage Generation Rate (L/unit/week)	Generated Garbage (L/w week)	Recycling Generation Rate (L/unit/w week)	Generated Recycling (L/w week)
A	360	120	43200	120	43200
TOTAL	360		43200		43200
Collections & Equipment	Garbage Bin Size (L)		660	Recycling Bin Size (L)	
	Garbage Bins per Day		10	Recycling Bins per Day	
	Garbage Collections per Week		1	Recycling Collections per Week	
	Total Garbage Bins Required		66	Total Recycling Bins Required	
Waste Rooms	Chute Discharge Equipment		Track Systems Required		

**Note: Additional 660LL MGBs should be provided for each chute discharge for use during collection periods. These bins are not included in the above figures.*

HOUSEHOLD WASTE

Each building will be supplied with 1 waste chute and 1 recycling chute. Access will be provided on each residential level.

Both waste and recycling discharges into 660L MGBs placed on separate linear and/or carousel track systems. The tracks systems are located in the separate waste rooms on basement 1.

On collection days, the building caretaker will transfer full MGBs to the bin holding area on the ground level, via the designated bin hoist, to await servicing.

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 (WASTE)

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

RECYCLING

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 – a cardboard collection bin will be made available to residents to deposit flattened cardboard and will be managed by the waste caretaker. Residents should be advised of the location of these bins by building management.

GREEN WASTE

Green waste is not typically generated from multi-unit dwellings other than from surrounding building landscaped areas and is removed by the designated maintenance contractor. In the event that green waste is produced i.e trimming of indoor or balcony plants then this may be disposed of via coordination with the building caretaker or cleaner. Very small quantities may be disposed of via the general waste stream.

BULKY GOODS

Strathfield Council requires that room or caged area will be made available for the storage of discarded residential bulky items (e.g. whitegoods, furniture, etc.). This room should be located within close proximity of the garbage and recycling bin collection room and must have a minimum doorway width of 1.5m to allow for easy movement of large waste items in and out of the room.

The bulky goods storage area should be provided at a rate of 4m² per 10 units. Based on this, the required bulky goods storage room size is **159m²**.

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, such as food scraps and garden materials, dramatically reduces the quantity of waste being diverted 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.

CLOTHING WASTE

Clothing is becoming an increasingly large waste stream for domestic dwellings. Unwanted clothing that is clean and undamaged can be donated to charities. Building management may choose to provide clothing donation bins for residents to donate their unwanted clothing. Building management can directly contact a charity to supply a donation bin or choose to provide their own nondenominational donation bin. Once a sufficient amount of clothing has been collected, the building management will be responsible for arranging the collection of donated items with the relevant charity.

MOVEMENT AND TRANSPORTATION OF BINS

The building manager/waste caretaker is responsible for the transportation of bins from their designated operational locations to their respective collection room/areas prior to scheduled collection times, and 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.

If required the developer should 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.

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

On collection days the building caretaker will transfer full MGBs, via the designated bin hoist, to the central bin holding area on the ground level for servicing.

The Council collection vehicle will enter the services loading area, via Columbia Lane and service all MGBs directly from the bin holding area.

Once serviced, the building caretaker will ensure that all MGBs are returned to their allocated storage locations.

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

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.

INSTALLATION EQUIPMENT AND DESIGN

EQUIPMENT SUMMARY

Table 3: Equipment Summary

Component	Part	Qty	Notes
Chutes	Galvanised Steel / LLDPE Polyethylene Plastic 510mm or 610mm (for 20+ levels)	4	510/610mm diameter (See APPENDIX C for Typical Chute Section)
Equipment A	Garbage 3-bin 1100L MGB Linear Track System with Compactor 4-bin 1100L MGB Carousel with Compactor	2	(See APPENDIX C.2 for Typical Linear System) (See APPENDIX C.3 for Typical Carousel)
	Recycling 2-bin 1100L MGB Linear Track System with Compactor 4-bin 1100L MGB Carousel with Compactor	2	See APPENDIX C.2 for Typical Linear System) (See APPENDIX C.3 for Typical Carousel)
Equipment B	Suitable Bin Hoist	1	NA
	Suitable Bin Moving Device	Optional	Optional (See APPENDIX B.4 for Typical Bin Mover)

WASTE ROOM AREAS

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 bin holding area must have the capacity to accommodate 132 x 660L MGBs and sufficient room to access and manoeuvre MGBs. A bin wash down area will be provided within this area.

Elephants Foot Recycling Solutions confirms that the proposed bin holding room location is at grade level and has no conflict with other uses and suited to its activity.

The areas allocated for residential waste rooms, bulky goods and collection areas are detailed in Table. 4 below.

Table 4: Waste Room Areas

Level	Waste Room Type	Equipment	Allocated Area (m ²)
B1	Waste Room 1	Waste: 33 x 660L MGBs Recycling: 33 x 660L MGBs Track Systems x 2	192.56
B1	Waste Room 2	Waste: 33 x 660L MGBs Recycling: 33 x 660L MGBs Track Systems x 2	241.16
B1	Bulky Goods Waste Storage Room		144.41
G	Bin Holding Area & Bin Hoist Room	Capacity to hold a minimum of 132 x 660L MGBs	320.68

WASTE ROOMS

CONSTRUCTION REQUIREMENTS

The waste 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/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.

USEFUL CONTACTS

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

Strathfield Council Customer Service

Phone: (02) 9806 5050

Email: council@cityofparramatta.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 (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

PURIFYING SOLUTIONS (Odour Control)

Phone: 1300 636 877

Email: sales@purifyingsolutions.com.au

MOVEXX (Bin Movers)

Phone: 1300 763 444

AUSCOL (Recycling Oils & Animal Fats)

Phone: 1800 629 476

Elephants Foot Recycling Solutions (Chutes, Compactors and eDiverter Systems)

44 – 46 Gibson Avenue

Padstow NSW 2211

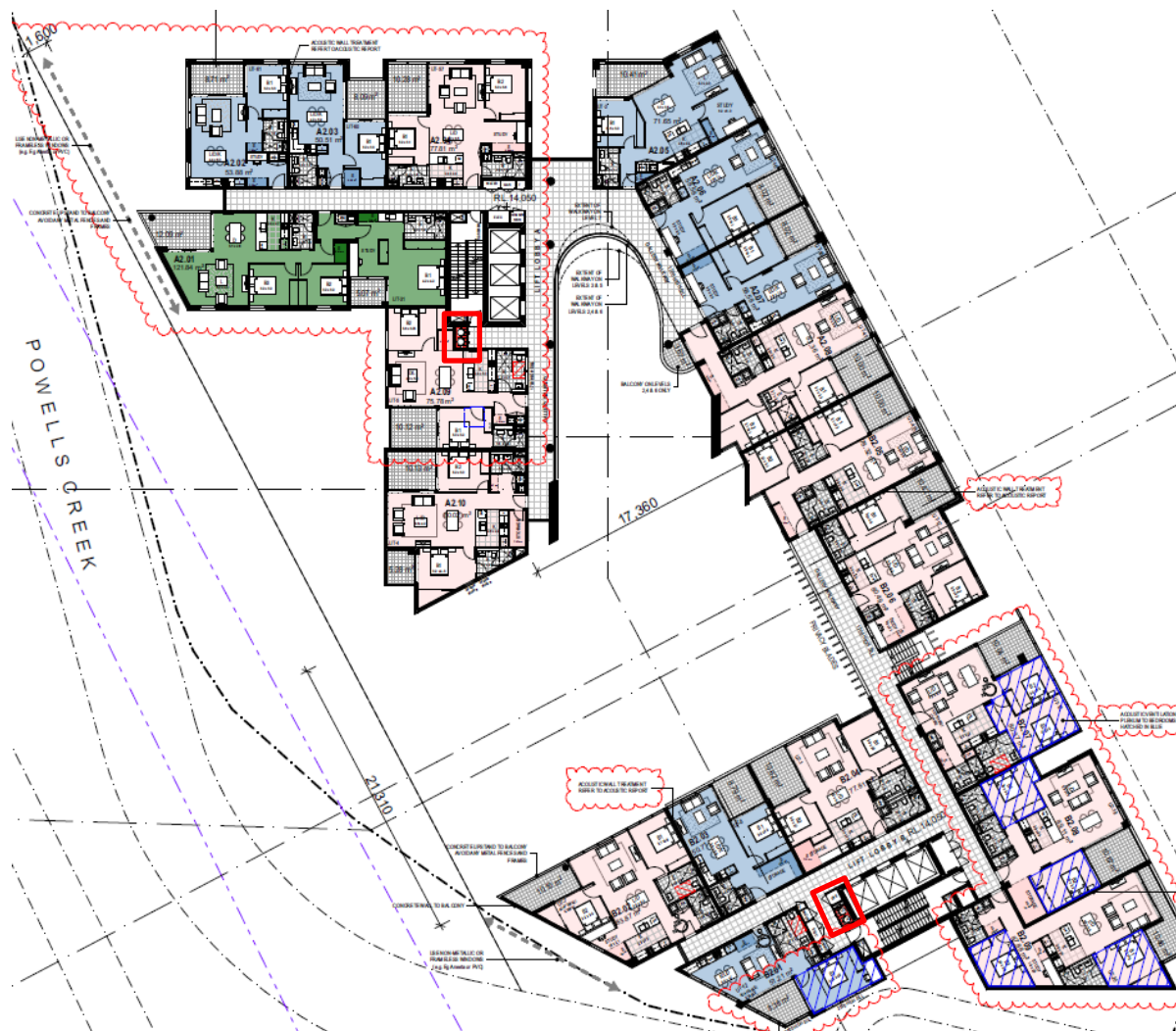
Free call: 1800 025 073

Email: info@elephantsfoot.com.au

APPENDICES

APPENDIX A ARCHITECTURAL DRAWING EXERPTS

APPENDIX A.1 TYPICAL LEVEL DISPLAYING CHUTE LOCATION



Excerpt – Mosca Pserras Architects, Drawing – AP10 D 15/07/20 – Levels 2-6

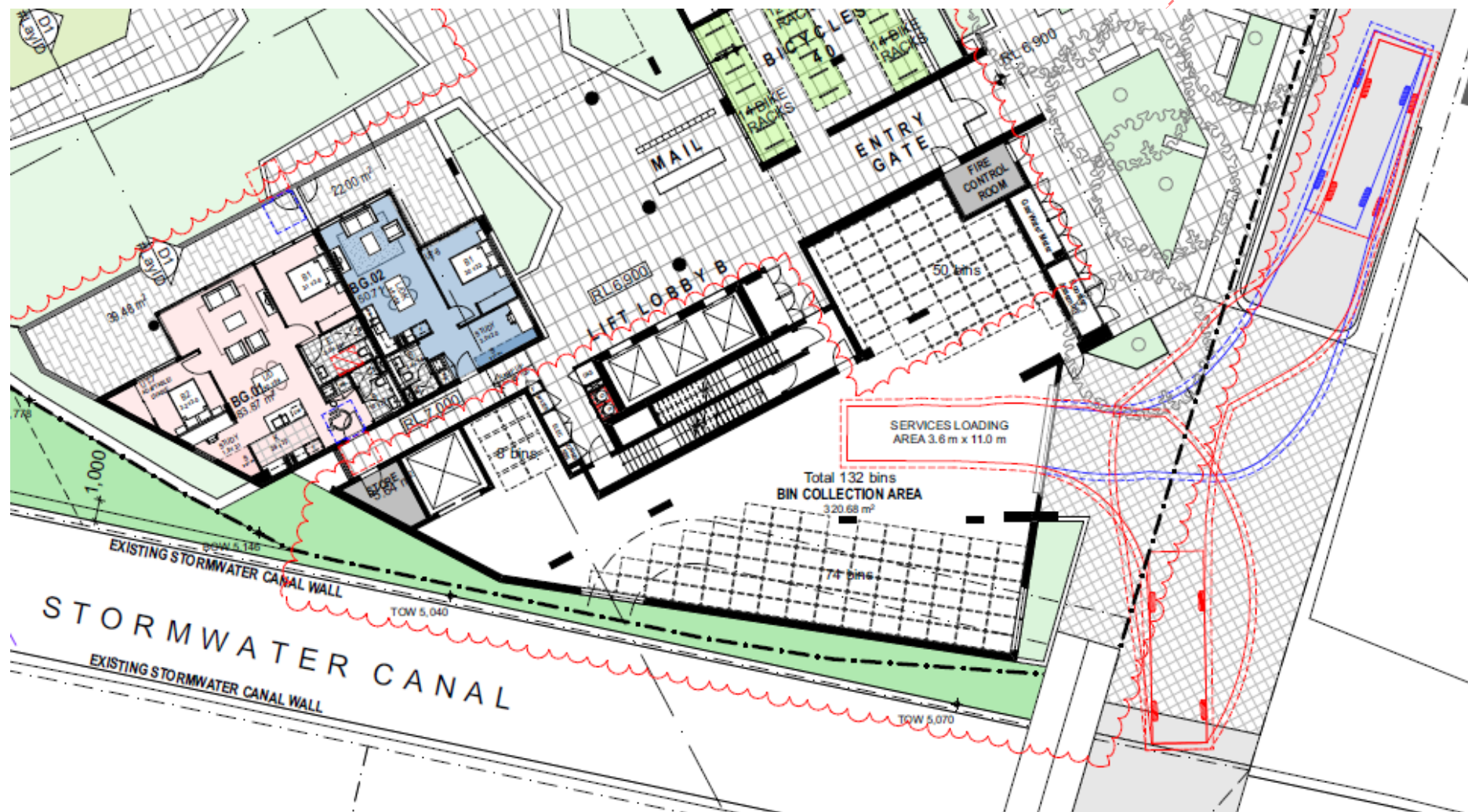
APPENDIX A.2 BASEMENT 1 DISPLAYING WASTE ROOMS



Excerpt – Mosca Pserras Architects, Drawing – AP07 D 15/07/20 – Basement 1

OPERATIONAL WASTE MANAGEMENT PLAN

APPENDIX A.3 GROUND LEVEL BIN HOLDING/COLLECTION AREA



Excerpt – Mosca Pserras Architects, Drawing – AP08 D 15/07/20 – Ground Floor

APPENDIX B PRIMARY WASTE MANAGEMENT PROVISIONS

APPENDIX B.1 STRATHFIELD COUNCIL BIN SPECIFICATIONS

Mobile Garbage Bins (MGBs)					
<i>All MGBs should comply with Australian Standard for Mobile Waste Containers (AS 4123) which establishes standard size and colour requirements for bodies and lids based on materials contained.</i>					
Bin Type (2 wheels)	80L	120L	140L	240L	360L
Height (mm)	870	940	1065	1080	1100
Depth (mm)	530	560	540	735	885
Width (mm)	450	485	500	580	600
Bin Type (4 wheels)	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
Bin Type (bulk bins)	2.0m ³ Skip	3.0m ³ Skip	4.5m ³		
Height (mm)	865	1225	1570		
Depth (mm)	1400	1505	1605		
Width (mm)	1830	1805	1805		

APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS

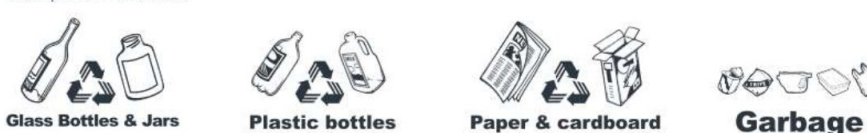
WASTE SIGNS

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

Example wall posters



Example bin lid stickers



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.

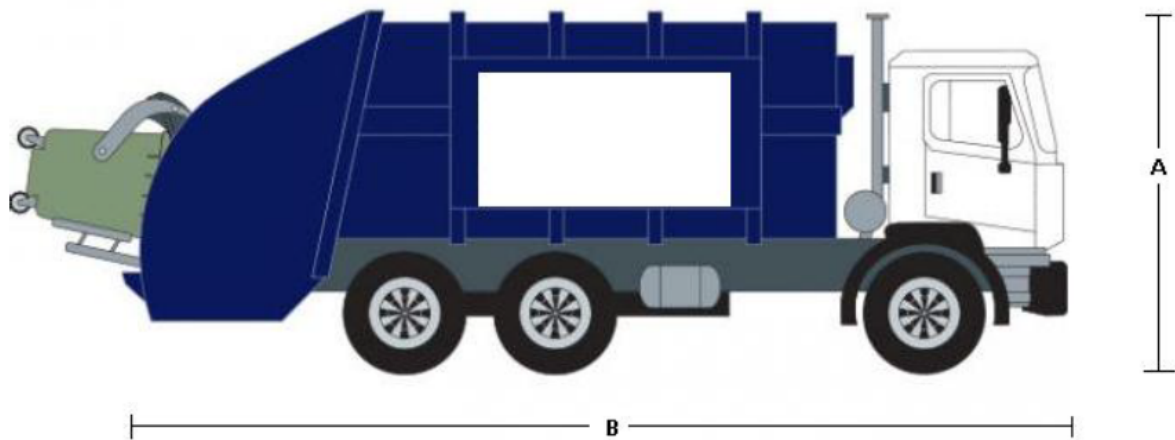
Examples of Australian Standards:



Australian Standards are available from the SAI Global Limited website (www.saiglobal.com).

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

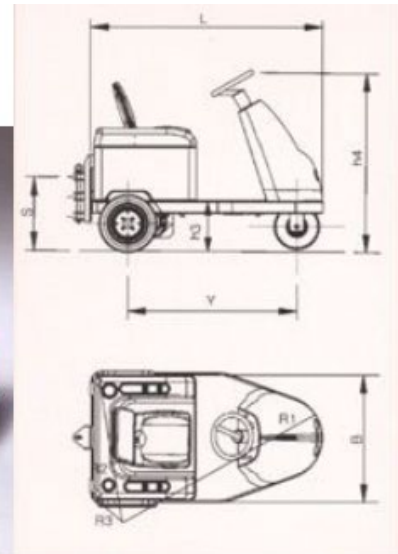
APPENDIX B.3 TYPICAL COLLECTION VEHICLE INFORMATION



Typical medium sized, rear loading collection vehicle specifications		Design Requirements
Width	2.2 - 2.5m	3.6m (one way)
Height (A)	2.5 - 3.0m	3.6m
Length (B)	8.64 - 9.4m	10m
Maximum Loaded weight	16 t	16 t
Turning Circle (kerb to kerb)	16.8m	18m
Note: Turning circles are kerb to kerb. Design specifications must provide necessary overhang and clearance room.		

Note: Design requirements allow additional area for body clearance and changing vehicle size

APPENDIX B.4 TYPICAL SEATED BIN MOVER



		UNIT M.	BULL 2	BULL 4
Manufacturer	DEC			
Model	BULL			
Platform loading cap.	Nominal capacity	kg	-----	-----
Pull capacity	Pull nominal capacity	kg	2000	4000
Power type	Electric - endothermic		electric	electric
Control type	Standing / seated thiller / steer		seated / steer	seated / steer
Tyres	Pn=pneum. Se=superelastic		Pn	Pn
Wheels	N. front/rear - x drive	n.	1/2X	1/2X
Platform dimensions	L x B (lengh x width)	mm	-----	-----
Platform hight	h6 = unload clearance	mm	-----	-----
Overall dimensions	L = lenght	mm	1500	1600
	B = width	mm	900	930
	h1 = foot leve	mm	1820	1960
	h3 = Seat height	mm	310	340
	h4 = Steer height	mm	1250	1330
Turning radius	R1 = front min. external	mm	1400	1500
	R2 = rear min. external	mm	1000	1000
	R3 = front min. internal	mm	400	400
Aisle width	A = 180° turn	mm	2200	2300
Tow hook height	s = center from ground	mm	220-350-490	240-380-520



Suitable for:

- Insulated food trolleys (eg: Cambro, Rubbermaid, Carlisle)
- 820/120/240/660/1100ltr Plastic wheelie bins
- General use for transport of goods
- Hospitals, Aged care, residential and commercial applications

Size:

2/4/6/8 bin, also custom sizes to suit your application

Designed Speeds: 5km to 20km/hr maximum

Not for highway use.

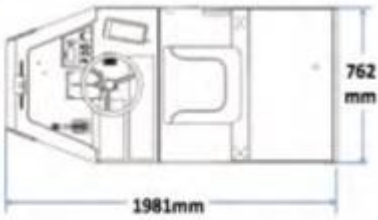
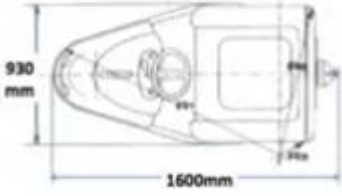
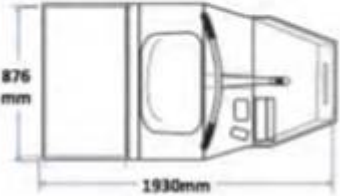
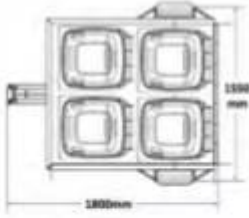
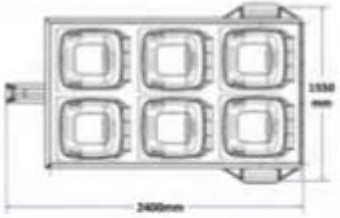
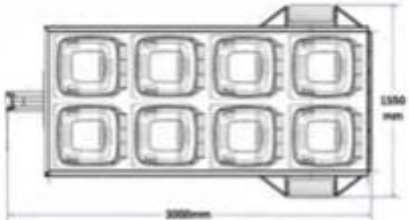
- Heavy Gauge Aluminium construction fully welded.
- Inline 700 mm models will fit through standard doorways.
- Engineer designed, lightweight yet extremely robust and easily cleaned.
- Can be pushed by one person or towed with Spacepac Battery Electric Tugs

Fixed draw-bar pre-drilled to suit standard connections types:

- 50mm towbar hitch - Towhitch supplied if required
- Drop-in pin hitch - 20mm to 25mm Hole
- Pintle hitch - 50mm Ring

Adjustable height to suit different tugs

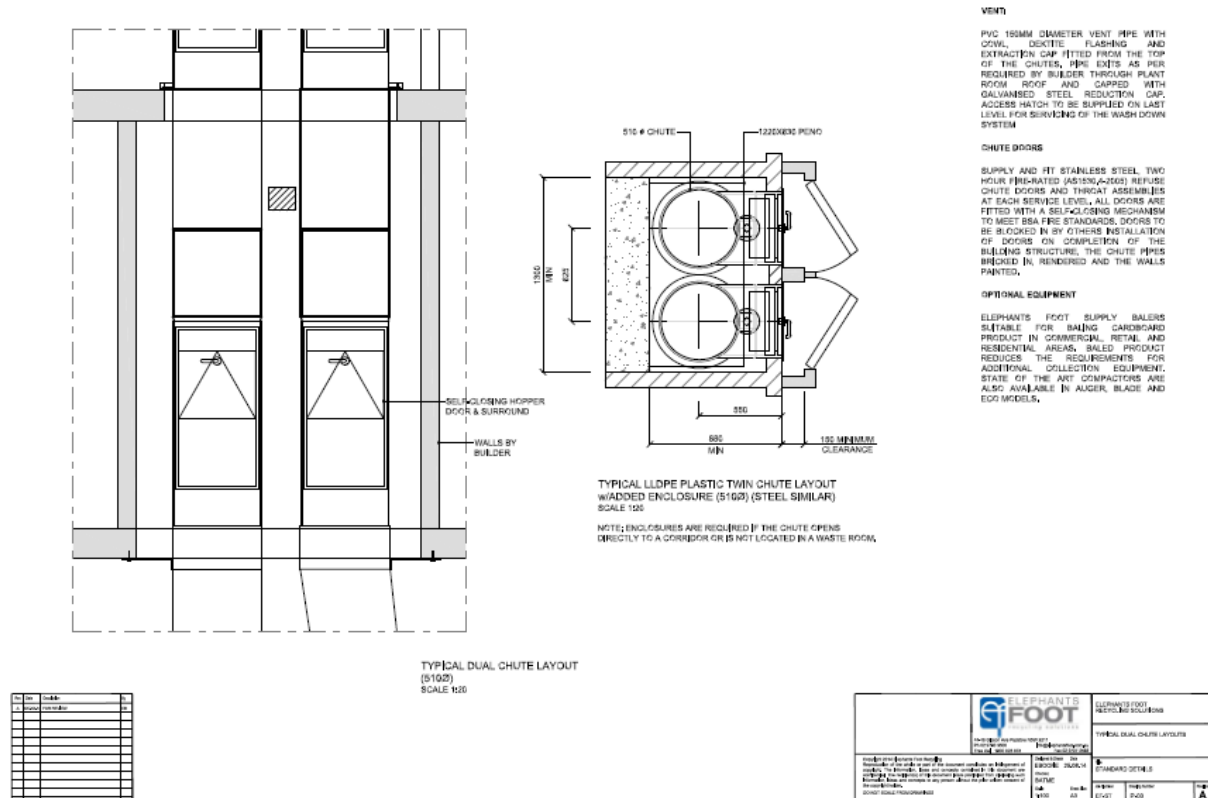


 <p>Motrec MP-240</p>	<p>Small Rigid Vehicle (SRV) the SRV represents light trucks to a maximum load capacity of 10 ton and typically having a single rear axle and either single or dual tyres. Typically used in service areas where small commercial vehicles are preferred.</p>
 <p>Dec Bull 2/4</p>	 <p>Cushman 8K</p>
 <p>Aluminium Trailer – 4 Bins</p>	 <p>Aluminium Trailer – 6 Bins</p>
 <p>Aluminium Trailer – 8 Bins</p>	

SOURCE – EMOVEIT <https://emoveit.com.au/>

APPENDIX C INSTALLATION EQUIPMENT AND WASTE ROOM LAYOUTS

APPENDIX C.1 TYPICAL DUAL WASTE CHUTE SPECIFICATIONS



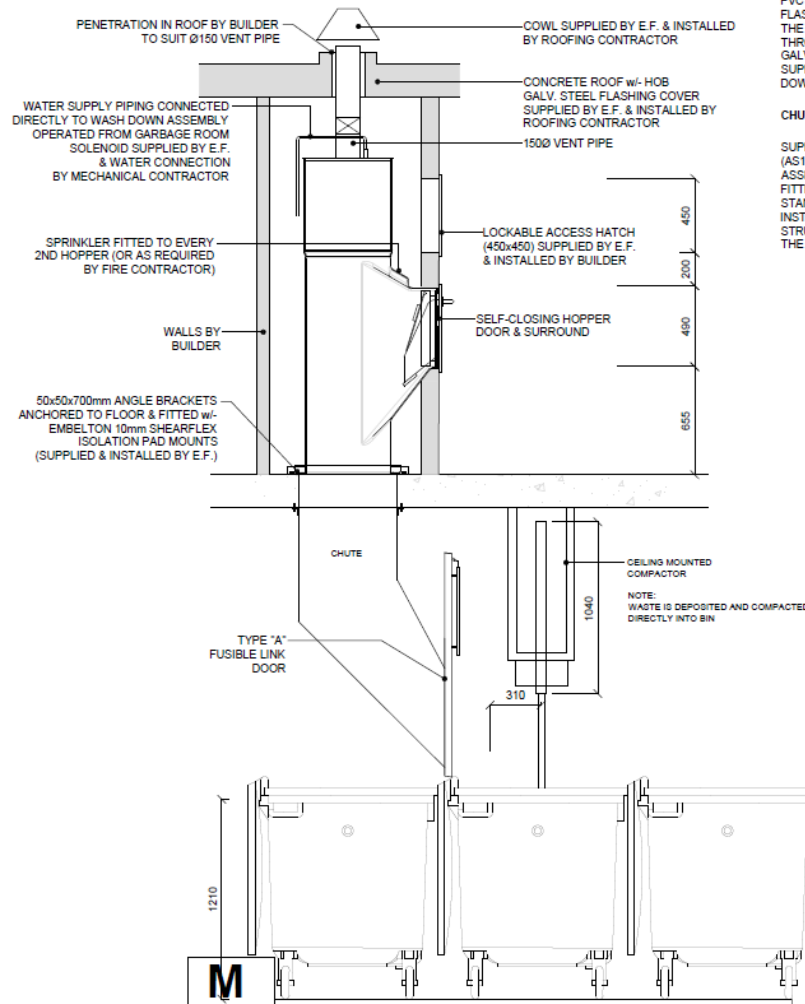
Waste chutes are supplied per the following specifications:

- either 510mm or 610mm (for 20+ levels) galvanised steel or recycled LLDPE polyethylene plastic;
- galvanised steel chute hoppers are wrapped with 50mm poly-wool R1.3 noise insulation foil to assist in noise reduction (or equivalent);
- penetrations on each building level at vertically perpendicular points with minimum penetration dimensions of either 600x600/700x700mm (square) or 650/750mm diameter (round) are required to accommodate the chute installation;
- a wash down system and vent should also be included as part of the chute system;
- council and supplier require that all chutes are installed without offsets to achieve best practise operationally for the building; and
- two hour fire-rated (AS1530.4-2005) stainless steel refuse chute doors at each service level. All doors are to be fitted with a self-closing mechanism to meet BSA fire standards.

NOTE: Chute doors are installed after walls rendered, painted or when required. Information stickers will be placed on each chute door at each residential level.

OPERATIONAL WASTE MANAGEMENT PLAN

APPENDIX C.2 TYPICAL LINEAR TRACK SYSTEM



VENT:

PVC 150MM DIAMETER VENT PIPE WITH COWL, DEKITE FLASHING AND EXTRACTION CAP FITTED FROM THE TOP OF THE CHUTES. PIPE EXITS AS PER REQUIRED BY BUILDER THROUGH PLANT ROOM ROOF AND CAPPED WITH GALVANISED STEEL REDUCTION CAP. ACCESS HATCH TO BE SUPPLIED ON LAST LEVEL FOR SERVICING OF THE WASH DOWN SYSTEM

CHUTE DOORS

SUPPLY AND FIT STAINLESS STEEL TWO HOUR FIRE-RATED (AS1530.4-2005) REFUSE CHUTE DOORS AND THROAT ASSEMBLIES AT EACH SERVICE LEVEL. ALL DOORS ARE FITTED WITH A SELF-CLOSING MECHANISM TO MEET BSA FIRE STANDARDS. DOORS TO BE BLOCKED IN BY OTHERS INSTALLATION OF DOORS ON COMPLETION OF THE BUILDING STRUCTURE. THE CHUTE PIPES BRICKED IN, RENDERED AND THE WALLS PAINTED.

FIRE

FIRE SYSTEM CONTRACTOR TO:

- SUPPLY FIRE SPRINKLERS AND CONNECTION FOR SPRINKLER SYSTEM
- SPRINKLERS FITTED ON EVERY 2ND LEVEL (OR AS PER FIRE CONTRACTOR INSTRUCTION)

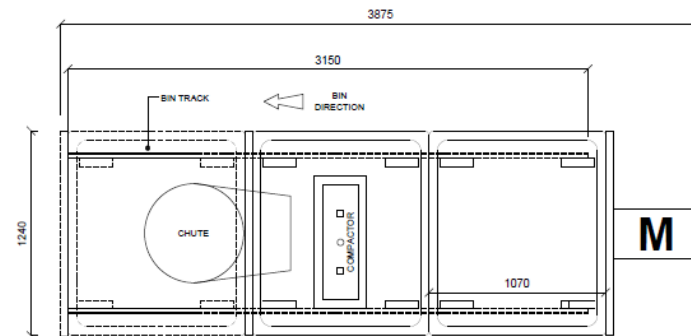
ELECTRICAL

YOUR ELECTRICIAN TO PROVIDE:

- ONE (1) STANDARD 240V GPO IN MAIN GARBAGE ROOM
- ONE (1) 415VOLTS, 5 PINS, 20AMPS FOR EACH REQUIRED COMPACTOR, CAROUSEL OR LINEAR
- COORDINATE WITH ELECTRICAL SUBCONTRACTOR

OPTIONAL EQUIPMENT

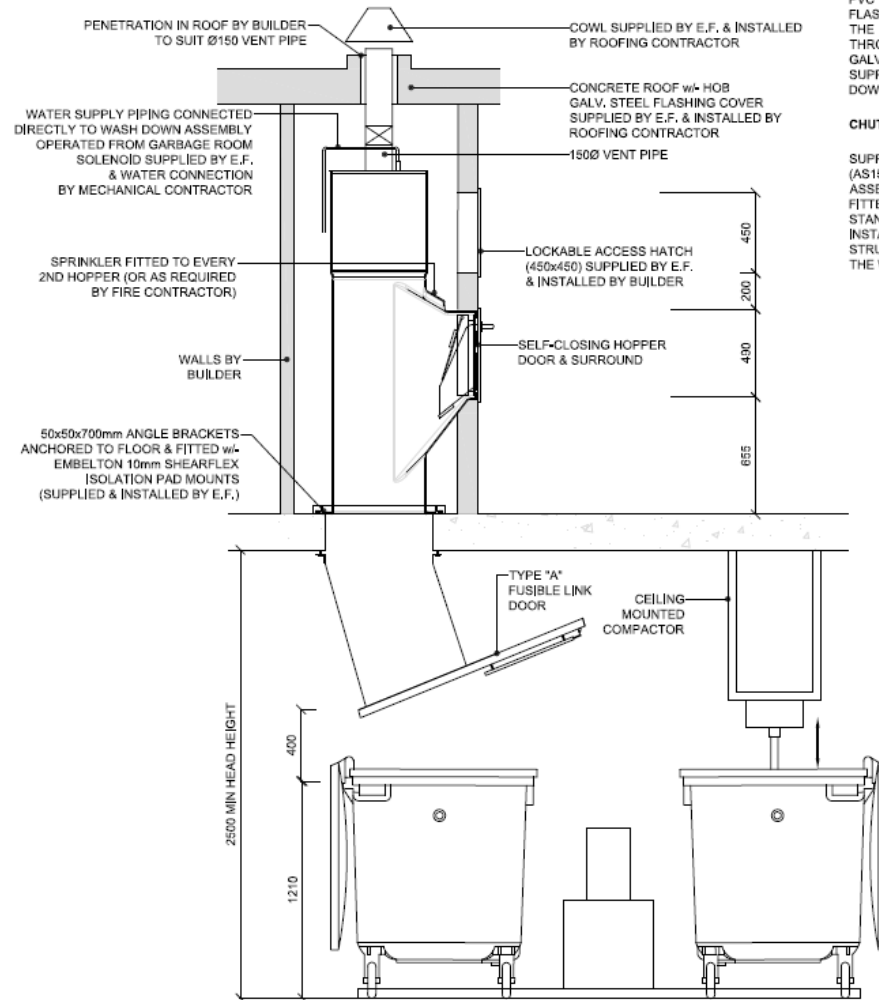
ELEPHANTS FOOT SUPPLY BALERS SUITABLE FOR BALING CARDBOARD PRODUCT IN COMMERCIAL, RETAIL AND RESIDENTIAL AREAS. BALED PRODUCT REDUCES THE REQUIREMENTS FOR ADDITIONAL COLLECTION EQUIPMENT. STATE OF THE ART COMPACTORS ARE ALSO AVAILABLE IN AUGER, BLADE AND ECO MODELS.



TYPICAL 2-BIN 1100L LINEAR WITH COMPACTOR
SCALE NTS

OPERATIONAL WASTE MANAGEMENT PLAN

APPENDIX C.3 TYPICAL CAROUSEL SYSTEM



VENT:

PVC 150MM DIAMETER VENT PIPE WITH COWL, DEKITE FLASHING AND EXTRACTION CAP FITTED FROM THE TOP OF THE CHUTES. PIPE EXITS AS PER REQUIRED BY BUILDER THROUGH PLANT ROOM ROOF AND CAPPED WITH GALVANISED STEEL REDUCTION CAP. ACCESS HATCH TO BE SUPPLIED ON LAST LEVEL FOR SERVICING OF THE WASH DOWN SYSTEM

CHUTE DOORS

SUPPLY AND FIT STAINLESS STEEL, TWO HOUR FIRE-RATED (AS1530.4-2005) REFUSE CHUTE DOORS AND THROAT ASSEMBLIES AT EACH SERVICE LEVEL. ALL DOORS ARE FITTED WITH A SELF-CLOSING MECHANISM TO MEET BSA FIRE STANDARDS. DOORS TO BE BLOCKED IN BY OTHERS INSTALLATION OF DOORS ON COMPLETION OF THE BUILDING STRUCTURE, THE CHUTE PIPES BRICKED IN, RENDERED AND THE WALLS PAINTED.

FIRE

FIRE SYSTEM CONTRACTOR TO:

- SUPPLY FIRE SPRINKLERS AND CONNECTION FOR SPRINKLER SYSTEM
- SPRINKLERS FITTED ON EVERY 2ND LEVEL (OR AS PER FIRE CONTRACTOR INSTRUCTION)

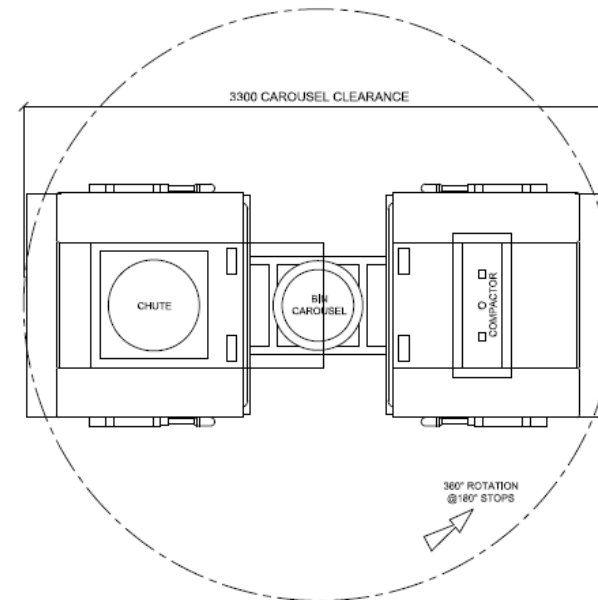
ELECTRICAL

YOUR ELECTRICIAN TO PROVIDE:

- ONE (1) STANDARD 240V GPO IN MAIN GARBAGE ROOM
- ONE (1) 415VOLTS, 5 PINS, 20AMPS FOR EACH REQUIRED COMPACTOR, CAROUSEL OR LINEAR
- COORDINATE WITH ELECTRICAL SUBCONTRACTOR

OPTIONAL EQUIPMENT

ELEPHANTS FOOT SUPPLY BALERS SUITABLE FOR BALING CARDBOARD PRODUCT IN COMMERCIAL, RETAIL AND RESIDENTIAL AREAS. BALED PRODUCT REDUCES THE REQUIREMENTS FOR ADDITIONAL COLLECTION EQUIPMENT. STATE OF THE ART COMPACTORS ARE ALSO AVAILABLE IN AUGER, BLADE AND ECO MODELS.



TYPICAL 2-BIN 1100L CAROUSEL WITH COMPACTOR
SCALE NTS