

WASTE MANAGEMENT PLAN

PREPARED FOR

MERITON GROUP

RESIDENTIAL DEVELOPMENT
100 BENNELONG ROAD
SYDNEY OLYMPIC PARK NSW 2127



SOURCE: TURNER

AMENDED JUNE 2014

The information contained in this document produced by Elephants Foot Recycling Solutions is solely for the use of the Client identified on the cover sheet for the purpose for which it has been prepared and Elephants Recycling Solutions undertakes no duty to, nor accepts any responsibility to, any third party who may rely upon this document.

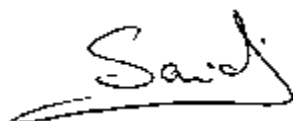
ABOUT ELEPHANTS FOOT

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

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

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

Regards

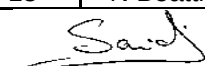


Eddy Saidi
Director
Elephants Foot Recycling Solutions

REVISIONS

Revision	Copy No.	Date	Prepared by	Reviewed by	Approved by	Remarks
-	1	May-13	N Beattie	E Saidi	E Saidi	Planning
A	1	Jun-13	N Beattie	E Saidi	E Saidi	Planning
B	1	Jun-13	N Beattie	E Saidi	E Saidi	Amendment

Authorised By:
Date:


12 June 2014

DISTRIBUTION LIST

Recipient Name	Company	Revision	Copy No.
Eddy Saidi	Elephants Foot Recycling Solutions	B	1
Tom Hutchinson	Meriton Group	B	1

CONTENTS

EXECUTIVE SUMMARY	5
AUBURN CITY COUNCIL.....	6
OBJECTIVES.....	6
INTRODUCTION	7
TABLE 1 – UNIT MIX PER BUILDING	7
FIGURE 1 – SITE PLAN	8
GENERATED WASTE VOLUMES.....	9
CONSTRUCTION AND DEVELOPMENT WASTE.....	9
WASTE DEFINITION	9
BUILDING MANAGER/ WASTE CARETAKER	9
REPORTING	10
EDUCATION	10
RESIDENTIAL UNITS WASTE	11
TABLE 2 – RESIDENTIAL WASTE GENERATION	11
WASTE MANAGEMENT SYSTEM	12
TABLE 3 – WASTE ROOM ALLOCATION.....	12
WASTE HANDLING.....	12
WASTE CHUTES.....	13
EQUIPMENT SUMMARY.....	13
CHILD CARE CENTRE.....	14
TABLE 3 – CHILD CARE WASTE GENERATION	14
MANAGEMENT OFFICE/LEISURE FACILITIES	15
TABLE 4 – RETAIL WASTE GENERATION	15
COMMON AREAS	15
GREEN WASTE.....	15
COMPOSTING.....	16
OTHER WASTE STREAMS.....	16
WASTE ROOM AREAS	16
COLLECTION OF WASTE.....	17
WASTE AREAS CONSTRUCTION REQUIREMENTS	18
SIGNAGE.....	18
VENTILATION	19
STORM WATER PREVENTION & LITTER REDUCTION	19

ADDITIONAL INFORMATION.....	19
LIMITATIONS	19
USEFUL CONTACTS	20
APPENDIX 1 – STANDARD SIGNAGE FOR WASTE AND RECYCLING BINS	21
APPENDIX 2 – WASTE MANAGEMENT EQUIPMENT	22
APPENDIX 3 – COMPOSTING.....	24
APPENDIX 4 - AUBURN COUNCIL WASTE & RECYCLING	26
APPENDIX 5 – TYPICAL WASTE COMPARTMENTS.....	28
APPENDIX 6 – BIN STORES/LOADING DOCKS (BUILDING B & C).....	30
APPENDIX 7 – TYPICAL WASTE ROOMS PARKING LEVEL 1.....	32
APPENDIX 8 – TYPICAL CHUTE SECTION	34
APPENDIX 9 – TYPICAL BIN MOVER	35

EXECUTIVE SUMMARY

Elephants Foot Recycling Solutions was commissioned by the Meriton Group to prepare a waste and recycling plan associated with the proposed development at 100 Bennelong Road, Sydney Olympic Park NSW 2127.

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** by assisting residents to segregate appropriate materials that can be recycled; displaying signage to remind and encouraging recycling practices; and through placement of recycling and waste bins in the retail precinct to reinforce these messages.
- ii. **Recover, reuse and recycle** generated waste wherever possible.
- iii. **Compliance** with all relevant codes and policies.

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

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

AUBURN 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 Auburn City Council. The residential waste and recycling will be collected by council.

The 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 Auburn City Council's DCP, Australian Standards and statutory requirements.

OBJECTIVES

To facilitate sustainable waste management and minimisation practices in accordance with the principles of ecologically sustainable development.

- To ensure waste minimisation through source separation, reuse and recycling.
- To ensure efficient storage, access, collection of waste and quality design of facilities.
- To implement the principles of the waste hierarchy of avoiding, reusing and recycling during
- the demolition, construction and ongoing use of premises through efficient resource recovery.
- To promote the principles of ecologically sustainable development through waste avoidance, resource recovery and recycling to achieve improved environmental outcomes.

INTRODUCTION

The following waste management plan pertains to the complete residential development located at 100 Bennelong Road, Sydney Olympic Park NSW 2127. This waste management plan is an operational waste management plan and will address the phases of the completed development.

The plan outlines measures to achieve the following objectives:

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

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

- three multi-level buildings known as Building A (9 levels), Building B (7 levels) and Building C (7 levels) plus 3 levels of car parking. See site plan p.8
- 342 residential units in total (see unit mix below)
- Childcare centre of 585.2 sqm
- Gym, sauna and pool facilities
- Courtyard and BBQ area – Building C (L1)

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

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

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

TABLE 1 – UNIT MIX PER BUILDING

Unit Type	A	B	C	Total
1 Bed	19	23	53	95
1 Bed + S	9	14	14	37
2 Bed (small)	20	30	54	104
2 Bed (large)	20	23	40	83
2 Bed + S	-	12	1	13
3 Bed	4	-	6	10
TOTAL	72	102	168	342

Figure 1 – Site plan



GENERATED WASTE VOLUMES

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

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.

WASTE DEFINITION

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 prunings, plants and flowers, and weeds.
MGB:	mobile garbage bin
L:	litres

BUILDING MANAGER/ WASTE CARETAKER

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

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

- General maintenance and cleaning of the chute doors on each level (Frequency will depend on waste generation and will be determined based upon building operation)
- Organising, maintaining and cleaning all 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
- 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

Educational material encouraging correct separation of garbage and recycling items must be provided to each resident to ensure correct use of the waste chute and to ensure an understanding of the chute's use.

This should include the correct disposal process for bulky goods (old furniture, large discarded items etc.). It is recommended that information is provided in multiple languages to support correct practises and minimise contamination in the collection MGB as well as chute blockages.

It is also recommended that the development's 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 place umbrellas, bedding, cigarettes, cartons, coat hangers, brooms, mops, large plastic wrappings from furniture, white goods, any sharp objects, hot liquid or ashes, oil, unwrapped vacuum dust, syringes, paint and solvents, car parts, bike parts, chemicals, corrosive and flammable items, soil, timber, bricks or other building materials, furniture, etc. down the chute.

It is expected that leasing arrangements with childcare centre operations contain direction on waste management services and expectations.

RESIDENTIAL UNITS WASTE

Using council's waste generation rates, the total waste generated by the development can be calculated as follows:

Waste: 660L per 5 units

*Comingled Recycling: 660L per 5 units

**Being that Councils recommendation is for the use of 660L recycling bins; the waste rate has also been used for the recycling calculation*

TABLE 2 – RESIDENTIAL WASTE GENERATION

Waste			Recycling		
Building	No. Units	660L MGB	Building	No. Units	660L MGB
Building A	72	15	Building A	72	15
Building B	102	21	Building B	102	21
Building C	168	34	Building C	168	34
Total	342	70	Total	342	70

BIN SUMMARY

Waste 70 x 660L bins collected weekly or
24 x 660L collected three times per week.
Collections will occur on Monday/Wednesday and Friday each week.

Recycling 70 x 660L bins collected weekly (Thursdays)

The above assumptions have been taken into consideration for the calculation of these figures:

- Garbage and recycling is not compacted;
- 660L MGB will be placed under the discharge of each chute (660L MGB will also be stored in the individual waste rooms either empty or waiting for transfer to the loading dock for collection);
- 1 x 660L MGB for recyclables is located in the waste compartment on each residential level with full bins transported to the recycling bin store for collection from loading dock;
- Number of bins have been rounded up for best operational outcome; and
- Waste is collected three times weekly as negotiated with Council
- Paper/cardboard and other recyclables are collected weekly

Note: Where a building consists of 40 or more units, 660L bins can be used, subject to negotiation with Council. The use of 660L bins will only be considered where:

- The building has more than 20 units; and
- Adequate offsite access for waste collection vehicles is provided and is in accordance with relevant Australian Standards.

WASTE MANAGEMENT SYSTEM

As per the drawings, there are seven garbage chutes servicing the development. Building A has one chute (A); Building B – two waste chutes identified as B1 and B2 at and Building C has 4 waste chutes; C1, C2, C3 and C4. (*Refer Appendix 8 – Typical Waste Compartments*)

Garbage from all chutes fall directly into 660L bins located under each chute in the waste rooms located on Parking Level 1. Waste from Building A and B will be transferred via hoist to the bin holding rooms at ground level, Building B loading dock awaiting collection.

Building C bins will be transferred from each waste room to the bin holding rooms and loading dock, Building C parking level 1. (*See Appendix 6 – Bin store/loading dock*).

Each waste room also has room to store additional 660L MGB and manoeuvre bins. (*See Appendix 7 – Waste Rooms, Parking Level 1*)

TABLE 3 – WASTE ROOM ALLOCATION

Waste room	Sqm
A	12.5
B1	36.5 (<i>includes hoist to loading dock</i>)
B2	12.5
C1	11.3
C2	13.0
C3	15.2
C4	11.3

Recycling bins for Buildings A, B and C are located in each residential waste compartment. (*see Appendix 5 – Typical Waste Compartments*.) Full waste and recycling bins for Buildings A and B will be transferred to the bin holding rooms near the loading dock on ground level; Building C will be transferred to the bin holding rooms near the loading dock on parking level 1.

WASTE HANDLING

All residents will be supplied with a collection area in each unit (generally in the kitchen, under bench) to deposit waste and collect recyclable material suitable for one day's storage. Residents should wrap or bag their waste before depositing into the waste chute.

Recycling must be sorted prior to being deposited into the collection bins. It is expected that residents will place clean recyclables into the collection bins.

Part of the caretaker/cleaner's duty will be to exchange or empty recyclable bins and store them in the main bin storage room located on ground level, ready for collection. The caretaker/cleaner will also be required to check the 660L MGB collecting waste and recycling from each chute, rotate full bins to the storage and collection areas, and replace empty 660L MGB under each chute operation.

WASTE CHUTES

The waste and recycling chute for the residential areas are supplied in either 510mm galvanised steel or 510mm recycled LLDPE plastic with 2-hour fire rated doors. Galvanised steel chute hoppers are wrapped with 50mm poly-wool R1.3 noise insulation foil to assist in noise reduction. (See *Appendix 8 – Typical chute section*)

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

Chutes must be installed without offsets to achieve best operational outcome for all buildings.

Stainless steel, two-hour fire-rated (AS1530.4-2005) refuse chute doors are to be provided at each service level. All doors are fitted with a self-closing mechanism to meet BSA fire standards.

EQUIPMENT SUMMARY

Chutes:

- Seven (7) galvanised steel or recycled LLDPE plastic chutes as supplied by Elephants Foot Recycling Solutions (or similar);
- Seven (7) type A bottom chutes suitable for discharge into 660L MGBs.

Equipment (Optional):

- Bin tug or tow suitable for transporting 660L MGB (See *Appendix 9 – Typical bin mover*)

CHILD CARE CENTRE

TABLE 3 – CHILD CARE WASTE GENERATION

Premises	SQM	Waste generation/ day (5 days)	Garbage (L)	Recycle (L)
Child care	585.2 sqm	10L/100m2/day –waste 10L/100m2/day - recycle	292.6L	292.6L

BIN REQUIREMENT:

Non-recycle Waste: 1 x 360L or 2 x 240L MGB collected weekly
Recycle Waste: 2 x 240L MGB collected weekly

It is expected that the contract cleaners appointed by the childcare centre will remove bagged waste and separated recycling from the allocated collection points and deposit it into the appropriate bins.

The child care centre will also appoint its own private waste services provider for garbage and recycling services which may be conducted on a walk in/walk out basis for the centre.

Most recycling generated by child care centres is office and paper product and this is typically stored in 240L MGB and removed at a collection frequency organised between building management and the contractors. It is envisaged that collections will occur weekly.

Secure destruction bins will be operated on a wheel in/wheel out basis by the appointed contractor/s if required.

It is recommended that all amenities and work station areas be furnished with suitable recycling and waste collection receptacles.

Washroom facilities should be supplied with collection bins for paper towels (if used).

Dedicated waste bins are to be allocated for sorting and storage of general waste and disposable nappies. All staff will be responsible for management of their general waste and storage of same.

Staff tea points and food preparation areas will be supplied with a dedicated commingled collection receptacle for the collection of all recyclable glass and plastic items. Staff will be responsible for sorting this material and allocating recyclables into the correct collection facility.

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.

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

MANAGEMENT OFFICE/LEISURE FACILITIES

Using council's waste generation rates, the total number of bins required for the retail/commercial area of this development can be calculated as follows. A seven day operating week has been assumed for the purpose of this report.

Table 4 – Retail Waste Generation

Retail Type	Area (m ²)	Waste calculation	Recycling calculation	Waste/ week	Recycling/ week
Office	15.6	10L/100m ² /day	10L/100m ² /day	10.92L	10.92L
Leisure	79.1	10L/100m ² /day	10L/100m ² /day	55.37L	55.37L
	94.7			66.29L	66.29L

Each area will be required to be responsible for their storage of waste and recycling back of house (BOH). On completion of each day or as required, nominated staff/cleaners will transport waste and recycling, using the access corridors and lifts, to the waste room on ground level and place waste and recycling into the appropriate collection bins.

It is recommended that:

- All waste should be bagged and waste bins should be plastic lined
- Bagging of recyclables is not permitted
- All waste collections located BOH during operations
- Individual recycling programs are recommended for retailers to ensure commingled recycling is separated correctly
- A suitable storage area needs to be provided and affectively banded for chemicals, pesticides and cleaning products

NB: Subject to the stakeholders preference/ capability (and as built constraints), bin sizes and quantities may be changed.

COMMON AREAS

Common areas including circulation areas, courtyards and BBQ ar will be supplied with suitably branded waste and recycling bins.

Any washroom facilities should be supplied with collection bins for paper towels (if used).

Building management will monitor use and ensure bins are exchanged and cleaned. (See *Appendix 2 – Waste Equipment Specifications*)

GREEN WASTE

There will be green waste generated by the buildings landscaping, courtyard and BBQ area. Any green waste will be collected and removed from site by the maintenance contractor.

COMPOSTING

Consideration should be given to providing space for individual home unit worm farms or small compost bins for residents to self-manage. Information on apartment composting bins and Council recommendations are included. (See *Appendix 3 – Composting*)

OTHER WASTE STREAMS

To avoid the occurrence of illegal street dumping, a room or caged area must be allocated for the storage of discarded bulky items awaiting council collection. The allocated space must be a minimum of 4m³ per building. The storage area shall be sheltered, readily accessible to all residents and must be located close to the main waste storage room and loading dock area. Residents will liaise with building management in regards to this service.

WASTE ROOM AREAS

Each garbage room will need to hold 660L MGB generated weekly including spare bins, and allow enough room to clean and manoeuvre bins.

A separate recycling bin store area of 16.8m² and a garbage bin store area of 47.8m² have been allocated at ground level, Building B, adjacent to the loading dock areas. (See *Appendix 6 - Bin Stores/Loading Docks*)

Building C has allocated at loading dock level 30.3m² for storage of recycling bins and 48.7m² for garbage bin storage.

The areas allocated are sufficient and suitable for these purposes.

COLLECTION OF WASTE

Council requires garbage and recycling room/s to be provided near the collection point with capacity for storing all MGB generated in the building between collections.

Residential - Waste caretakers will ensure that full bins are available at the collection area on the nominated days and times for collection by Council's contractors. Bins will be transported by hoist from building A and B. Building C will have bins transported via the walkways to the bin store area and loading dock.

Note: It is recommended that bin moving equipment be employed for any bin transfers to ensure manual handling requirements are met. (See *Appendix 9 – Typical Bin Mover*)

Childcare Centre – Bins will be serviced on a scheduled basis with a walk in/walk out service or as required.

Comprehensive details including a swept path analysis for all vehicle movements on site will be provided by the traffic consultant's report for all vehicular access and egress.

MGB bins store areas should comply with the service vehicle access specifications as detailed in the DECCW's Better Practice Guide for Waste Management in Multi-Unit Dwellings.

Council will collect waste and recycling bins from the loading docks for Building B and C located off the proposed New Road. (See *Appendix 6 – Bin Store/Loading Dock*)

WASTE AREAS 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 and fitted with an aerator to increase water efficiency
- For commercial: a cold water facility with hose cock must be provided for washing the bins
- Any waste water discharge from bin washing must be trained to sewer in accordance with the relevant water board.
- 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. This process generally takes place at building handover – building management make the decision to install.
- All personnel doors are self-closing and able to be opened from within the room
- 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
- Childproofing and public/operator safety shall be assessed and ensured
- Fitted with smoke detectors in accordance with the relevant Australian Standards

SIGNAGE

Signs stating “NO STOPPING” and “DANGER” should be included on the external face of waste storage rooms, where appropriate, which will be arranged by the building manager/caretaker.

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.

All chute doors on all levels will be labelled with a sign stating ‘*GARBAGE ONLY IN THE CHUTE*’.

Separate signage will direct chute operations and encouraging occupants to recycle and minimise their waste.

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
- 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 and information supplied by the project architect
- The figures presented in the report are an estimate only. The actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building managements approach to waste management.
- The building manager will make adjustments as required based on actual waste volumes (if waste is greater than estimated) and increase the number of bins and collections accordingly.
- The report will not be used to determine or forecast operational costs or prepare any feasibility study or to document any safety or operational procedures.
- Any manual handling equipment should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply.

USEFUL CONTACTS

Auburn City Council

Customer Service: 02 9735 1222 (Monday to Friday 8:30am to 4:00pm)

After Hours Emergency: 02 9735 1222

Email: auburncouncil@auburn.nsw.gov.au

SULO MGB (MGB, Public Place bins, tugs and bin hitches)

Phone: 1300 364 388

RUD (Public place bins, recycling bins)

Phone: 07 3712 8000

Info@rud.com.au

VISY RECYCLING (All recycling including glass)

Phone: 1300 368 479 (Australia)

REMONDIS (Private Waste Services Provider)

Phone: 13 73 73

SITA ENVIRONMENTAL (Private Waste Services Provider)

Phone: 13 13 35

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 (1300 ODOURS)

sales@purifyingsolutions.com.au

Full Circle Composting Bins

Phone: 1300 024 725

www.fullcirclehome.com.au

Electrodrive (Bin movers, tugs and hitches)

Phone: 1800 333 002

nsw@electrodrive.com.au

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

Elephants Foot Recycling Solutions (Chutes, compactor and eDiverter systems)

Natalie Beattie

44 – 46 Gibson Avenue

Padstow NSW 2211

Free call: 1800 025 073

Email: natalie@elephantsfoot.com.au

APPENDIX 1 – STANDARD SIGNAGE FOR WASTE AND RECYCLING BINS

WASTE SIGNS

Signs for garbage, recycling and organics bins should comply with the standard signs promoted by the DECC.

Example wall posters



Example bin lid stickers



SAFETY SIGNS

The design and use of safety signs for waste rooms and enclosures should comply with AS 1319 Safety Signs for the Occupational Environment. Safety signs should be used to regulate and control safety related to 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 services provided.

Examples of Australian Standards:



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

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

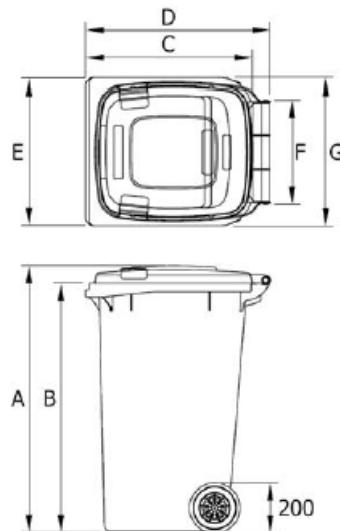
APPENDIX 2 – WASTE MANAGEMENT EQUIPMENT

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 a guide and differ slightly according to manufacturer, if bins have flat or dome lids and are used with different lifting devices.

Bin Type	Height	Depth	Width
240L	1080mm	735mm	580mm
660L	1250mm	850mm	1370mm

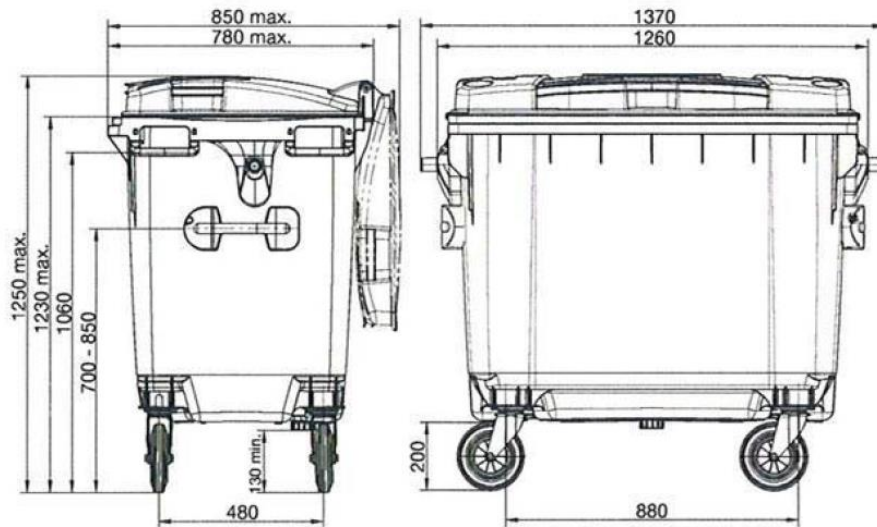


Dimensions - Weights - Standards

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

Material

- **Polymer components:**
 - Injection moulded from specially designed HDPE
 - Resistant to decay, frost, heat and chemicals
 - Special UV-stabilisation provides excellent ageing characteristics
- **Corrosion resistant steel axle**
- **Noise reduction:**
 - Quiet-running solid rubber tyres
 - Tight-fitting axle
- **Long service life:**
 - High quality materials
 - Most advanced manufacturing processes
 - Withstands exposure to high mechanical stress levels
- **Recycling:**
 - All container parts are recyclable



Material

■ Polymer components:

- Injection moulded from specially designed HDPE
- Resistant to decay, frost, heat and chemicals
- Special UV-stabilisation provides excellent ageing characteristics

■ Corrosion resistant metal components:

- All metal components are galvanised

■ Noise reduction:

- Quiet-running tyres

■ Long service life:

- High quality materials
- Most advanced manufacturing processes
- Even if exposed to high mechanical stress levels

■ Recycling:

- All container parts are recyclable

Dimensions and Weights

■ Nominal volume:	660 litres
■ Net weight:	ca. 43 kg
■ Permitted total weight:	310 kg

Source: SULO

APPENDIX 3 – COMPOSTING



Typical Apartment Compost bin (See Useful Contacts)

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

Compost Bins and Worm Farms

Residents can reduce their waste by up to half by composting food waste and garden waste. Composting has many benefits including:

- Composting is the breakdown of organic matter and produces free organic matter for the garden which improves the structure of the soil and helps plants grow.
- Organic waste such as fruit, vegetable peelings and garden waste makes up a substantial part of the waste stream. Therefore residents can reduce the amount of waste placed in their garbage bin by composting.
- Council has to pay for rubbish disposal costs. Ultimately, if residents were composting their kitchen and garden waste at home, there would be less waste generated and less for the council to collect. Every tonne less that is saved during disposal is a financial saving to Council which in turn means improved services for residents.

The following materials are great for composting:

- Fruit and vegetables
- Salad scraps
- Coffee grounds
- Tea bags
- Soft prunings
- Old plants and flowers
- Weeds (no noxious)
- Vegetable patch trimmings
- Bedding from vegetarian pets
- Autumn leaves in moderation
- Grass cuttings

It is better not to put eggshells, meat, fish or cooked food in the composter as it will attract rats and vermin.



Figure 5 Shows image of a compost bin.



Figure 6 Shows image of a worm farm unit.

Source: Auburn City Council – Waste Information guide

APPENDIX 4 - AUBURN COUNCIL WASTE & RECYCLING

RECYCLE BIN					
✓ YES				✗ NO	
					
Aluminium and Steel Cans	Glass Bottles	Glass Jars	Magazines and Newspapers	Foam Products	Garbage
					
Milk and Juice Cartons	Paper and Cardboard	Recyclable Plastic Bottles	Water and Soft Drink Bottles	Green Waste	Plastic Bags

RECYCLING TIPS

- Use reusable cloth nappies, a nappy service or eco-friendly compostable nappies
- Have a garage sale for those unused or unwanted household items
- Set up a compost bin or worm farm - food and garden waste is a great resource to reuse
- Don't buy heavily packaged goods
- Use refillable containers where possible
- Use your own shopping bags or re-use plastic shopping bags
- Recycle clothes and household items by taking them to your local charity shop
- Supermarket plastic bags can usually be returned for recycling
- Save your electronic waste and drop off at the free, six monthly, e-Waste events
- Take your household chemicals to the free, annual, Chemical CleanOut event

GARBAGE BIN

✓ YES

✗ NO



**Disposable
Nappies**



**Foam
Products**



Batteries



**Building or
Renovation Waste**



**Food
Waste**



**Non Recyclable
Household Waste**



**Car
Parts**



**Electronic
Waste**



**Pet
Litter**



**Plastic
Bags**

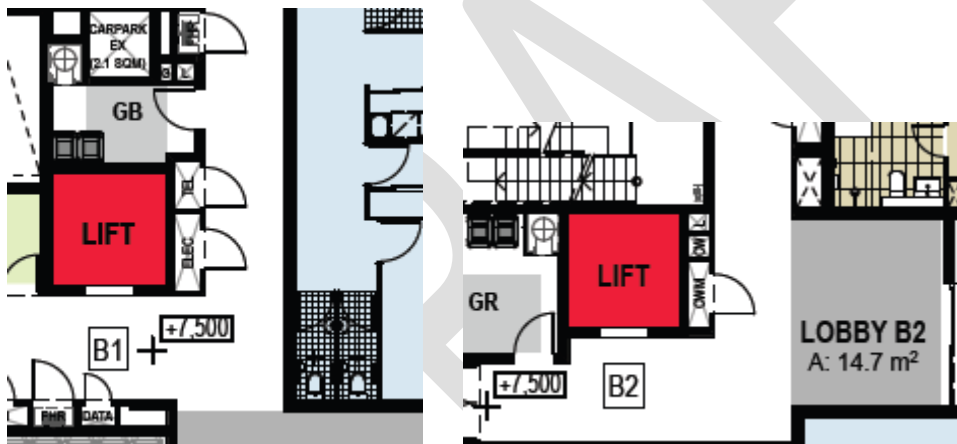
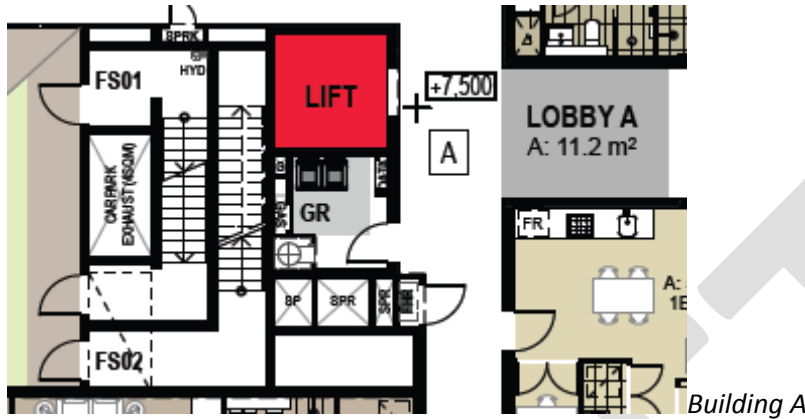


**Hazardous
Waste**



**Medical
Waste**

APPENDIX 5 – TYPICAL WASTE COMPARTMENTS



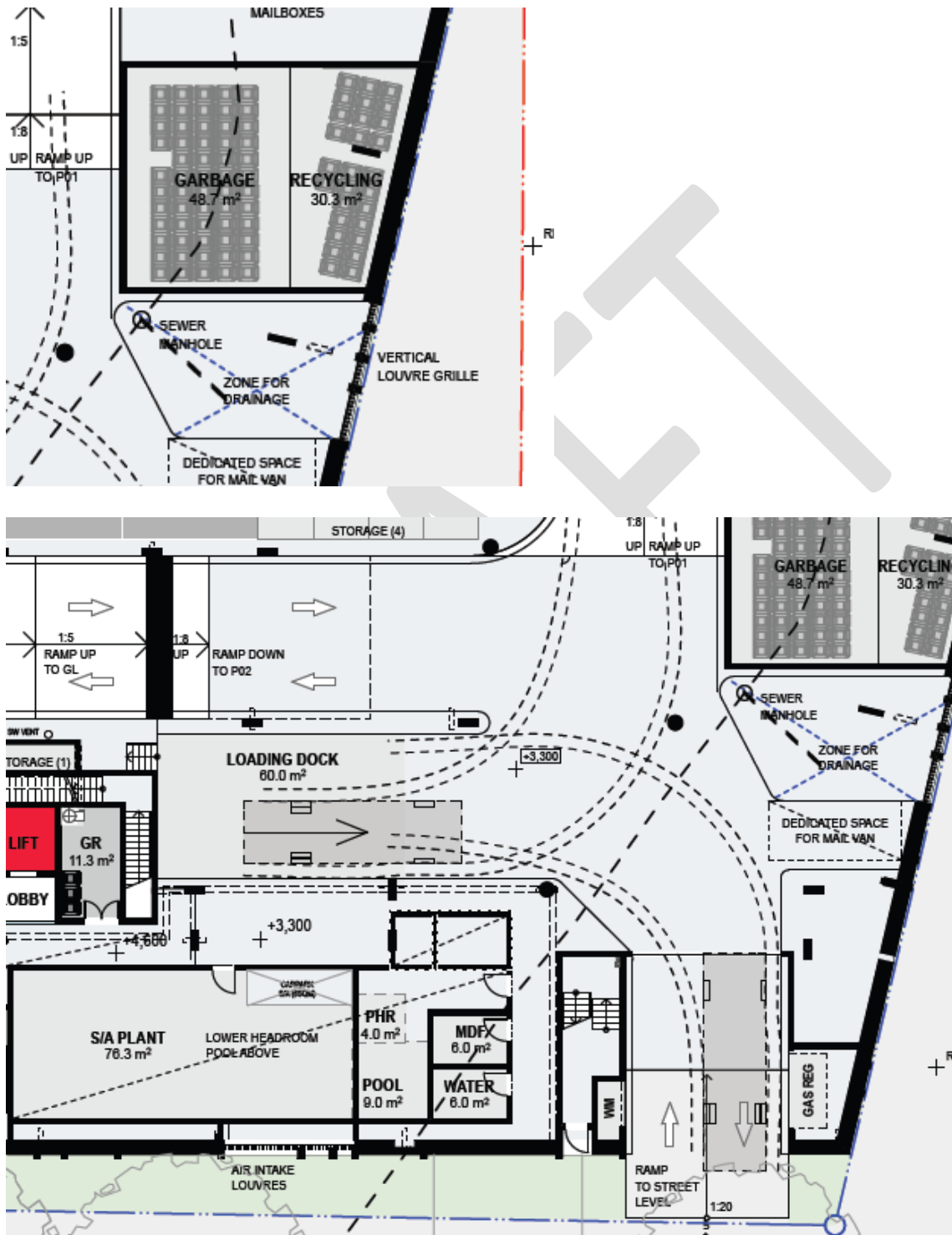
Building B – Lobby B1 & 2



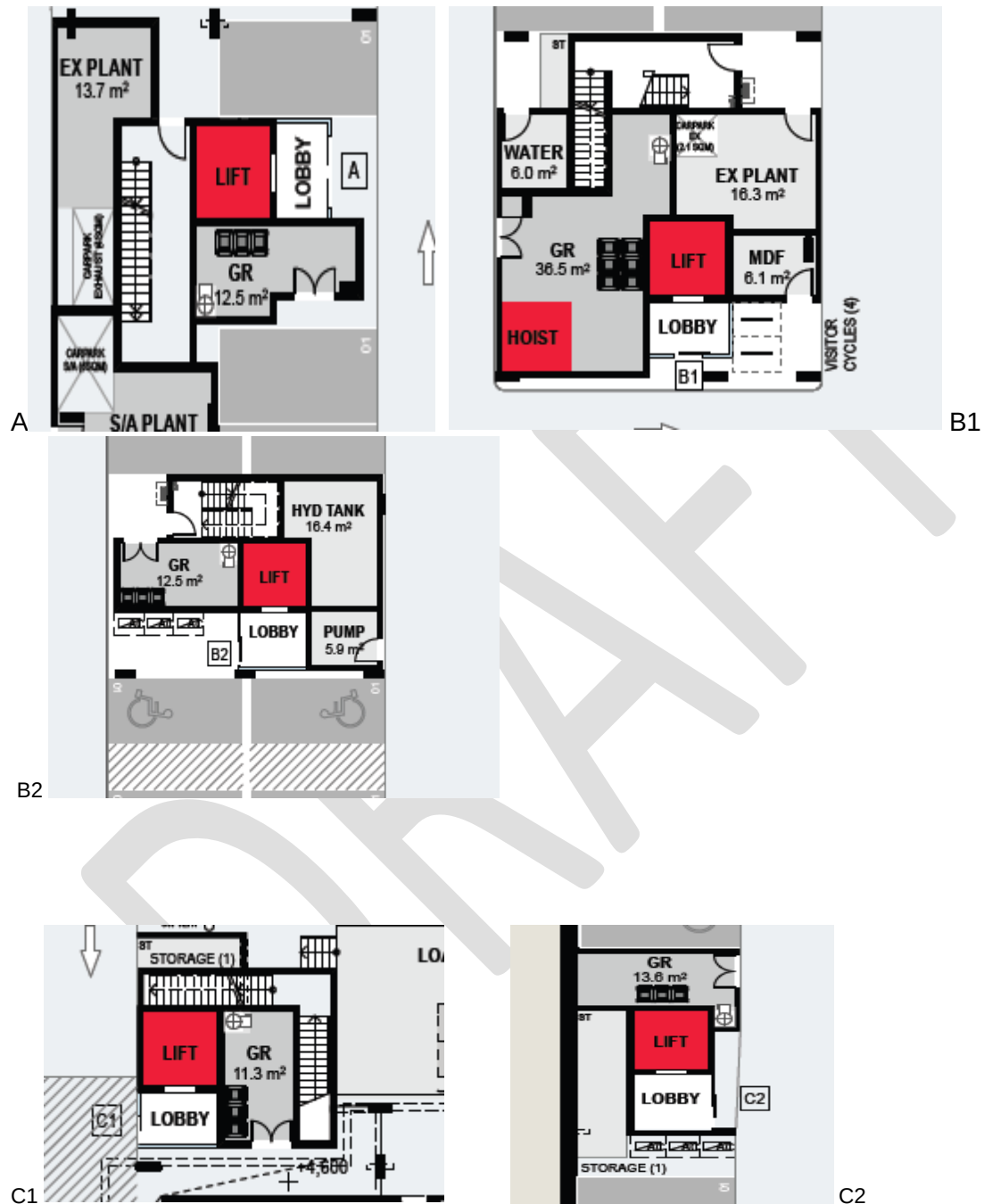
Building C – Lobby C1, 2, 3 & 4

Source: Turner, GA Plans, Ground level, dwg no.A-DA-110-000, Dated 30.05.14

Building C

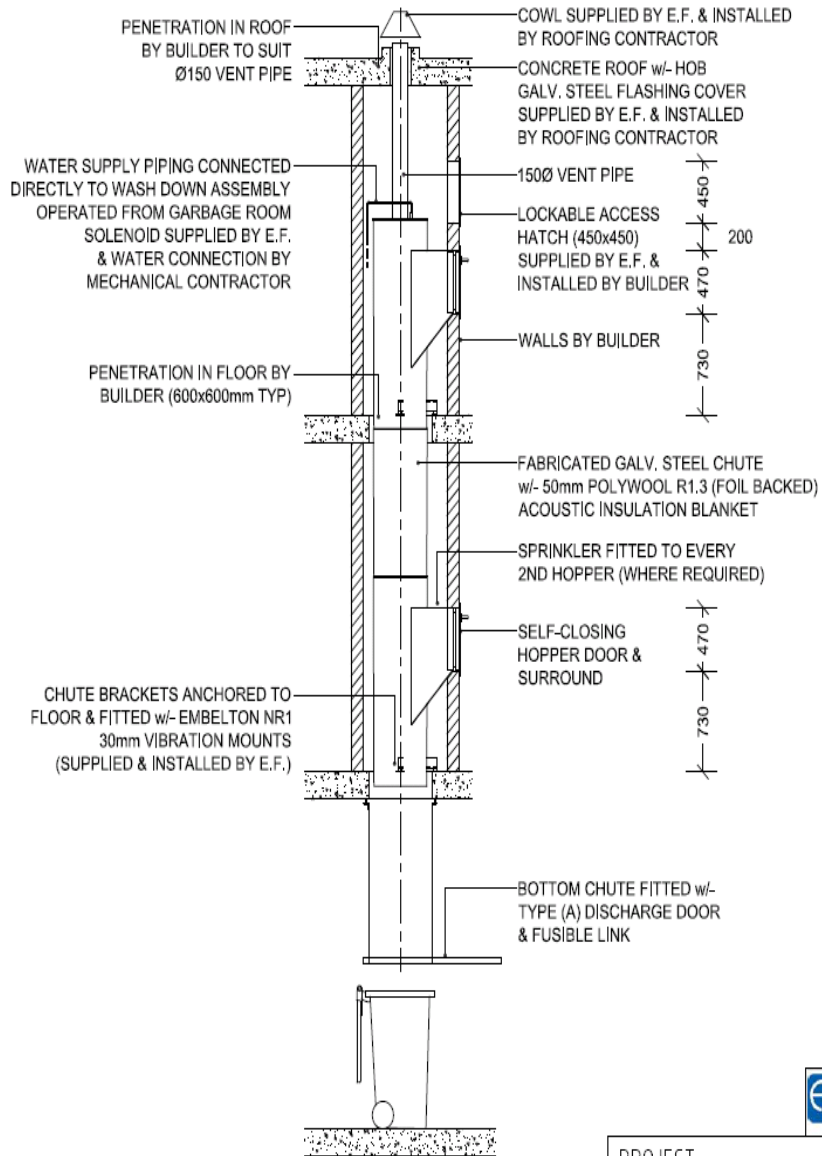


APPENDIX 7 – TYPICAL WASTE ROOMS PARKING LEVEL 1



C4

APPENDIX 8 – TYPICAL CHUTE SECTION



APPENDIX 9 – TYPICAL BIN MOVER



TUG INCLINER

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