# WASTE MANAGEMENT PLAN
# FOR
# 11-23 MACARTHUR AVENUE (MULTI RESIDENTIAL)

## AUGUST 2025

## FINAL REPORT

ITE CONSULTING
TRAFFIC AND TRANSPORT ENGINEERS

| | |
|---|---|
| PREPARED FOR:<br>***5 Point Constructions*** | PREPARED BY:<br>***ITE Consulting***<br>34 Flamingo Crescent<br>Thornlands<br>Brisbane<br>4164<br><br>**Contact Person:** Herman Joubert<br>**Tel:** 0424110122<br>**Email:** herman@iteconsulting.com.au |

# ITE CONSULTING REPORT
# QUALITY ASSURANCE ISSUE DATA

| | |
|---|---|
| **Report Title:** | 11-23 Macarthur Avenue Waste Management Plan |
| **Client:** | 5 Point Constructions |
| **Project Team:** | Herman Joubert MEng CEng (U.K) CPEng (NZ) RPEQ |
| **Project Name:** | 11-23 Macarthur Avenue Waste Management Plan |
| **Report Number:** | 001 |
| **Revision Number** | 01 |

## Revision History:

| Date | Report Status | Written by | Reviewed by |
|---|---|---|---|
| 06/08/2025 | Draft | Herman Joubert | Herman Joubert |
| 08/08/2025 | Final | Herman Joubert | Herman Joubert |
| | | | |

**Approved by:**

08/08/2025

**Signed** **Date**

**Herman Joubert**
RPEQ No.: 25899

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# 1.0 INTRODUCTION

## 1.1 Project Overview

ITE Consulting has been engaged to prepare a Waste Management Plan for a proposed residential-led development at 11-23 Macarthur Avenue, Hamilton. It is understood that this report will accompany a Development Application submission to Economic Development Queensland (EDQ). The site locality is provided in Figure 1.1.

**Figure 1.1: Site Locality**


| ITE CONSULTING Project: | Client: | Figure Name: | Figure Number: |
|---|---|---|---|
| 11-23 Macarthur Avenue | 5 Point Constructions | Site Locality | 1 |

Source: BCC Mapping Tool (2025)

The proposed development is located adjacent to Macarthur Avenue which is considered to be the frontage street providing access to the proposed development. The site is located within the Priority development Area (PDA) and the requirements for waste management is outlined in the Northshore Hamilton Priority Development Area Scheme (Section 2.5.4.7 Waste Management).

## 1.2 Proposed Application

The proposed application is for a material change of use consisting of:

**Table 1.1 Proposed Development Extents**

| Parameter | Extent |
|---|---|
| Units: | 429 |

| | |
|---|---|
| Commercial / retail: | 368 sqm GFA |
| Bins: | Retail: 3 x 1100L waste bins & 2 x 1100L recycling bin<br>Tower 1 = Residential: 6 x 1100L waste bins & 16 x 1100L recycling bins<br>Tower 2 = Residential: 6 x 1100L waste bins & 16 x 1100L recycling bins |
| RCV Vehicle: | Rear Loading RCV |

There is no phasing expected for this development. The following legislative summary items applicable to the proposed development are indicated in Table 1.2.

**Table 1.2 Legislative Summary**

| Legislative Summary | |
|---|---|
| Local Government Authority | Brisbane City Council and Economic Development Queensland (EDQ) |
| Planning Scheme Zone/s | Priority Development Area |
| Applicable Planning Scheme Policies | Northshore Hamilton Priority Development Area Scheme (Section 2.5.4.7 Waste Management) |

## 1.3 Scope and Context of Report

This report investigates the refuse aspects associated with the proposed development. The scope of the waste management plan includes:

- Waste generation anticipated to be generated;
- Waste collection methods and vehicle movements;
- Refuse disposal and storage;
- Internal systems and equipment requirements
- Refuse storage facilities design
- Refuse collection room, area or loading bay designs

# 2.0 RESIDENTIAL REFUSE DISPOSAL AND STORAGE

## 2.1 Waste Generation

Given that the development is proposed to include commercial use and residential dwellings, the anticipated waste types include general waste, co-mingled recycling material and waste cooking oil only. The proposed development will include two stages being a Western building (Stage 1): Residential and Commercial Tower and an Eastern Building (Stage 2): Residential Tower.

A refuse collection frequency of 3 times per week has been established for both general waste and commingled recycling in line with BCC's 'Residential (on-site bulk) service frequency and compaction requirement'. A non-residential collection frequency of 3 days per week has been established to be compliant with BCCs un-documented maximum 'low-frequency servicing' requirement. ITE recommend considering a service frequency of 2 days between services where volumes of food waste are generated. The anticipated retail waste generation expected is illustrated in Table 2.1 and the anticipated residential waste generation is provided in Table 2.2 and Table 2.3.

**Table 2.1 Retail Waste Generation**

| Description | GFA | Waste Generation (L/100sqm/day) | Recycling Generation (L/100sqm/day) |
|---|---|---|---|
| Retail (non-food) | 368 | 300 | 200 |
| Description | GFA | Waste Generation (L/week) | Recycling Generation (L/week) |
| Retail (non-food) | 368 | 7728 | 5152 |
| Service Frequency per week | | 3 | 3 |
| Waste Quantity | | | |
| Total Waste Quantity | 368 | 2576 | 1717 |
| Bin Quantity | | 2.3 | 1.6 |
| 1100L Bins | | 3.0 | 2.0 |

The waste generation calculations require the following bins to be provided:

- 3 x 1100L general waste and 2 x 1100L recycling bin for the retail waste

**Table 2.2 Stage 1 Residential Waste Generation (Western Building)**

| Description | Units | Waste Generation (L/unit/week) | Recycling Generation (L/unit/week) | Waste Generation Compacted 3:1 (L/unit/week) |
|---|---|---|---|---|
| Dwellings | 215 | 240 | 240 | |
| Description | Units | Waste Generation (L/week) | Recycling Generation (L/week) | |
| Dwellings | 215 | 51600 | 51600 | 17200 |
| Total | 215 | 51600 | 51600 | 17200 |
| Collections per week | 3 | | | |
| Volume required for storage | | 17200 | 17200 | 5733 |
| Bins Required (1100L) | | 15.6 | 15.6 | 5.2 |

The waste generation calculations require the following bins to be provided for the Western building:

- 6 x 1100L general waste and 16 x 1100L recycling bins for the residential component. Additional allowance of bin quantity is made for bin changeover. A dual 4 x bin roto feed system is proposed for both waste and recyclebles. Waste and comingled recyclables will be discharged into the bins by means of a single chute system.

**Table 2.3 Stage 2 Residential Waste Generation (Eastern Building)**

| Description | Units | Waste Generation (L/unit/week) | Recycling Generation (L/unit/week) | Waste Generation Compacted 3:1 (L/unit/week) |
|---|---|---|---|---|
| Dwellings | 215 | 240 | 240 | |
| Description | Units | Waste Generation (L/week) | Recycling Generation (L/week) | |
| Dwellings | 215 | 51600 | 51600 | 17200 |
| Total | 215 | 51600 | 51600 | 17200 |
| Collections per week | 3 | | | |
| Volume required for storage | | 17200 | 17200 | 5733 |
| Bins Required (1100L) | | 15.6 | 15.6 | 5.2 |

The waste generation calculations require the following bins to be provided for the Eastern building:

- 6 x 1100L general waste and 16 x 1100L recycling bins for the residential component. Additional allowance of bin quantity is made for bin changeover. A dual 4 x bin roto feed system is proposed for both waste and recyclables. Waste and comingled recyclables will be discharged into the bins by means of a single chute system.

The waste generation rates used for the calculation of refuse produced, use rates as indicated in the SC6.26 Refuse planning scheme policy (BCC City Plan 2014: v32, 2025) and consisted with that of the recent approval DEV/2023/1402.

## 2.2 Waste Storage Points

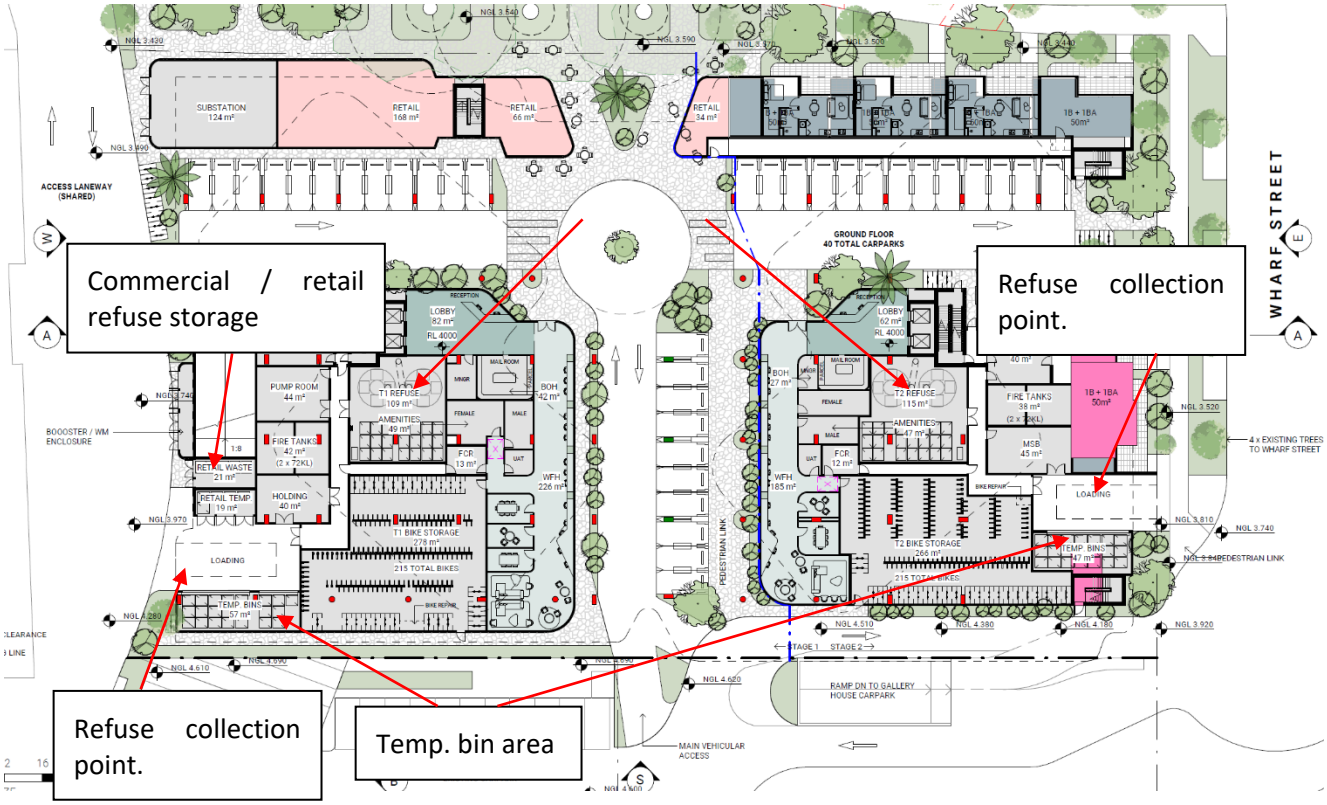
### *2.2.1 Western Building Stage 1*

All residential refuse will be stored within the Ground Floor refuse room located directly beneath the Western Building core. The refuse room will house all equipment required for the Western Building including the chute discharge, bin rotation equipment and storage of the bins. The room will be accessible only to building management and authorised persons. A separate commercial / retail waste storage room will be provided at Ground Level to accommodate the required commercial / retail waste bins.

### *2.2.2 Eastern Building Stage 2*

All residential refuse will be stored within the Ground Floor refuse room located directly beneath the Western Building core. The refuse room will house all equipment required for the Eastern Building including the chute discharge, bin rotation equipment and storage of the bins. The room will be accessible only to building management and authorised persons.

**Figure 2.1: Refuse Storage**




## 2.3 Residential Waste Storage Room

The residential bin storage room will be designed and constructed to meet the requirements listed below. The residential bin storage room will be designed to ensure that:

1. The bins are serviced by Council or their appointed collection contractor;
2. Sufficient storage capacity is provided for 240L of refuse and 240L of recycling per dwelling, per week;
3. On-site collection is provided for the Council or their appointed collection contractor;
4. A separate pedestrian access point is available to the development outside of the RCV manouvering area. The pedestrian route will provide access from the site's frontage to the development and will have a minimum width of 1.2m.
5. Bins are contained in a room of sufficient size for the bulk bin quantity required. This includes allowing for sufficient space between bins and a door width of 1.5m;
6. Easily accessible for the required servicing of bins;
7. Screened from neighbouring properties to mitigate odour, amenity and noise;
8. The room is of a design to mitigate the harbourage of vermin or attraction of scavenging animals;
9. Natural or temperature-controlled ventilation is provided;

10. Of a design which maintains a minimum internal vertical clearance of 2.1m;
11. Kept clear of obstructions, such as fixed bay separators, that impede the ability to change from existing bin sizes or which otherwise limit future refuse collection options;
12. The room will not contain other amenities such as air-conditioning compressors, hot water systems or electrical hubs;
13. Provided with a hose connection and centrally drained to sewer in accordance with trade waste requirements;
14. The room is of a sufficient size;

## 2.4 Commercial / Retail Waste Storage Room

The commercial / retail bin storage room will be designed and constructed to meet the requirements listed below. The commercial / retail bin storage room will be designed to ensure that:

1. The bins are serviced by an appointed collection contractor;
2. Sufficient capacity is provided to achieve low-frequency servicing in line with Table 2 of SC6.26 Refuse planning scheme policy (BCC City Plan 2014: v32, 2025);
3. Bins will be contained within a dedicated room that is of sufficient size for the bin quantity required;
4. Designed to allow an additional clearance surrounding each bin;
5. The bin storage room is easily accessible for staff of the retail space;
6. Screened from neighbouring properties to mitigate impacts from odour, amenity and noise;
7. Of a design to mitigate the harbourage of vermin or attraction of scavenging animals;
8. Provided with a hose connection and centrally drained to sewer in accordance with trade waste requirements;
9. Provided with natural or temperature-controlled ventilation;
10. Of a design which maintains a minimum internal vertical clearance of 2.1m;
11. Kept clear of obstructions, such as fixed bay separators, that impede the ability to change from existing bin sizes or which otherwise limit future refuse collection options;
12. Does not contain other amenities such as air-conditioning compressors, hot water systems or electrical hubs;

## 2.5 Disposal and Storage

The anticipated waste streams generated by the residents within the tower may consist of the following:

- Frequently generated waste streams:

  General waste;

Recycling (glass, aluminium/steel lids/cans/tins, semi rigid plastics, paper and cardboard); and

- Organic food waste.

- Infrequently generated waste streams:
  - Green waste;
  - Hard waste / bulky goods; and
  - Hazardous / e-waste.

General Waste

Residents will be supplied with a collection area in each unit to deposit garbage 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 garbage; bagged garbage 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 the waste chute for general recycling . Larger recycling items can be emptied into a crate or dedicated bin within the allocated residential space provided to ensure correct separation. 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.

E-Waste

E-waste (electronic waste) refers to any equipment containing printed circuit boards. E-Waste must not be placed in standard garbage or recycling, E-Waste can potentially contaminate soil and surrounding water bodies if not disposed of correctly. The best disposal method for e-waste is recycling through an E-waste service or council. Disposal or recycling of electronic waste will be organised with the assistance of the building caretaker. Residents and/or the building manager may choose to contact Council to find out about new or existing strategies for the disposal and collection of electronic waste.

Chemical Waste

Chemical wastes (e.g. cleaning chemicals, paints, oils solvents) pose detrimental effects to human health and the environment if not disposed of correctly. Chemical wastes should be disposed of at a suitable licensed disposal facility. No liquid wastes or wash down waters should be disposed of via the storm water drainage system. Residents will need to liaise with the building manager when disposing of their chemical wastes. The building manager will be responsible for arranging the correct disposal of chemical waste. Household Chemical CleanOut events are held at various locations throughout Queensland on specified dates throughout the year.

Locations and dates are subject to change. It is recommended that the building caretaker confirm these details with Council.

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.

Organic Waste (Optional)

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. 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 C.3**).

The retail waste streams may consist of the following:

- Frequently generated waste streams:
  - General waste;
  - Recycling (glass, aluminium and steel cans/tins/lids, paper/cardboard, semi rigid plastics);
  - Organic waste; and
  - Waste oil.

- Infrequently generated waste streams:
  - Green waste;
  - Hazardous waste (paints, batteries and cartridges); and
  - E-waste.

There will be receptacles within the individual tenancies for immediate disposal and separation of all refuse streams. On completion of each day, or as required during the day, staff or cleaners from the commercial / retail tenancies will transfer the refuse to the commercial refuse room and place waste and recycling into the appropriate bins. Consideration should be given to the use of oil collection for cooking as shown in Appendix C.4. Alternatively, disposal may be completed via the food waste systems if installed.

## 2.6 Waste Collection Points

The development design includes a Service / Loading area built into the Western Building as well as Eastern Building - Ground Floor design. The refuse rooms of each building tower have been designed with surplus area to permanently house 20 x 1100L changeover recycling bins and 10 x 1100L changeover waste bins. The rooms include a service door and full width (1.8m) to allow easy access to transfer the bins to the Loading Bay Areas.

The refuse rooms will include chain mesh partition or similar to separate the chute discharge and bin rotation / compaction equipment from the storage portion of the room. Separation of these spaces allows safe access to the room by collecting drivers. The chute discharge area will be accessible only to building management and authorised persons with restricted distribution of door keys/fob or swipe cards and signage applied to the discharge areas for both buildings.

Non-Residential

The non-residential (Retail) refuse storage room is located near the residential storage room of the Western Building tower and adjoining the service area in a serviceable, efficient, and operationally convenient location. Access to the room is 5m of the loading bay and external access ensures separation from the residential refuse bins temporarily stored within the loading bay.

### *2.6.1 Waste Room Size*

The refuse rooms are sufficiently sized to accommodate all of the bins and equipment required as outlined in Table 2.4 and Table 2.5. Figure 2.2 demonstrates the potential layout of the refuse storage area for the Eastern Building, consisting of the residential chute discharge room, 2 x 4 bin roto feed systems with a single chute, diverter and waste compactor as well as non-residential refuse storage.

**Figure 2.2: Eastern Building Waste Room**

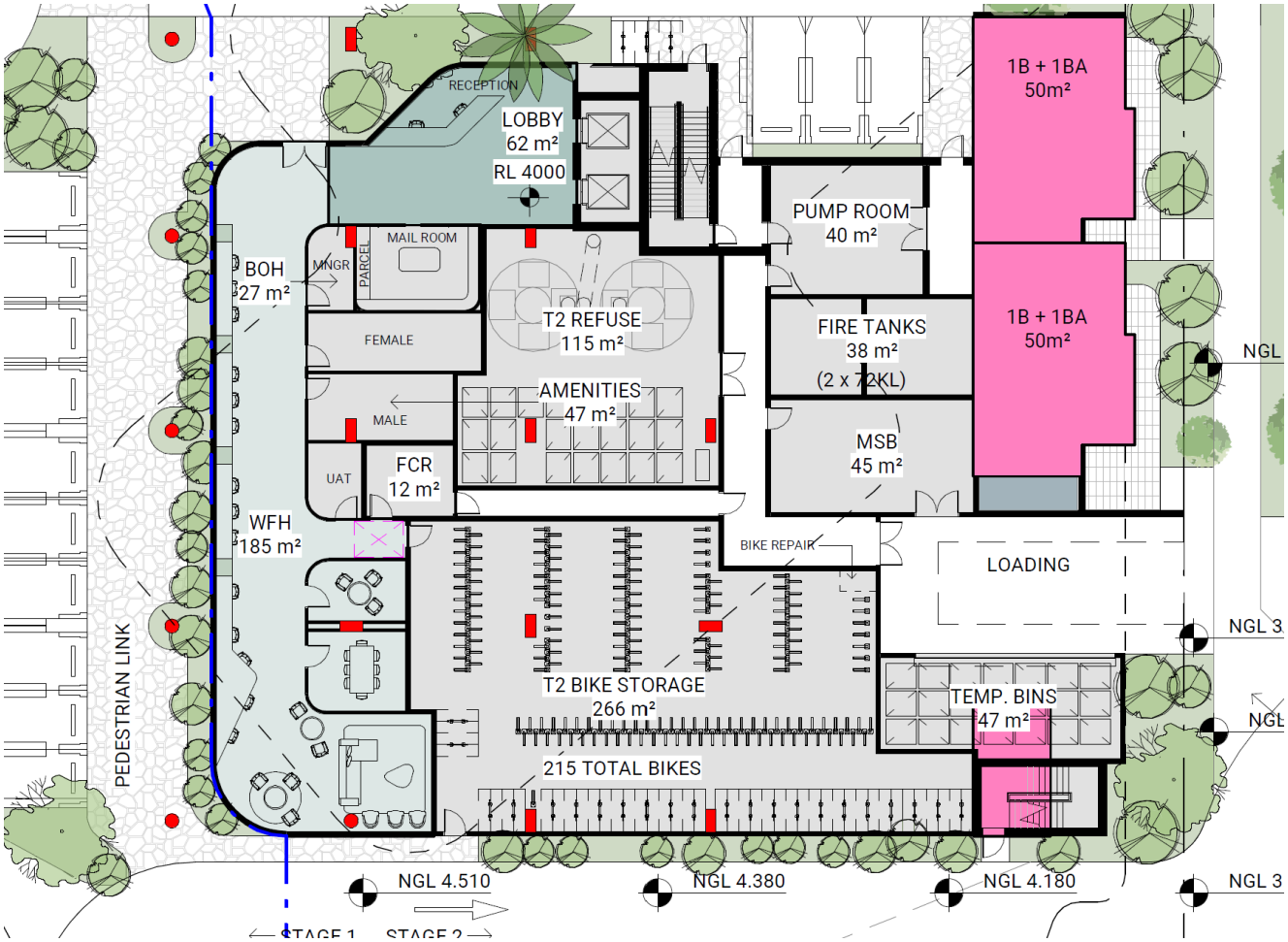
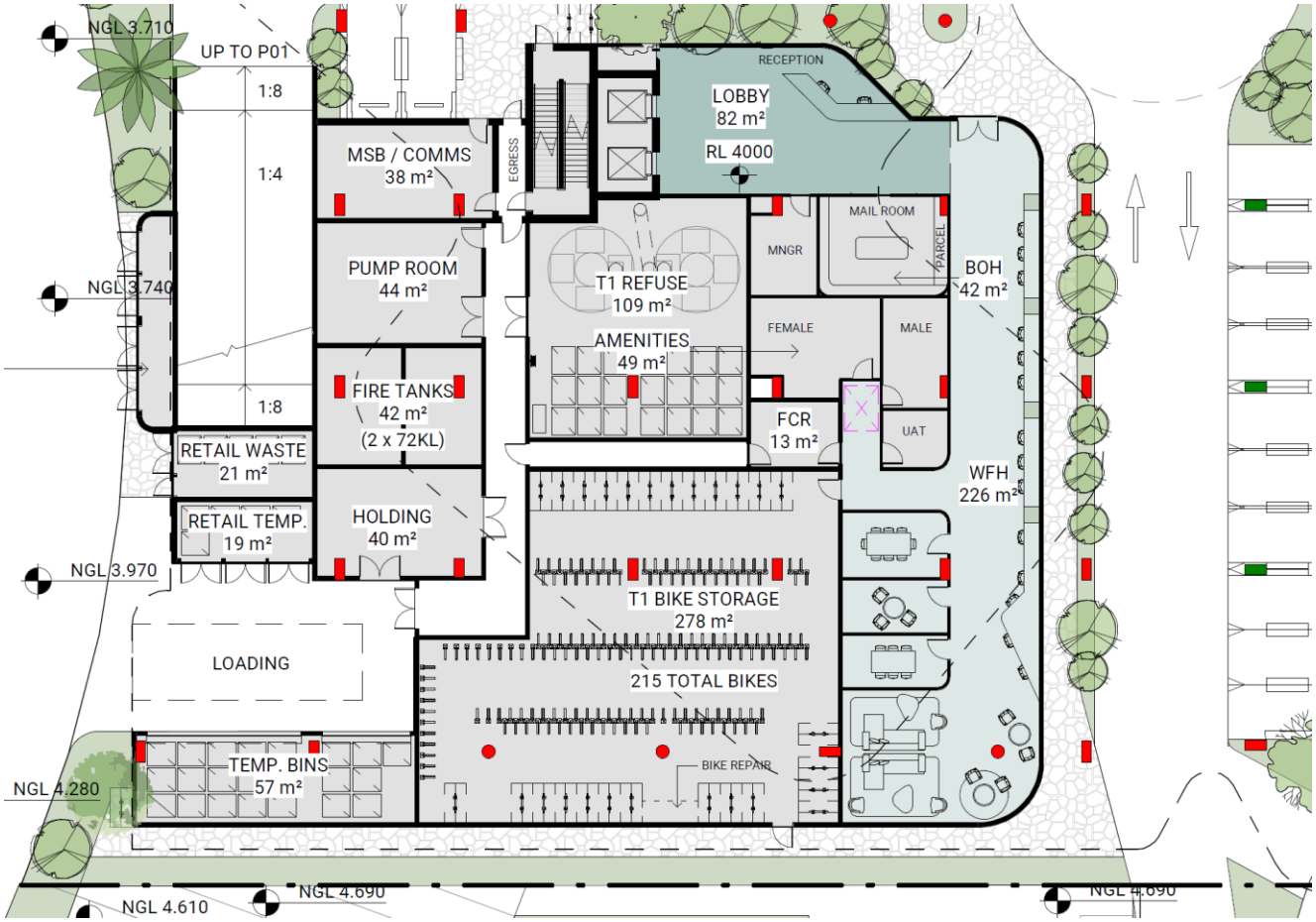



Figure 2.3 demonstrates the refuse storage areas for the Western Building, 2 x 4 bin roto feed systems with a single chute, diverter and waste compactor.

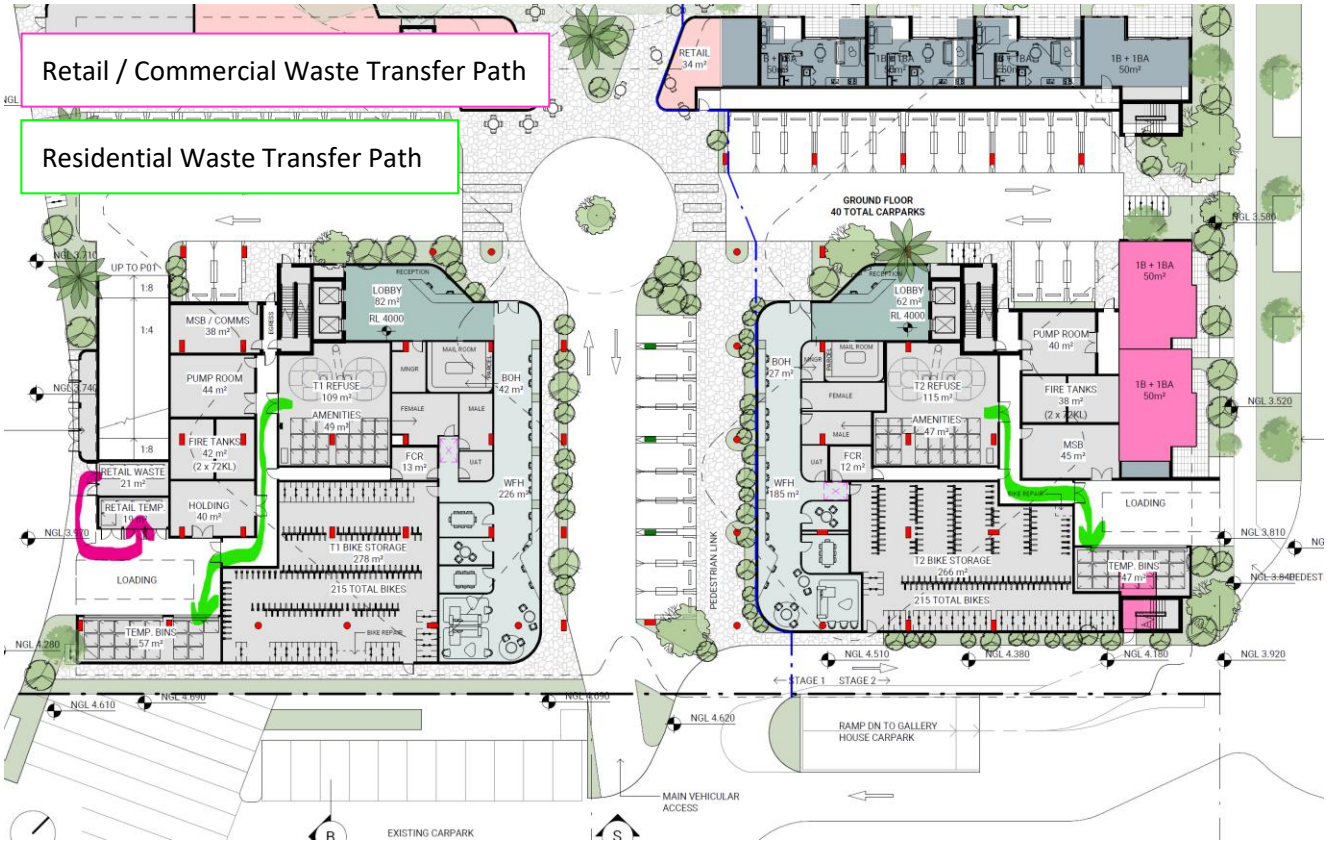
**Figure 2.3: Western Building Waste Room**




## 2.7 Bin Transfer

Building management or caretaker will be responsible for changing of bins from the roto feed systems. Prior to collections transfer of bins is required between the refuse rooms of the Eastern Building and Western Building Waste rooms and loading bay areas. Bin towing equipment such as a bin tug or a registered vehicle fitted with a trailer may be utilised to transfer multiple bins per trip. Use of a bin tug would be via internal pathways at low pedestrian traffic periods, or a vehicle and trailer may use public roadways for the transfer of bins. Retail tenancy staff / cleaners will transfer all refuse generated within each tenancy to the retail refuse room using cleaners' trolleys to reduce manual handling input as required for disposal. The transfer path is contained entirely within the building line. The collecting contractor will service the residential refuse bins directly from the temporary storage areas adjoining the servicing areas and return after servicing. The non-residential refuse bins will be collected and returned to the non-residential refuse room after service. Building staff / Cleaners will be responsible for cleaning and returning bins to buildings and cleaning the rooms after service as required.

**Figure 2.4: Bin Carting Route**




## 2.8 Bin Dimensions

The proposed bins to be used on site is provided in Table 2.3.

**Table 2.3 Bin Dimensions**

| Bin Type | Volume | Length (mm) | Width (mm) | Height (mm) | Collection Vehicle |
|---|---|---|---|---|---|
| Plastic Bulk Bin | 1100L | 1280 | 1080 | 1340 | Rear Lift Truck |

## 2.9 Collection Vehicle

The vehicle specifications of a rear loading RCV to be used to service the proposed site is indicated in Figure 2.5, as per the BCC Refuse Planning Scheme Policy, Table 3.

**Figure 2.5: RCV Vehicle Specifications**

| Vehicle type and description | Specifications | Measurements |
|---|---|---|
| **Rear loading collection vehicle**<br>Commonly used for domestic garbage and recycling collections from multiple dwellings. Rear loading collection vehicles can be used to collect waste stored in mobile garbage bins or bulk bins, particularly where bins are not presented on the kerbside | Length overall | 10.24m |
| | Width overall | 2.5m |
| | Operational height | 3.6m |
| | Travel height | 3.6m |
| | Turning circle kerb to kerb | R9.5m |
| | Turning template | As per BSD-3008-2 |

# 3.0 RECOMMENDED OPERATIONAL REQUIREMENTS

## 3.1 On-going Management

All refuse equipment movements are to be managed by the building manager / caretaker or cleaners at all times. The building manager's / cleaners' duties include, but are not limited to the following:

- Organising, maintaining and cleaning the general and recycled waste discharge, storage and collection areas (frequency will depend on waste generation and will be determined based upon building operation);
- Transporting and decanting of bins as required;
- Organising both general waste and recycled waste pick-ups as required;
- Cleaning and exchanging / transporting all bins as required;
- Organising and coordinating bulky goods collections;
- Ensuring site safety for residents, children, visitors, staff and contractors;
- Abiding by all relevant occupational health and safety legislation, regulations, and guidelines;
- Providing to staff / contractors equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management activities; and
- Continual monitoring of equipment uses and scheduling to ensure best operational outcomes.

## 3.2 Waste Minimisation

Waste minimisation is an important part of any site operation. At a minimum, the following should be implemented.

### *3.2.1 Education*

On-going education is important to ensure people continue to use the facilities as originally intended. All body corporate and leasing contracts should contain clauses pertaining to waste management arrangements and use of any associated equipment.

### *3.2.2 Signage*

All receptacles and bins should have adequate signage, with appropriate labelling, which is clear and easy to read. Standard signage is to be provided in and around waste collection and storage areas (see **Appendix D**).

## 3.3 Operational Equipment Summary

Equipment required or suitable for use as part of the operational phase of the development is outlined below. Note that all collection receptacles and bins should be branded with the appropriate stickers.

**Table 3.1 Operations Equipment**

| Component | Description | Quantity | Notes |
|---|---|---|---|
| Residential | Waste Bins in Refuse Room | 10 x 1100L waste bins | See Appendix C |

| | | | |
|---|---|---|---|
| | Recycle Bins in Refuse Room | 20 x 1100L recycle bins | See Appendix C |
| | Single Refuse Chutes | 2 | 1 x required for each tower. Co located chutes for general waste and recycling. Access points on each habitable residential level. |
| | Chute Discharge Compactor | 2 | 1 x required for each tower. Installed to general waste chute only. Will achieve an average compaction ratio of 3:1. |
| | 4 x 1100L Bin Carousel | 1 | 1 required for Eastern Tower. Automate bin rotation beneath the chute discharge of the commingled recycling stream. |
| | 4 x 1100L Bin Carousel | 1 | 1 required for Western Tower. Automate bin rotation beneath the chute discharge of the commingled recycling stream. |
| | Bin Tug | 1 | To assist in transferring bins to the collection point. |
| Commercial / retail | Waste Bins in Refuse Room | 5 x 1100L bins | See Appendix C |
| | Refuse Cleaner Trolleys | TBD | |
| | Cooking Oil Storage | 1 | Portable Storage Tank |

## 3.4 Operational Suppliers Summary

Equipment suppliers for use as part of the operational phase of the development are outlined below.

**Table 3.2 Equipment Suppliers**

| Company Name | Equipment | Link |
|---|---|---|
| Closed Loop Organics | Domestic Composters | https://closedloop.com.au/ upcycling-products |
| Absorbenviro | Containment, Absorbents, Drain Protection | http://www.absorbenviro.com.au/ |
| Trade Environmental | Spill Response, Spill Containment, Storm water Management | http://www.tradeenviro.com.au/bunded-pallets/ |
| Wastech | Chutes & Bin Rotation Equipment, Balers, Compactors | http://wastech.com.au/ |
| Elephants Foot Recycling Solutions | Chutes & Bin Rotation Equipment, Balers, Compactors, Bin Lifters, Weighing Systems | http://www.elephantsfoot.com.au/ |

## 3.5 Controls

### *3.5.1 Refuse Room*

The refuse room will have the following features in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area:

- Enclosed rooms will be fire rated and ventilated in accordance with the National Construction Code-Building Code of Australia;
- Doors must be wide enough to allow for the easy removal of the largest container to be stored;
- The walls, ceilings, floors and equipment are to be designed and constructed of impervious material with a smooth finish to allow for easy cleaning;
- Door frames are metal, hardwood or metal clad softwood, situated in an external wall;
- Door frames are rebated with a lock capable of being activated from within the room without a key at all times;
- Rainfall and other surface water cannot flow into the waste rooms;
- The floors are to be graded to fall to a drainage point;
- Drainage points connected to sewer in accordance with trade waste requirements;
- A hose cock must be provided directly outside the rooms for cleaning bins and the room;
- Adequate artificial lighting;
- Not located adjacent to or within any habitable portion of a building or place used in connection with food preparation (including food storage);
- Permit unobstructed access for removal of the containers to the service point; and
- Will be attractively designed to minimise their visual impact on the surrounding areas.

### *3.5.2 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.

**WMP Approved by:**

**Herman Joubert** M.Eng (CIV), CPEng (NZ), CEng (U.K), RPEQ

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**ITE Consulting**

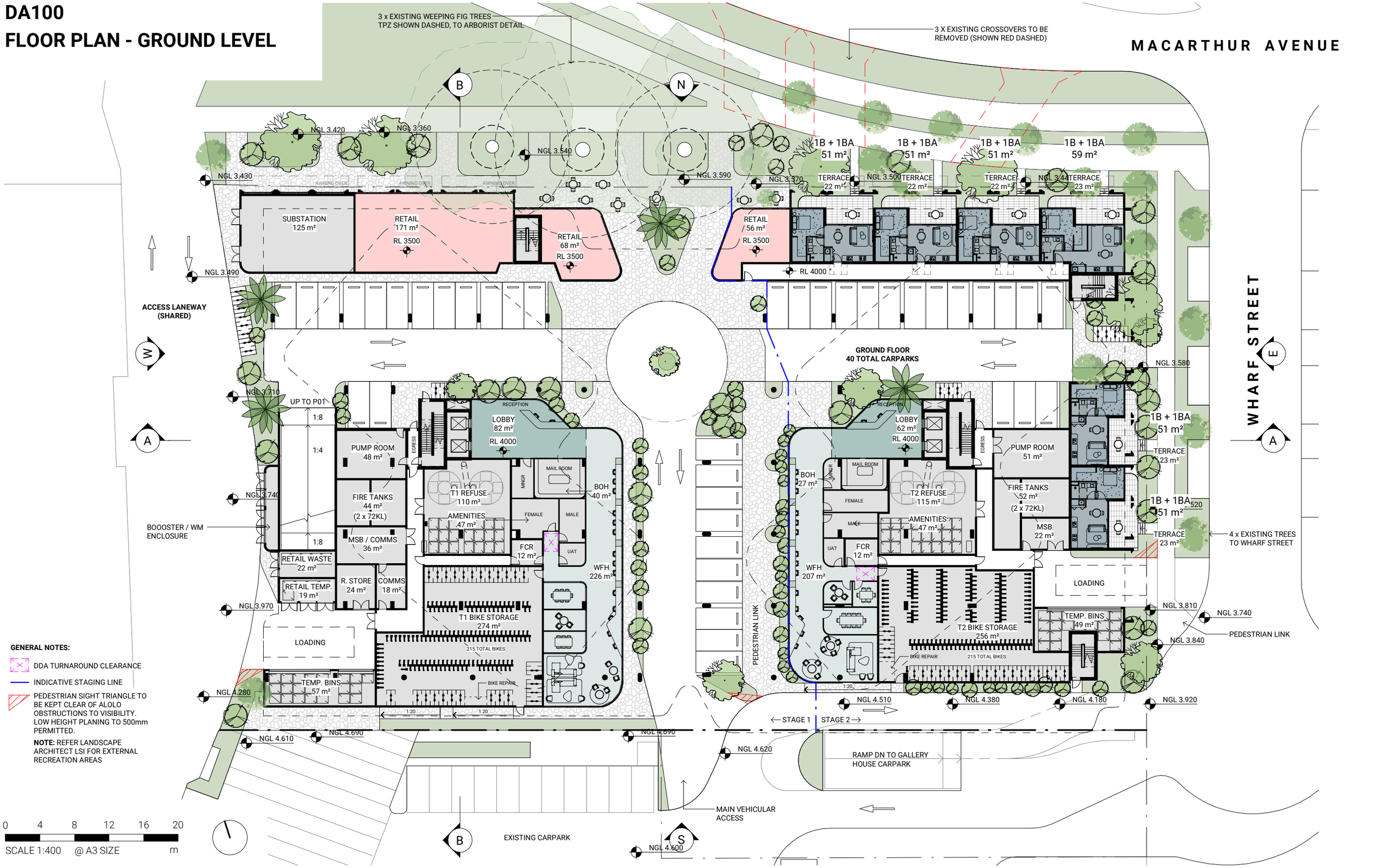
RPEQ No.: 25899

APPENDIX

# A

## Architectural Plan and Waste Room

# DA100
# FLOOR PLAN - GROUND LEVEL




**GENERAL NOTES:**

- DDA TURNAROUND CLEARANCE
- INDICATIVE STAGING LINE
- PEDESTRIAN SIGHT TRIANGLE TO BE KEPT CLEAR OF ALOLO OBSTRUCTIONS TO VISIBILITY. LOW HEIGHT PLANING TO 500mm PERMITTED.

**NOTE:** REFER LANDSCAPE ARCHITECT LSI FOR EXTERNAL RECREATION AREAS

0 4 8 12 16 20 m

SCALE 1:400 @ A3 SIZE

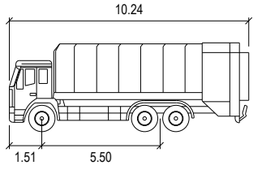
APPENDIX

# B

## RCV Vehicle Swept Paths

Notes:

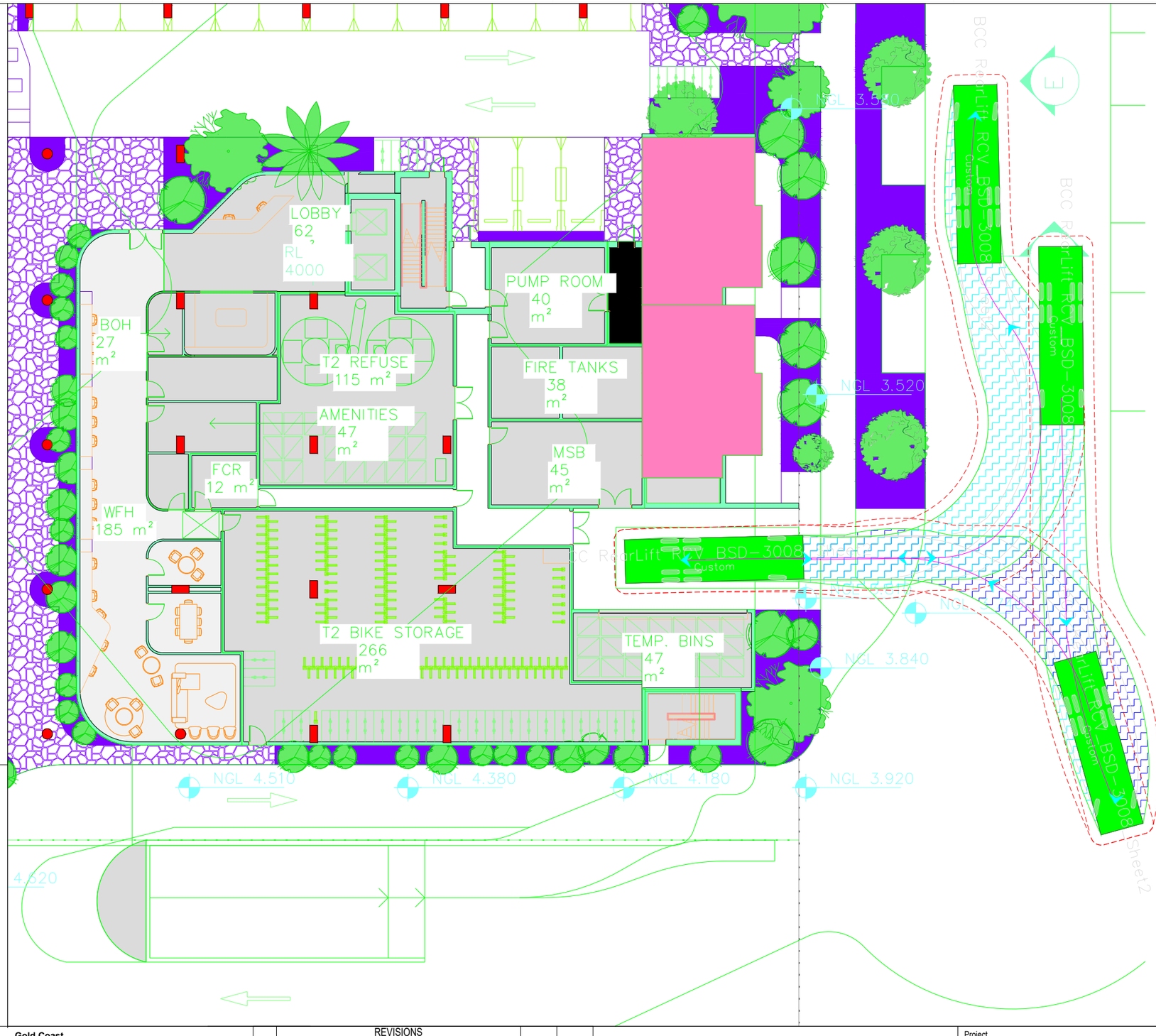
Vehicle Clearance (600mm)




BCC Rear Load RCV — meters

| | | |
|---|---|---|
| Width | : | 2.5 |
| Track | : | 2.5 |
| Lock to Lock Time | : | 6.0 |
| Steering Angle | : | 44.4 |

# DESIGN VEHICLE





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| Issue | REVISIONS Revisions/Descriptions | Drawn | Date |
|---|---|---|---|
| 001 | Swept Path Assessment | T.R | 01.08.2025 |

Scale @ A3 — 0 4 8 12 16 20 — 1:400

Project: 11_23 MACARTHUR AVE HAMILTON

Title: SWEPT PATH ASSESSMENT
BCC REAR LOAD RCV
EAST LOADING DOCK

| Design | Drawn | Checked |
|---|---|---|
| T.R | T.R | J.BR |

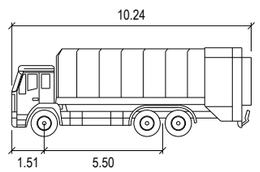
CONCEPT ONLY

Date: 01.08.2025

| Project Number | Sheet Number | Issue |
|---|---|---|
| P7112 | 1 | 001 |

Notes:

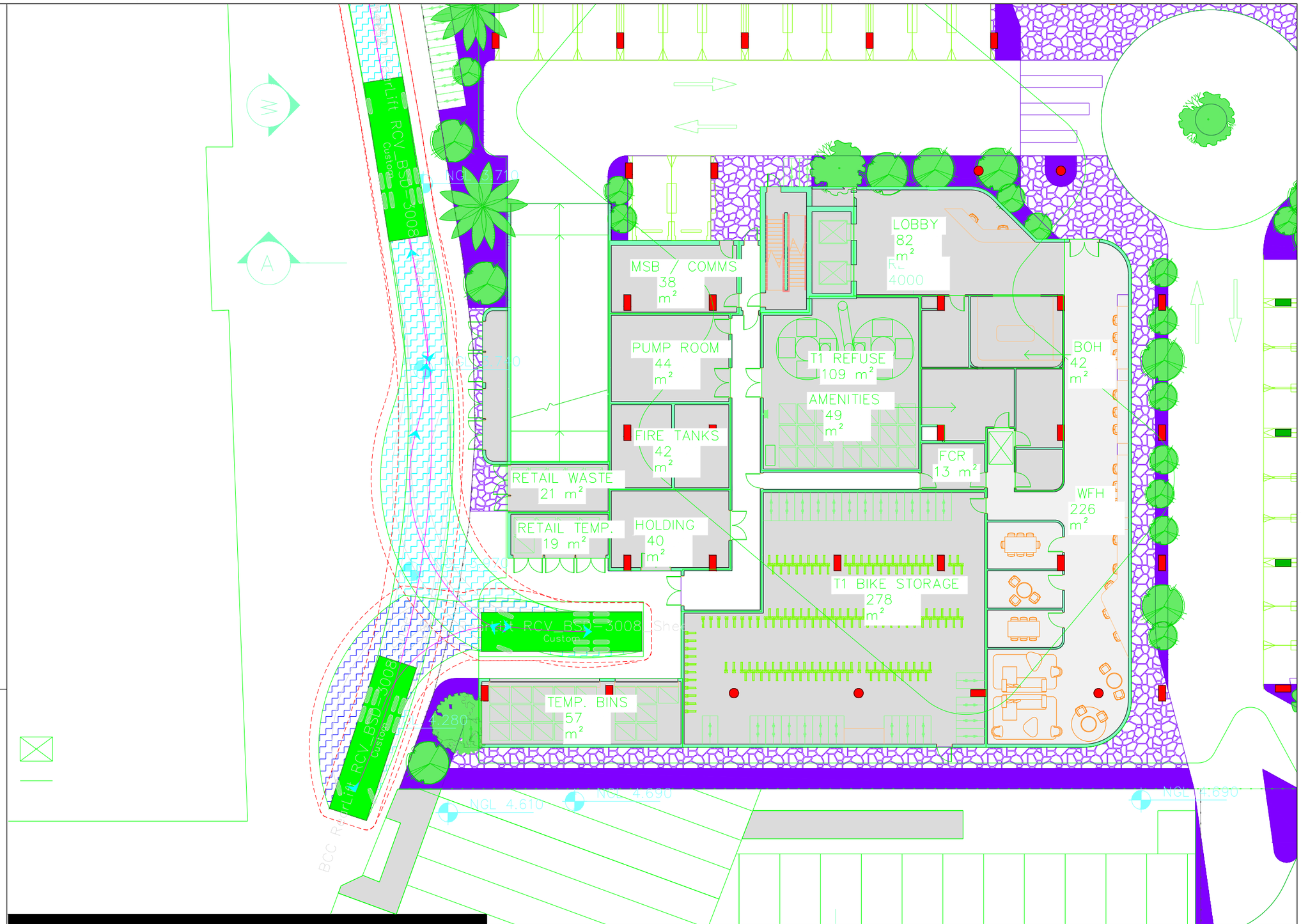
Vehicle Clearance (600mm)




BCC Rear Load RCV meters

| | |
|---|---|
| Width | : 2.5 |
| Track | : 2.5 |
| Lock to Lock Time | : 6.0 |
| Steering Angle | : 44.4 |

# DESIGN VEHICLE




**Gold Coast**
Suite 26, 58 Riverwalk Avenue, Robina QLD 4226
P: (07) 5562-5377
W: www.bitziosconsulting.com.au
**Brisbane**
Level 2, 428 Upper Edward Street, Spring Hill 4000
P: (07) 3831-4442
E: admin@bitziosconsulting.com.au
**Sydney**
Studio 203, 3 Gladstone Street, Newtown NSW 2042
P: (02) 9557 6202

| Issue | REVISIONS Revisions/Descriptions | Drawn | Date |
|---|---|---|---|
| 001 | Swept Path Assessment | T.R | 01.08.2025 |

Scale @ A3 0 4 8 12 16 20 1:400

Project: 11_23 MACARTHUR AVE HAMILTON

Title: SWEPT PATH ASSESSMENT
BCC REAR LOAD RCV
WEST LOADING DOCK

| Design | Drawn | Checked |
|---|---|---|
| T.R | T.R | J.BR |

CONCEPT ONLY

Date: 01.08.2025

| Project Number | Sheet Number | Issue |
|---|---|---|
| P7112 | 1 | 001 |

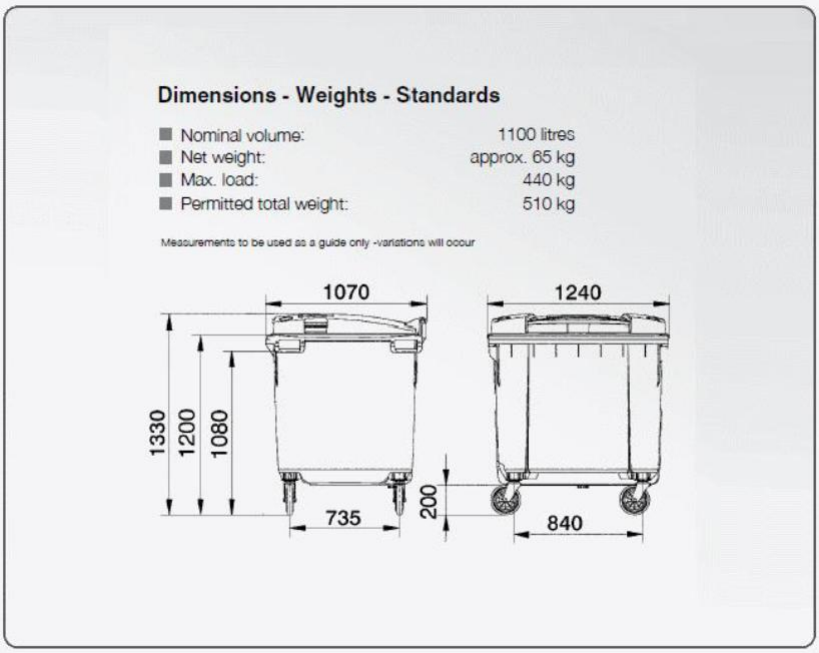
APPENDIX

# C

## System Specifications

# C.1 Typical Apartment / Unit Receptacles for Refuse

# C.2 Waste and Recycling Bins



# C.3 Apartment Compost Bins (Optional)

Urban Composter https://www.urbancomposter.com.au/

CLOSED LOOP
LOVE WHAT YOU DO
CLO'ey


## Product Specifications

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

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

Closed Loop Composter http://www.closedloop.com.au/domestic-composter

# C.4 Waste Oil

Cookers
Bulk Oil System
the future of cooking oils

1300 882 299
VIC NSW SA QLD WA
ENQUIRE

HOME SUSTAINABILITY - OIL MANAGEMENT SYSTEMS - PRODUCTS - ORGANIC OIL - VIDEOS MEDIA - ABOUT US - CONTACT US -

## oil Management Systems

### Retail Solutions

Cookers has developed and enhanced a reliable stainless steel tank system for the storage and handling of your cooking oil and is available to you on a Free Loan basis. All of the equipment supplied by Cookers has been manufactured in Australia.

Our standard fresh oil tank is fully stainless steel and is equipped with an electric pump, food grade hose, filler nozzle and heavy duty castors for ease of movement. The dimensions of this tank are 450mm W x 700 D x 900 H which is equivalent to a standard bench height. This tank has a holding capacity of 180 litres.

There are also other size tanks available to suit different applications and Cookers will also supply custom built tanks if required.

Lifting of drums is eliminated, OH&S is enhanced and stock management is improved.

Cookers also has a number of options when it comes to handling your waste oil.

Our standard waste oil holding tank has the same dimensions as our fresh tank - 450 W x 700 D x 900 H - and holds 200 litres. A larger tank with a capacity of 400 litres is also available.

We now have a new addition to our waste equipment with a Vacuum Waste Tank now available (Patent Pending ). Again this tank has identical dimensions to our standard fresh oil tank. Simply wheel the unit up to your fryer, place the hose tip into the fryer and vacuum out the oil in less than 1 minute. This unit will be pumped out by our waste collection truck on its scheduled run.

As you can see the Cookers Bulk Oil System makes the worst job in the kitchen much safer and easier.

Fresh oil storage tanks

Waste oil tanks are compact, clean and easy to use.

Cookers
the future of cooking oils

# C.5 Waste Chute, Carousel, Feeders, Compactor and Bin Tug

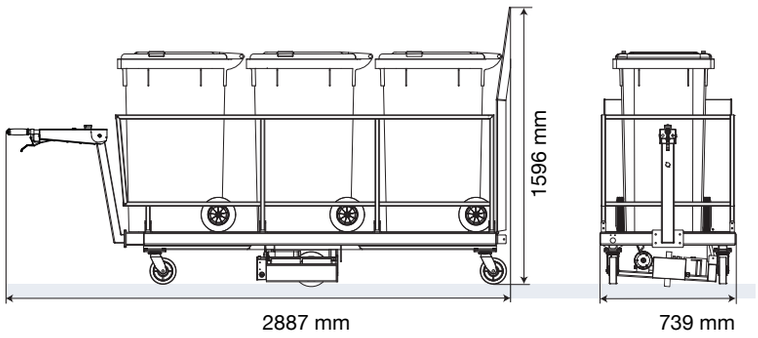
POWERED BIN TROLLEY

# Smart solutions for
# moving multiple wheelie bins.


MODULAR BIN TRAILER

Electrodrive

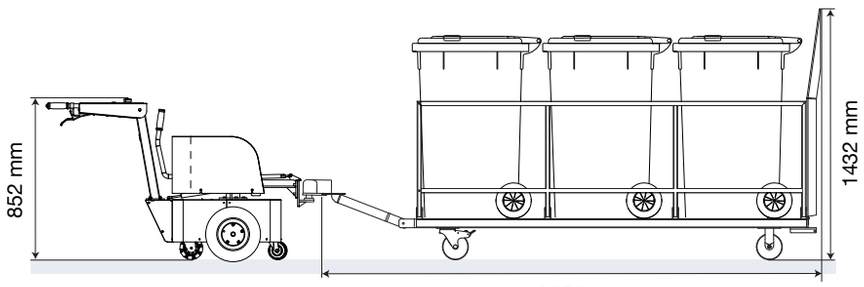
# Powered bin trolley

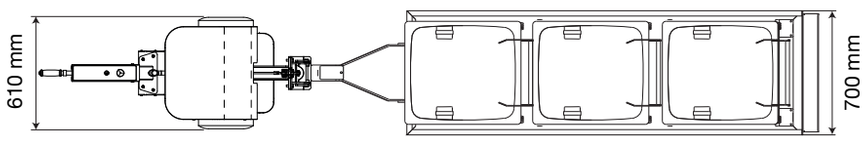



- Move up to three 240 litre wheelie bins, weighing up to 400 kg over a flat surface.
- Powered drive wheel can carry loads over ramps up to 5 degrees.
- Smart design with easy turning action.
- Tiller control keeps you in front of load.

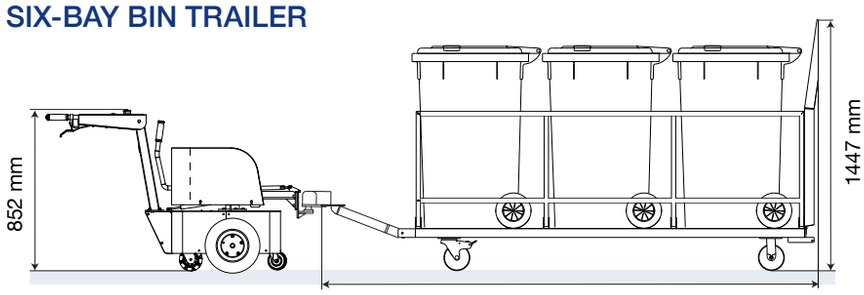
# Modular bin trailer

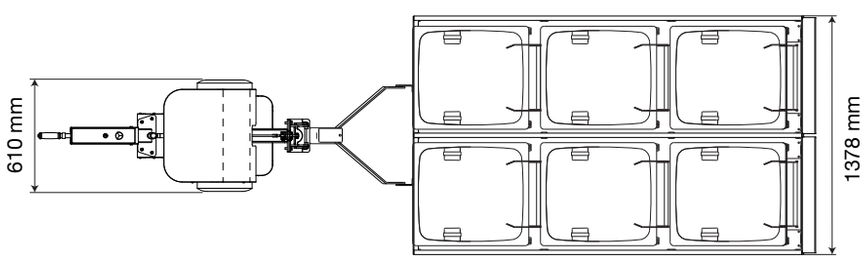
## THREE-BAY BIN TRAILER




## SIX-BAY BIN TRAILER




- Load capacity of up to 240 kg per bin bay.
- Compatible with 80, 120, 140, 240 and 360 litre wheelie bins.
- Gas strut actuated bin retention bar.
- Fits within one standard car parking space.
- Comes with a drawbar to suit pin hitch as standard.

### Safe
Move bins safely by maximising forward vision, reducing the risk of collisions and back and side strains.

### Simple
No licence required and easy to use.

### Strong
A single operator can safely move heavy loads.

### Quiet
Smooth operation with zero emissions and low maintenance.

### Local
Manufactured in Australia.

**Electrodrive Pty Ltd** | 1800 333 002 | sales@electrodrive.com.au | www.electrodrive.com.au

**Victoria**
2A Ayton Street
North Sunshine
VIC 3020

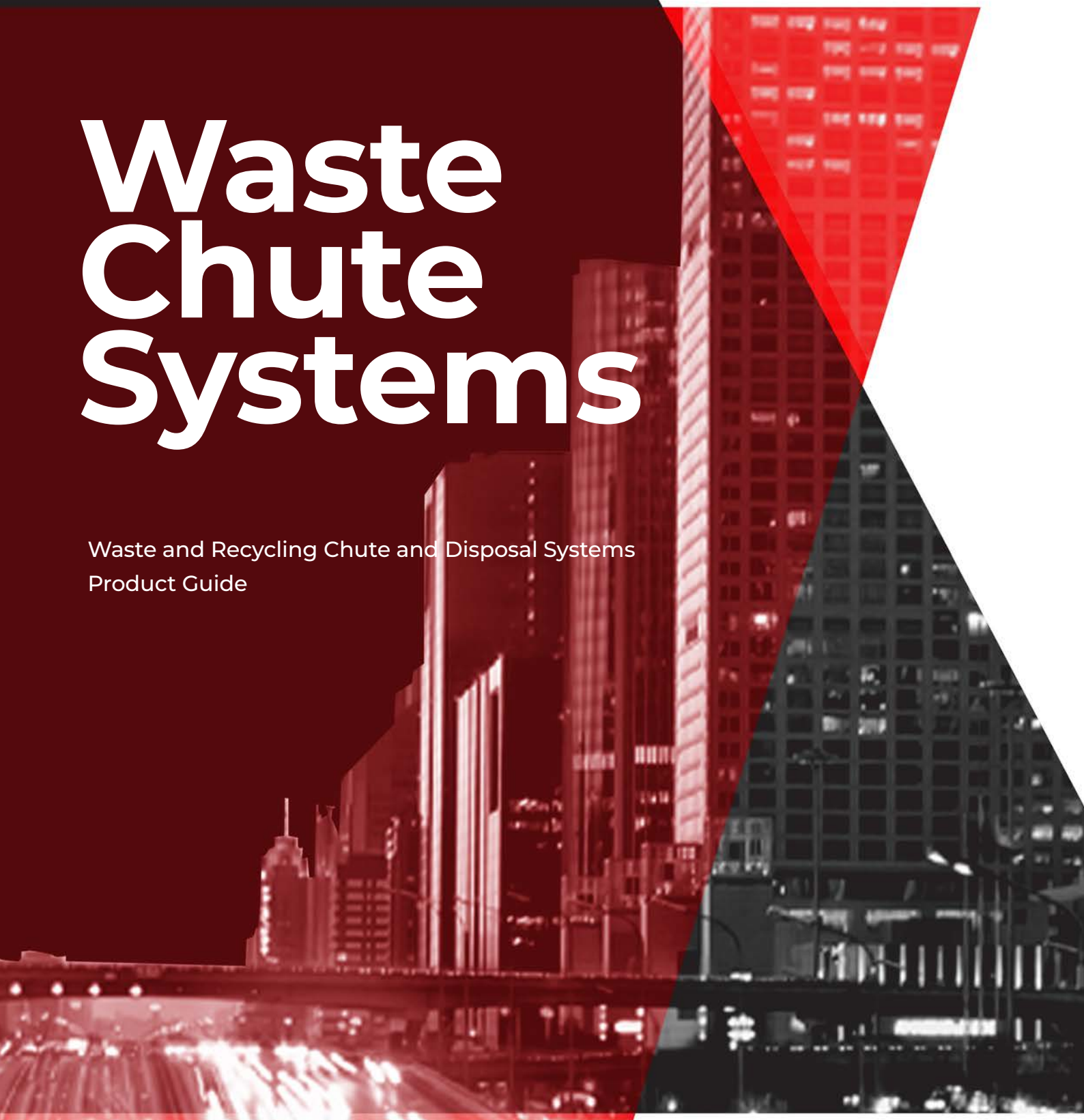
**Queensland**
Unit 4/11 Christensen Road
Stapylton
QLD 4207

Electrodrive

WASTECH
ENGINEERING

# Waste Chute Systems

Waste and Recycling Chute and Disposal Systems
Product Guide



1800 465 465
www.wastech.com.au
info@wastech.com.au
Wastech Engineering

# Welcome to your complete guide to Wastech Waste Management Systems and Chutes range



# Company Profile

We are an Australian design, engineering and manufacturing company that services the waste management and resource recovery sectors across Australia and New Zealand.


Our extensive product range and end-to-end service offerings support a diverse range of businesses big and small, and governments local to federal, that are seeking technology-enabled solutions to effectively manage waste and resources and drive efficiency.

We have been at the forefront of Australian engineering innovation for more than 30 years and continuously strive to improve our products and services through investment in research and development, adoption of best-practice design and the procurement of high-quality technology and materials. We implement a quality-focused, lean manufacturing model in design and production so that we can reduce wastage and unnecessary use of materials.

Our commitment to sustainability also extends to our energy consumption with all our products fabricated using power sourced from our own 85kw solar array. This efficient product development process means we can pass savings onto customers while also helping the environment.

## Customer Centric.

**Dedicated and experienced teams for every product**

When commissioning new equipment, our engineers and technicians work with our customers until the equipment is fully operational and they know how to use it. We work as one team to get the job done.

## Proudly Australian.

**On-site and local manufacturing capabilities**

Our organisation has grown to become an award-winning and highly respected Australian manufacturing and engineering company committed to creating and supporting local jobs. With a local workforce of more than 100 people, we maintain a deep inhouse capability with Australia-wide operations.

## Trusted. Reliable.

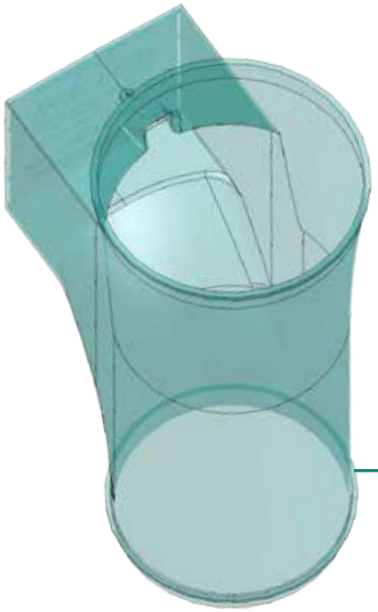
**On-time project delivery backed by 24/7 service and support**

Our service and support team operates out of dedicated facilities to maintain a high level of service. Our qualified technicians can attend all sites to service, repair and refurbish all products in the industry.

Waste Recycling Linen Organics

# Smoothtubes™ Plastic Chutes

Introducing Wastech's very own super smooth plastic Waste Chute system offering 80% less friction than steel, allowing for quieter and smoother waste disposal, whilst being a more cost effective solution.



## Pioneering the design of Australia's first plastic chutes, Wastech's Smoothtubes™ Chutes system offers:

- Superior industrial grade plastic(LLDPE)
- Australian designed and developed
- Superior acoustic properties
- Made from recycled* Polyethylene
- Low density, flexible material
- Offers unrestricted continuous flow
- Corrosion proof
- Self cleaning smooth internal surface

## Recommended configuration/installation options are:

Single Chute System | Dual Chute System | Triple Chute System

For more detailed specifications on Single, Dual and Triple chute systems, please refer to page 14.

### Innovative Design

The Smoothtubes™ modular design caters for any application without the need to custom build sections. The innovative slip-joint assembly system significantly reduces installation time.

Smoothtubes™ also offer UV and impact resistance while weighing less than 15kg per section.

### Builder Friendly

Easy installation by offering:

- In-built block-off panels that seal the chute until installation of the loading doors is complete. This helps to ensure no usage or damage can occur during construction and installation.
- Self supporting modular sections with built in mounts.
- Lightweight for easy handling.

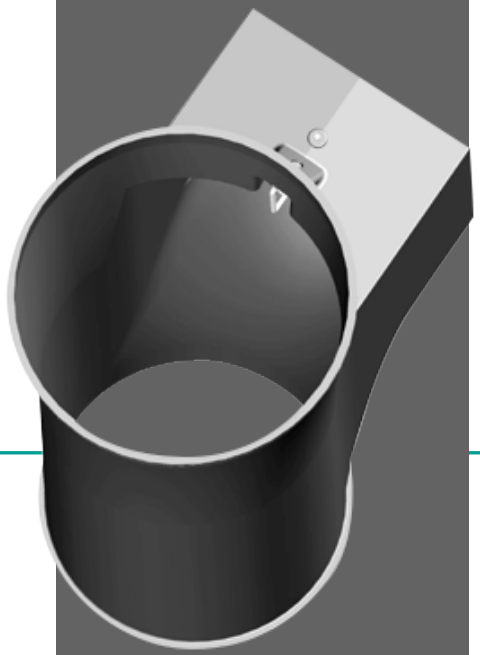
### Cleaner & Quiter

Smoothtubes™ are designed to be cleaner whilst eliminating noise by:

- Offering crevice free joints with no sharp angles eliminating collection of any waste particles.
- Closed cell, non-porous material repelling grime, bacteria, odour and liquid.

## Fact!

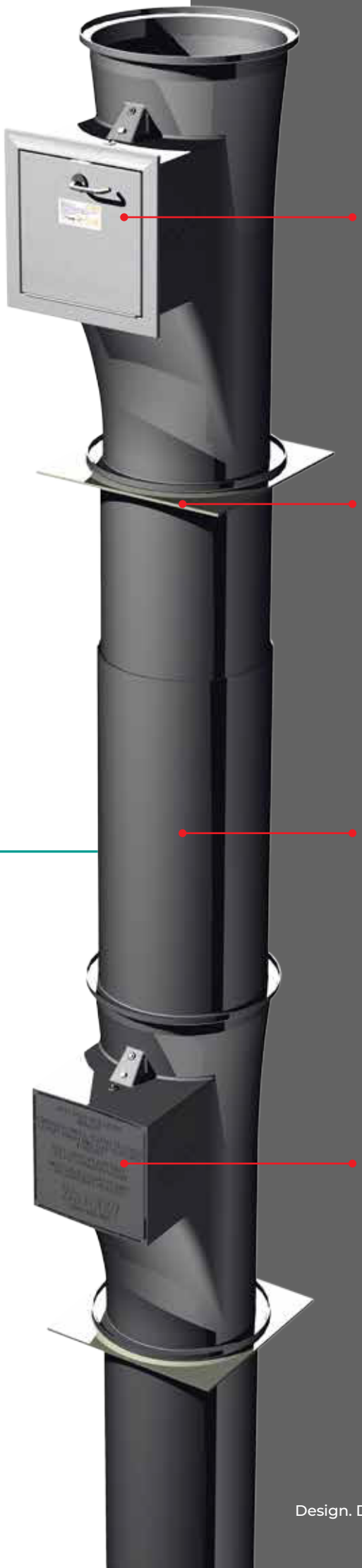
Wastech pioneered the plastic chute system withSmoothtubes$^{T}$ and have successfully manufactured, delivered and installed over 2000 waste chute major commercial projects Australia wide!



## Contact Us

A large range of options are available including Steel chutes and custom built solutions.

To arrange a detailed discussion, contact a Waste Management consultant today on 1800 465 465.



Stainless Steel fire rated door. (AS1530)

Floor mounts supported by Embelton NRD isolation mounts

Lightweight self supporting chute modular section.

In-built installation block off panel.

For detailed specifications, please refer to page 12.

Waste Recycling Linen Organics

# Smoothtubes™ Diverter

## A smart, space saving, single chute diverter system for both waste and recycling.

Designed for use with a single chute waste disposal system, the Smarttubes™ diverter provides a simple and efficient method for disposing of multiple waste streams while saving valuable building space.

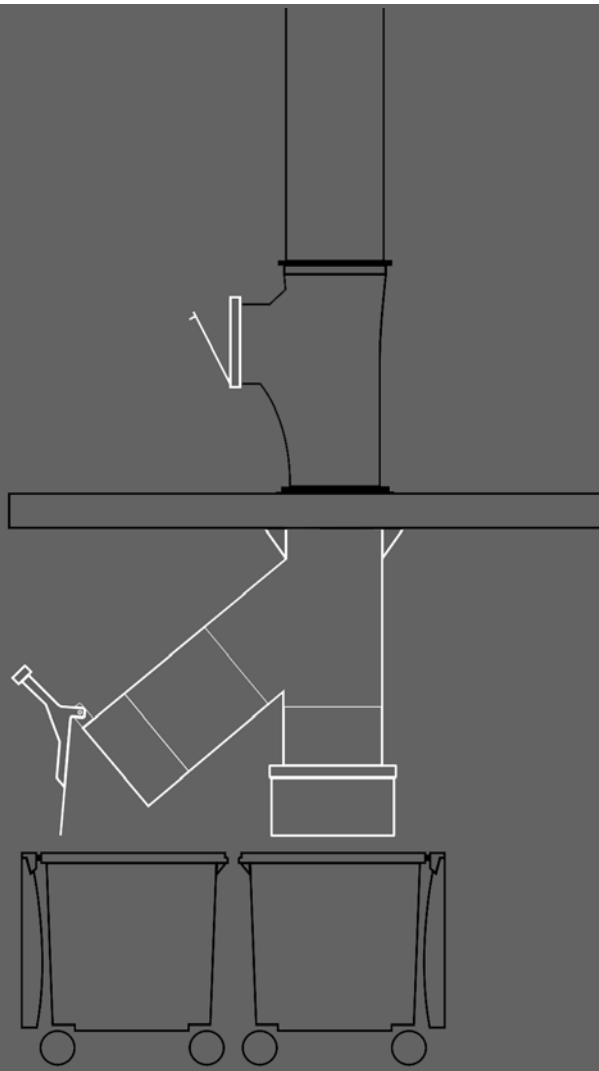
Smarttubes™ is an intelligent system that is simple to use for residents and building managers alike. The door control panel allows residents to easily select their desired waste stream, while the advanced web-based dial in system allows building managers to control the chute from anywhere within the building through wifi access!

### Wifi Dial-In

The Smarttubes™ single chute diverter systems allow for web based, wifi dial-in. This enables the user to lock individual or sets of doors, lock out of all doors for maintenance, or setting of the programmable timer. (i.e. disposal only allowed between 6am and 12am).

### Programmable & Remote Lock-Out

The Smarttubes™ system is fully programmable, allowing building managers to lock out specific levels or even the entire system for maintenance. Additionally, the system can be used to enforce a building disposable curfew via a programmable timer.



## Easy Installation & Maintenance

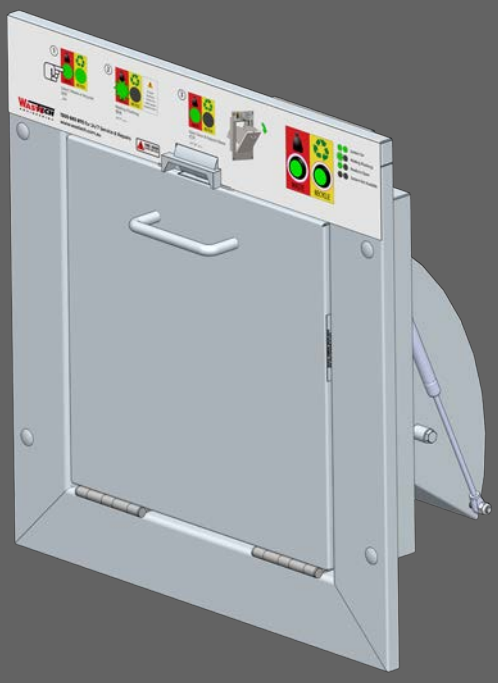
The electric actuator of the Smarttubes™ system eliminates the need for expensive hydraulics and results in lower lifetime maintenance costs. The electric motor also allows for lower power requirements, only requiring one standard 240V outlet.

## Simplified Operation

1. Select waste stream (waste or recycling).
2. Wait* - Diverter arm will move to the appropriate position.
3. Open - Chute door unlocks for disposal.

To ensure correct disposal, the chute door will only open for one waste stream at any stage of operation.

## Smarttubes™ Door Control Panel



*Wait time will vary depending on building height and current/active users.

Waste Recycling Linen Organics

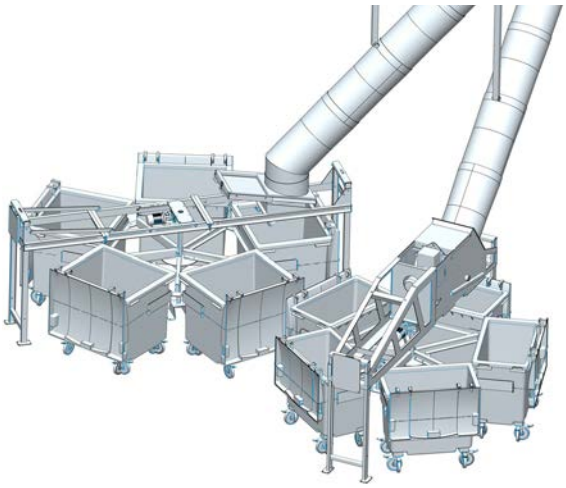
# Discharge Room

Introducing Wastech Chute compactors designed for efficient waste disposal for multi-story or multi-level buildings.

## Binpac™ Compactor

Introducing an extremely quiet and fast, hydraulic free, state-of-the-art compactor, designed to handle high volumes of even the most diverse garbage types with ease.

Running costs are minimised, while maintenance and cleaning is kept simple and safe.



- Low power drive motor
- Self cleaning compact drum
- Compact profile
- Large access panels
- Jam sensor switch
- Light weight bin cradles
- Configurable control box mount

| | |
|---|---|
| Bin feed system compatible | ✓ |
| Compaction Ratio | 2:1 to 5:1 (dependant on waste types.) |
| Construction | 5mm to 10mm Grade 250 M/Steel |
| Chamber Dimensions | N/A |
| Waste Capacity | N/A |
| Power Requirements | 240V / 10A GPO |
| Hydraulic Specs | N/A |
| Compaction Force | 680kg |
| Waste Bin Qty | 4x660ltr and 4x1100ltr Bins |
| Electric Control | PLC Control with Electronic Cycle |
| Service | Hydraulic Free 24 Hour Service |
| Warranty | 12 months (terms & conditions apply) |

## Automatic Bin feed Systems

Designed for use with or without a compactor, Wastech Automatic Bin Feed Systems help save time by automatically rotating through your bins as they are filled. Once the system detects the bin is full, it will automatically cycle to the next available empty bin using a powered carousel or conveyor machine system.

Smart alert options are available. For more information, contact a Wastech waste consultant on 1800 465 465.

# Equipment

## Eco-pack Compactor

Engineered for working installation within tight space restrictions, the economical Eco-pack is a hydraulic based compactor offering high packing force to help eliminate potential OH&S issues and bin damage.

- High compaction reducing bins required in floor space
- Robust high tensile steel construction
- Quiet and efficient hydraulic system
- Continually sealed door
- Suits all bin sizes
- Suits both carousel or linear bin feed systems
- Waste is compacted inside the compactor unit and not the bin
- No bin damage

| |
|---|
| 2:1 to 5:1 (dependant on waste types.) |
| 5mm and 20mm Grade 350 High Tensile Steel |
| 560 x 600mm |
| 80 ltr/sec per 15 second cycle = 20m3/hr |
| 415V / 20A / 5 Pin power point |
| 12 Lpm Pump / 5.5kW Motor |
| 62kn or 6.3 tonnes force @ 14Mpa |
| On Carousel System: Multiple Configurations Available |
| PLC Control with Electronic Cycle |
| Comprehensive fixed price service available |
| 12 months (terms & conditions apply) |


### Carousel System

Ideal for rooms with tighter space, this system rotates bins in a circular cycle system.

### Conveyor System

Ideal for rooms with longer, narrower space, this system rotates bins in a linear cycle system.

For specifications and configuration examples, please refer to page 15.

# Smoothtubes™ Plastic Chutes

## Chute Construction

**Nominal Internal Diameter:** Garbage 530mm
Material LLDPE (linear low density polyethylene). Internal surface is closed cell, ultra smooth finish that resists waste residue build up, odour, blockages, corrosion and liquid. +Fire hazard property tests in accordance with BCA Clause C1.10 and Specification C1. 10 in complying with Australian Standard AS1530.4-2014 by Warrington Fire Research (Aust) Pty Ltd.

**Material Thickness:** Chute tubes 5mm nominal.

**Mounts:** Designed to be flexible and smoke seal at every level.

**Noise & Vibration Prevention:** Acoustic lagging is not necessary. Refer to #acoustic report. Isolation is provided at every level under the floor mounts. Flexible mount is isolated from concrete using polyurethane sealant that is acoustically rated.

**Ventilation:** 200mm diameter galvanised steel ventilation fan and discharge cowl assembly. The fan is supplied with 240 volt single phase plug and lead. The cowl assembly comes complete with dektite flashing. The vent is connected to the top of the chute by a flexible duct.

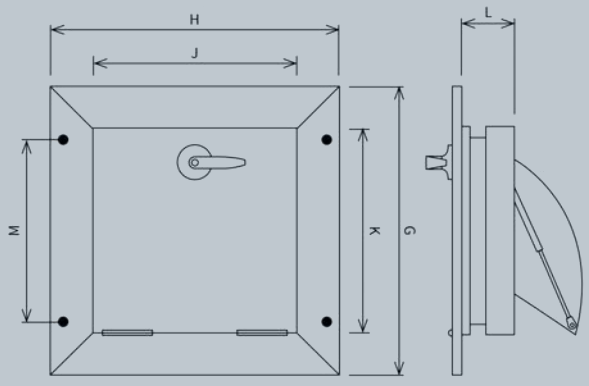
**Loading throat door:** Smoothtubes™ Loading Throats are molded within the chute tube creating a smooth flowing entry to reduce impact noise and minimise blockages. Loading doors -304 grade Stainless Steel with a fire block core, door frame sealed to wall using fire sealant. Compliance to Australian Standards AS1530.4-2014 (FRL:-/120/30). Doors are self closing. Key locks are supplied standard for Linen doors, Garbage and recycling doors. Fire sprinklers are installed in every loading throat ready for connection to fire services by others.

**Deflector:** The discharge of the chute has a 3 or 5mm thick Galvanised Steel deflector, set at 45 degrees (min) for discharge directly into a bin. The deflector is fitted with a fire activated fusible link close-off door which can be manually overridden, to close the chute for bin changes. For garbage discharge into an EcoPack Compactor the fire door is not required as the Compactor isolates the chute at all times.

## Installation

Chute sections weigh no more than 15kg each allowing easy transport and installation by hand without reliance on Tower Cranes. Bricking up instructions are detailed on the front panel of every loading throat, which stays fitted until installation of loading door to prevent unauthorised use and potential damage from building rubble.

## Chute Door Dimensions

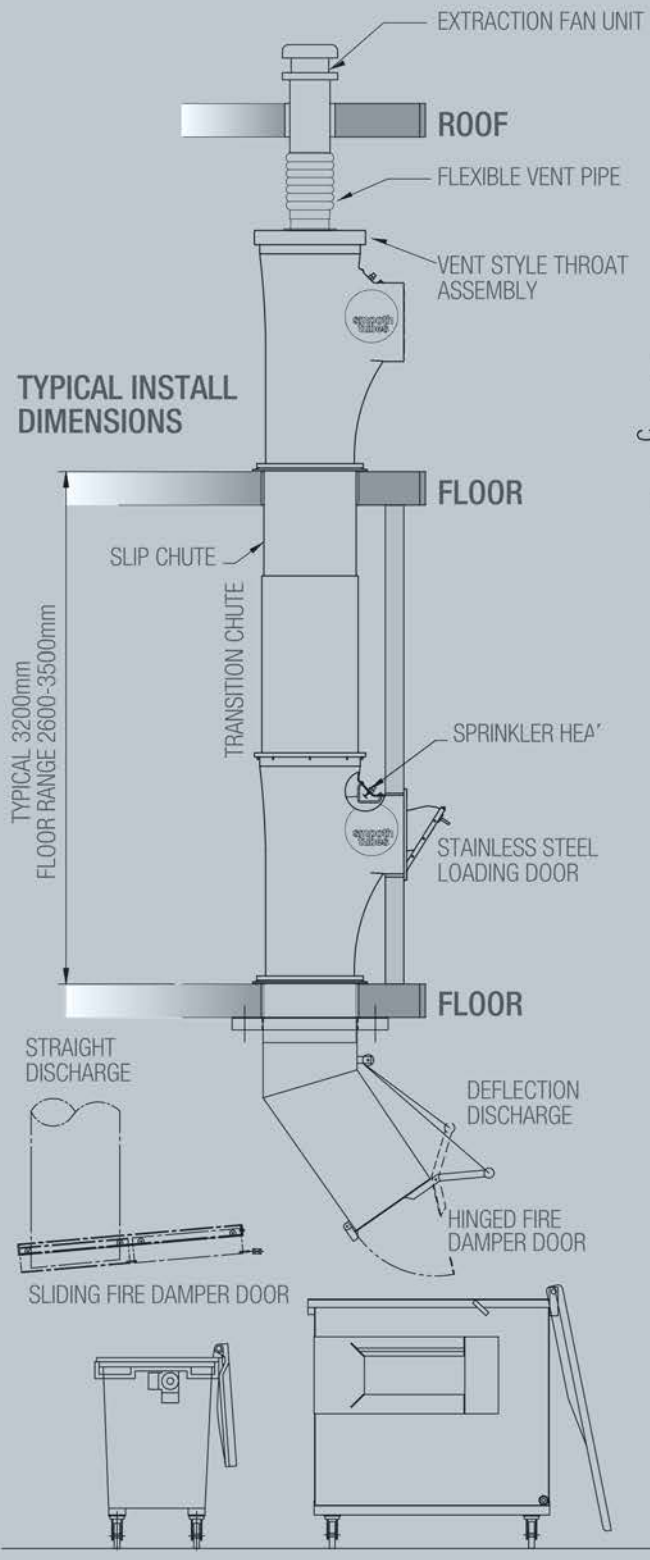


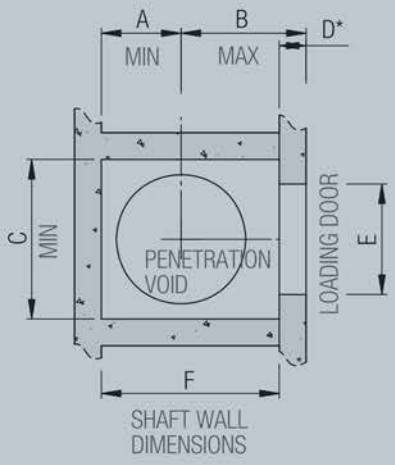

**Dimensions**

| Label | Waste Door | Linen Door | Recycling Door |
|---|---|---|---|
| G | 603mm | 603mm | 603mm |
| H | 603mm | 603mm | 603mm |
| J | 432mm | 432mm | 432mm |
| K | 432mm | 432mm | 432mm |
| L | 110mm | 110mm | 110mm |
| M | 380mm | 380mm | 380mm |

 A large range of configuration options and layouts are available. For more information or specifications, please contact a Wastech consultant on 1800 465 465.

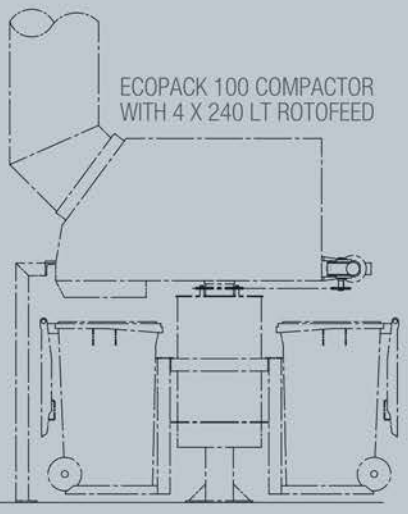
## TYPICAL INSTALL DIMENSIONS



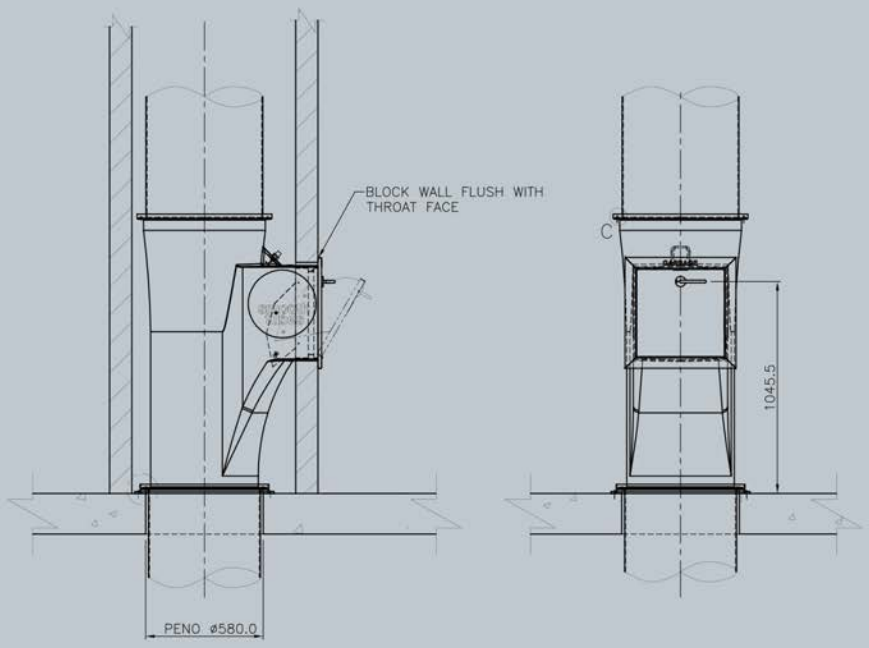

| Label | Waste / Linen Chute |
|---|---|
| A | 357mm |
| B | 560mm |
| C | 715mm |
| D | 110-140mm |
| E | 470mm |
| F | 808mm |

*See installation notes for more information.

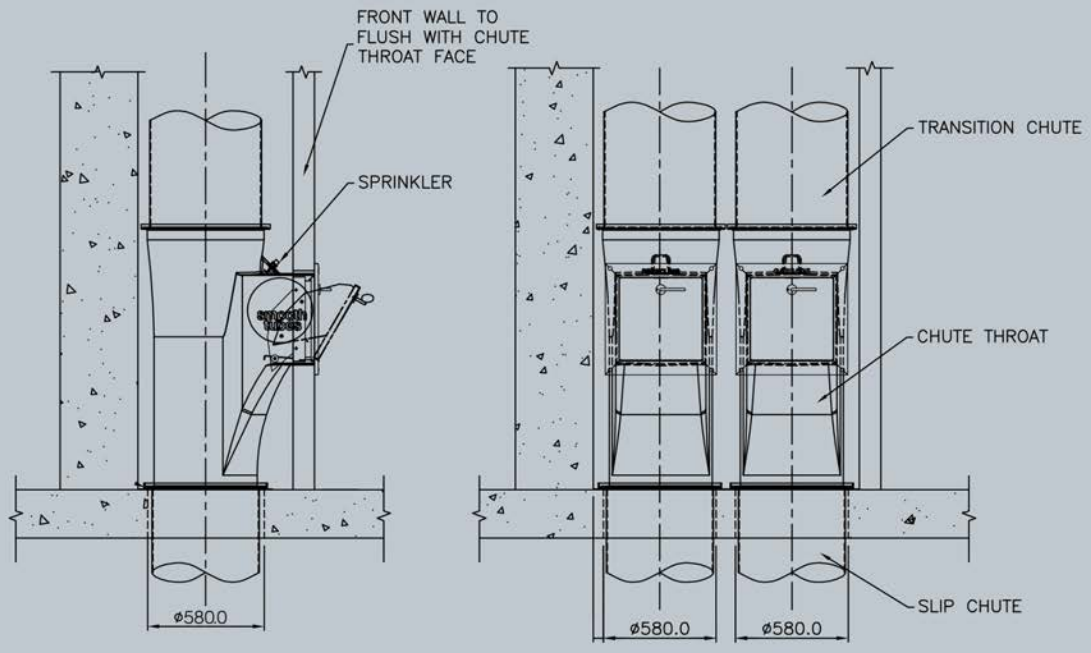


# Smoothtubes™ Chute Assembly

**Single Chute Assembly Example**



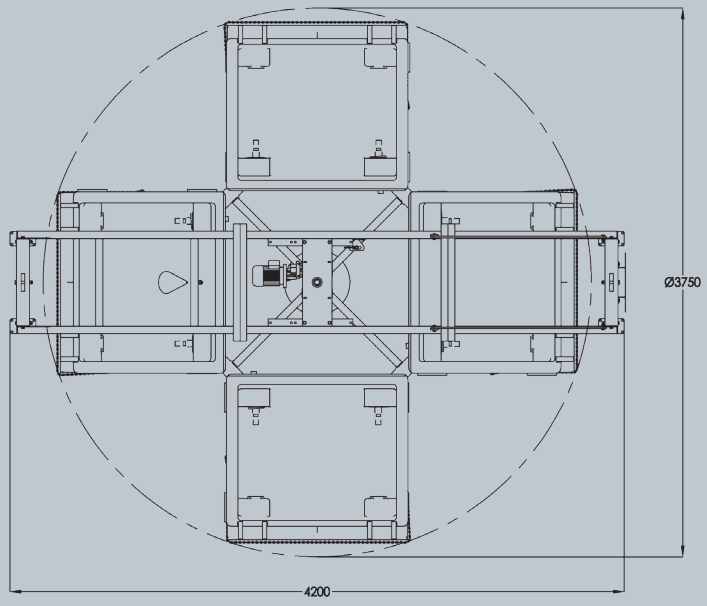

**Dual Chute Assembly Example**



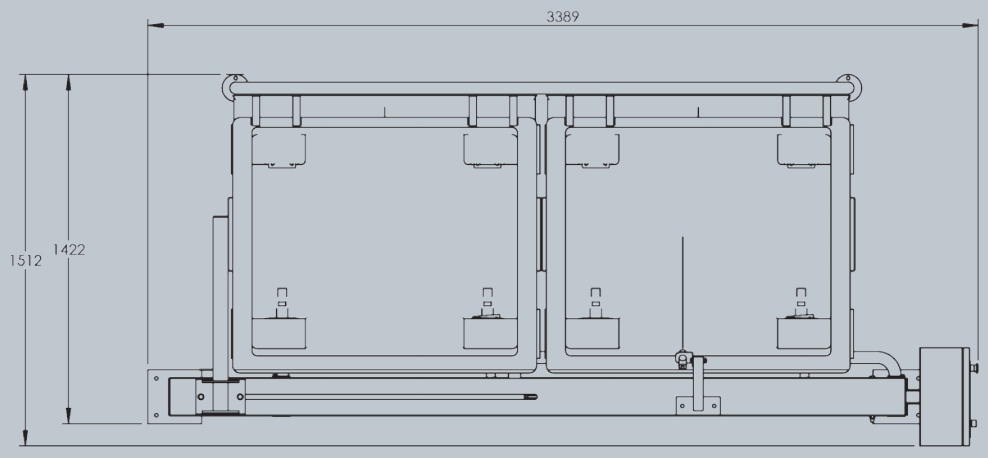

 A large range of configuration options and layouts are available. For more information or specifications, please contact a Wastech consultant on 1800 465 465.

# Bin Feed System Examples

### Carousel Bin Feed System Examples

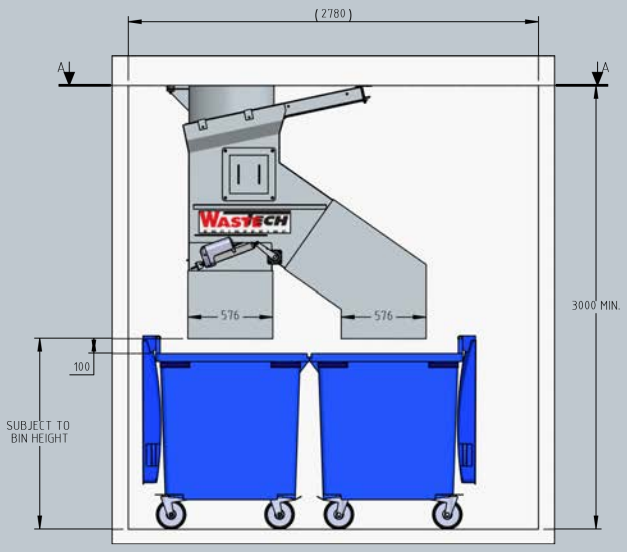


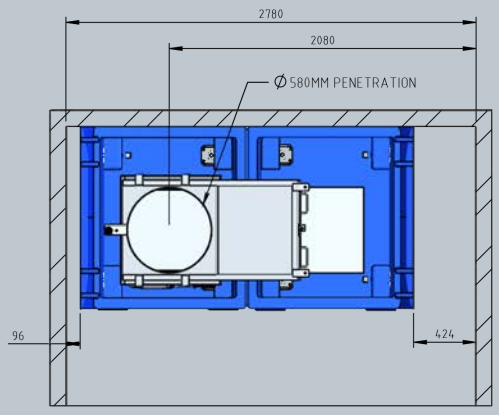

### Conveyor Bin Feed System Example



# Diverter Example Room Layouts

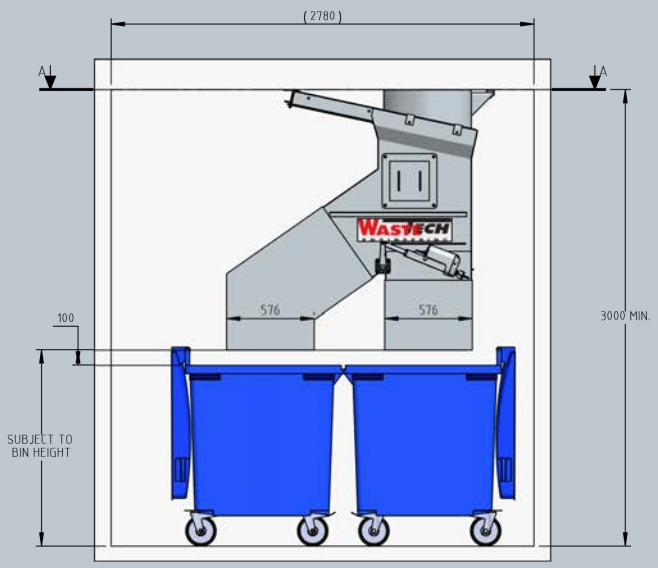
## Standard Configuration 1

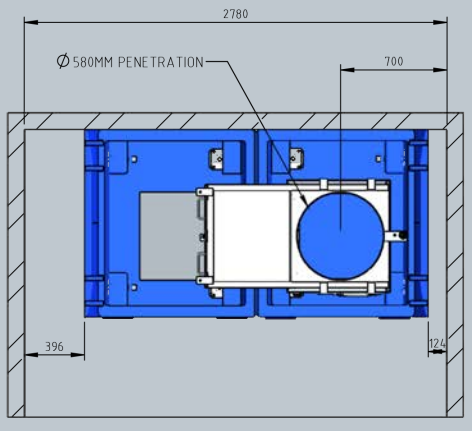



SECTION A-A

## Standard Configuration 2




SECTION A-A

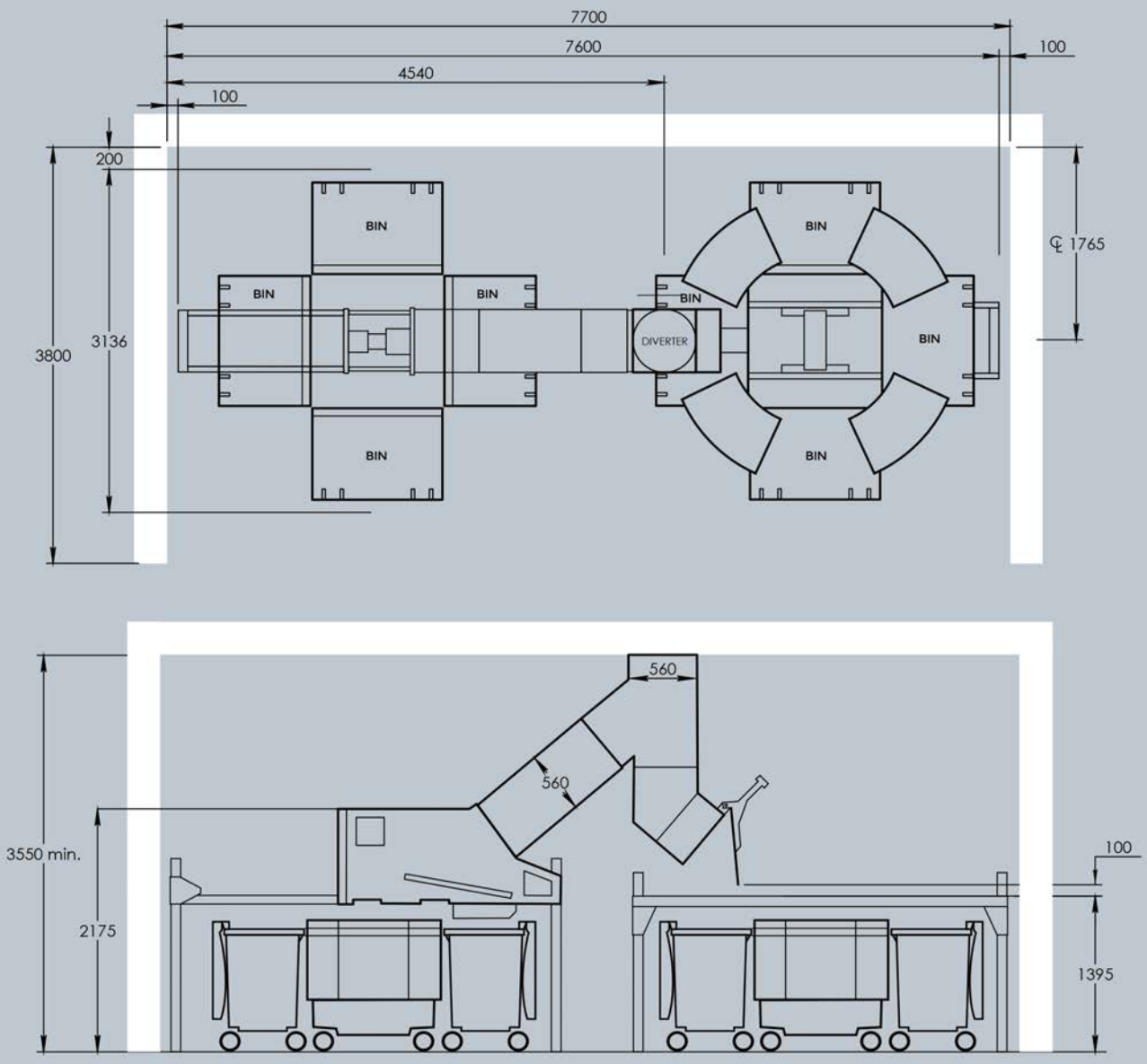
 A large range of configuration options and layouts are available. For more information or specifications, please contact a Wastech consultant on 1800 465 465.

## Design Guides

The following are standard installation spacings and requirements solely intended to assist in the design of refuse rooms and chute systems. These are intended as guides only and do not constitute a complete site specific design. Bin arrangements and compacting options vary significantly and are unique to each site.

Please contact Wastech for a formal assessment of your site and for further options.

### Carousel Feed System Configuration: Ecopac & Bin Carousel



# Optional Parts & Accessories

Wastech offer a large range of additional spare parts and accesories to suit all your needs including:

## Penetration Ring

Reusable circular steel mandrel for builder to set out and form floor penetrations.

## Flushing Spray

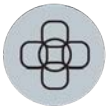
19mm diameter brass flushing spray head fitted to the top of the chute. Supplied complete with fire rate access door for maintenance.

## Mounting Brackets

Site-specific brackets to suit oversized penetrations, large building shafts or wall-mounting.

## Collector Bins

Plastic or steel collector bins available in all industry sizes.



## Automatic Bin Feed Systems

Automatic bin feed systems available in Carousel and Conveyor layouts options.

## Odour Control Systems

A range of diffferent products designed to control odour of Waste Chute systems.

## Manual Bin Handling Equipment

Wastech offers a range of optional equipment to assist with safe and easy handling of your bins.

## Equipment & Bin Monitoring System

Bin full notifications via email
Bin monitoring systems.

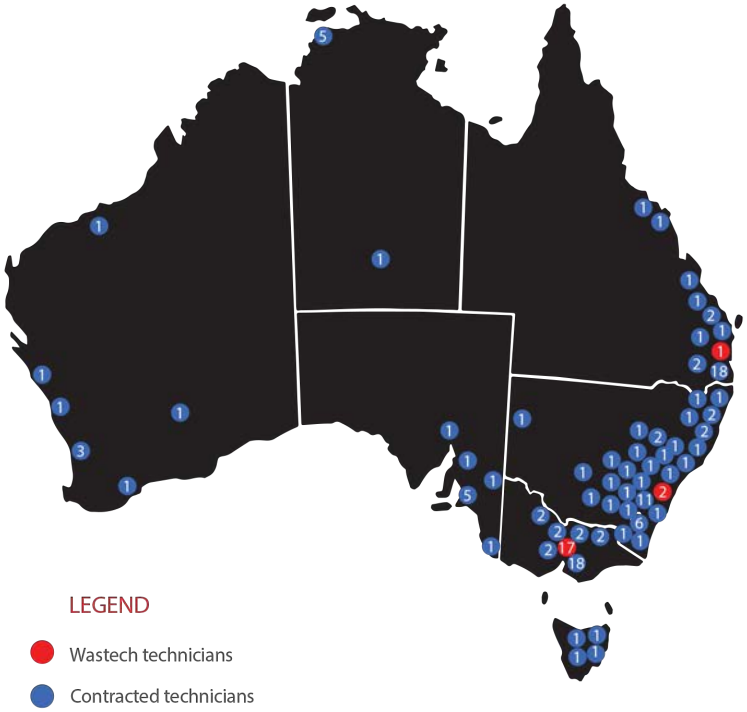
# 24/7 Service & Support

## 24 HOURS A DAY, 7 DAYS A WEEK, 365 DAYS A YEAR

Our skilled technicians operate around-the-clock Australia-wide and can attend on-site to service, repair and refurbish all products in the industry. Our national 24/7 service centres also provide breakdown response, refurbishments and preventative maintenance support.

Our own Cloud Based Service and Support Network (CBSSN) makes the tracking of equipment, scheduled servicing and inspections streamlined, simple and efficient. A full history for every single unit ensures the job is done right, with reports available at the touch of a button.

Each of our technicians has the ability to remotely access our CBSSN system directly via iPad. All the details of the service or breakdown are provided in full to the technician before they even reach the site; reducing your costs and downtime. Nationwide, every minute of every day, Wastech have you covered.

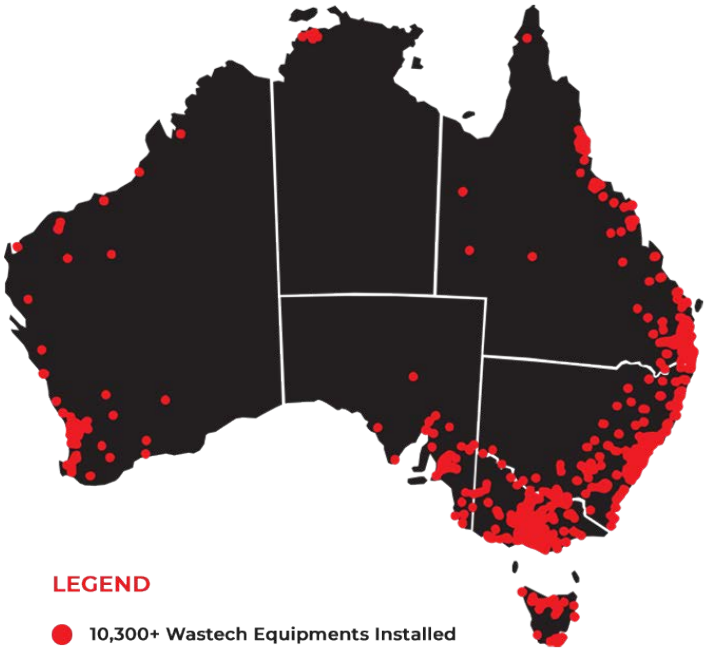




## A VAST NETWORK OF TECHNICIANS

We have 20 Wastech technicians supported by a network of over 130 contract technicians, servicing more than 11,000 balers, compactors, MRFs and Transfer Stations nationally


**For 24/7 Service, Simply Call**

**1300 665 870**




## VIC Head Office

33 Wedgewood Drive,
Hallam VIC 3803
info@wastech.com.au

Service Branch Locations

**VIC**
29 Technology Circuit,
Hallam VIC 3803
service@wastech.com.au

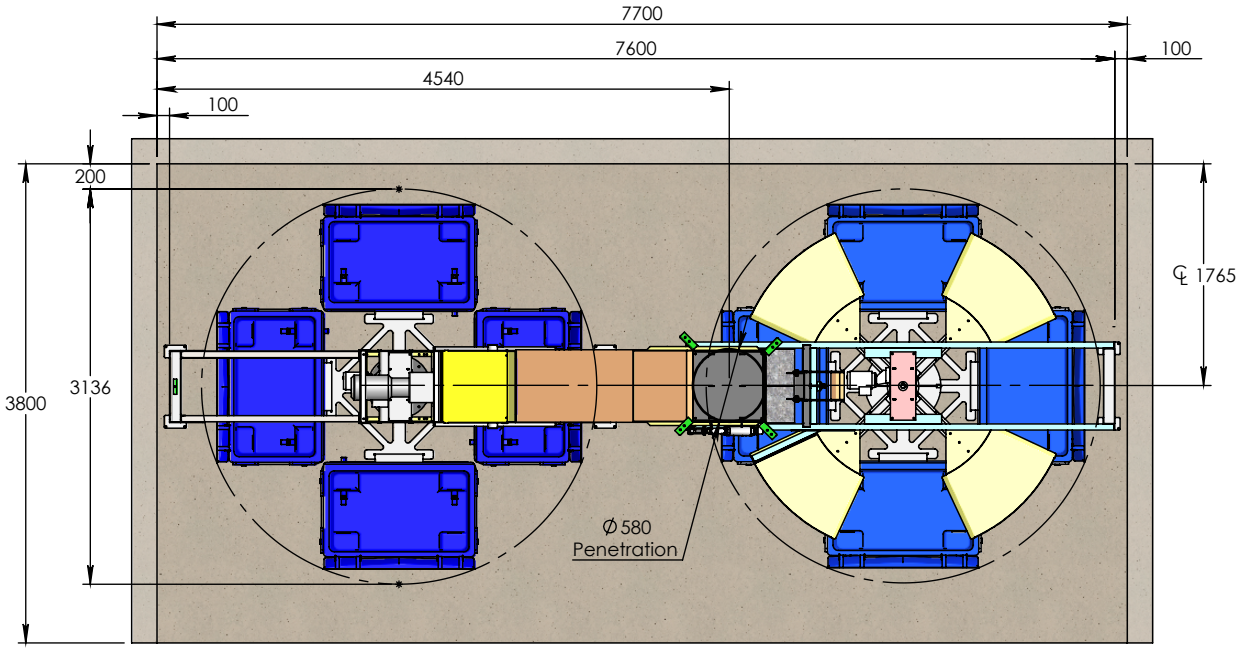
**QLD**
Unit 2, 50 Raubers Road,
Banyo QLD 4014
service@wastech.com.au

**WA**
Unit 1, 2 Trade Road,
Malaga WA 6090
service@wastech.com.au

**NSW, SA, NT, TAS, ACT**
1300 665 870
service@wastech.com.au

WASTECH ENGINEERING

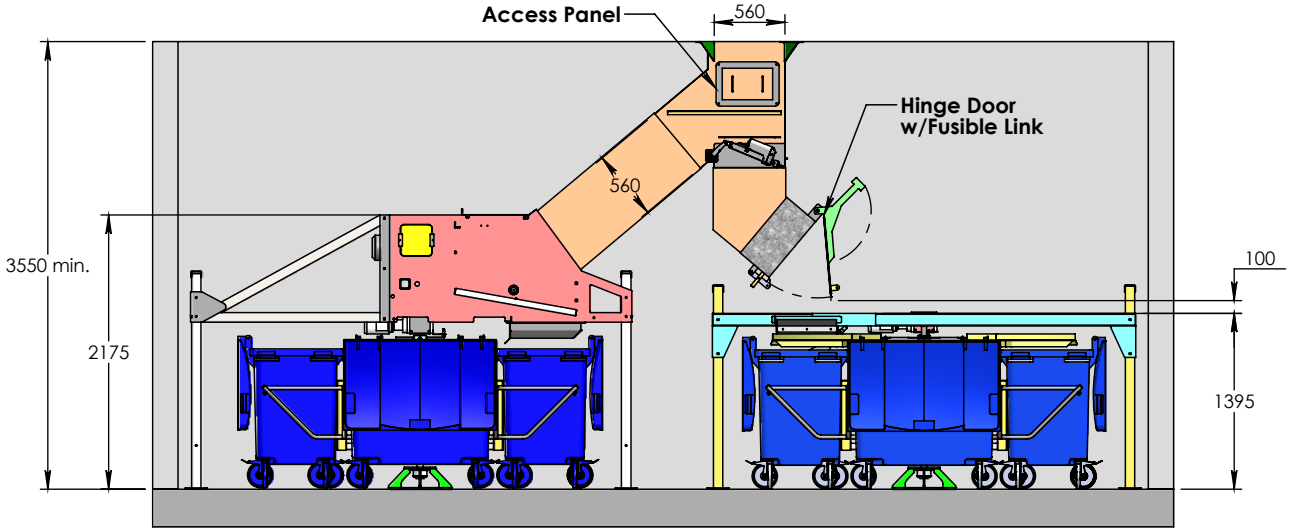
**1800 465 465**
**www.wastech.com.au**




**Power Supply:**
**Diverter Chute**
**Single Phase (240V)**
**Standard GPO**

**Ecopac and Carousel**
**15 amp 5 pin plug**
**3 phase (415V)**

**3 x Control Box**




TOLERANCES UNLESS OTHERWISE SPECIFIED:

| | |
|---|---|
| UP TO 10 | ± 0.25 |
| OVER 10 UP TO 100 | ± 0.5 |
| OVER 100 | ± 1 |
| ALL ANGLES | ± 1° |



File: J:\STANDARD PRODUCTS\Sales Layouts\

DRAFTING STANDARD AS1100 - 1992

All Welds to A.S. 1554

WASTECH ENGINEERING
33 Wedgewood Rd, Hallam
Victoria, Aust, 3803
Ph: +61 3 8787 1600
Fax: +61 3 8787 1670

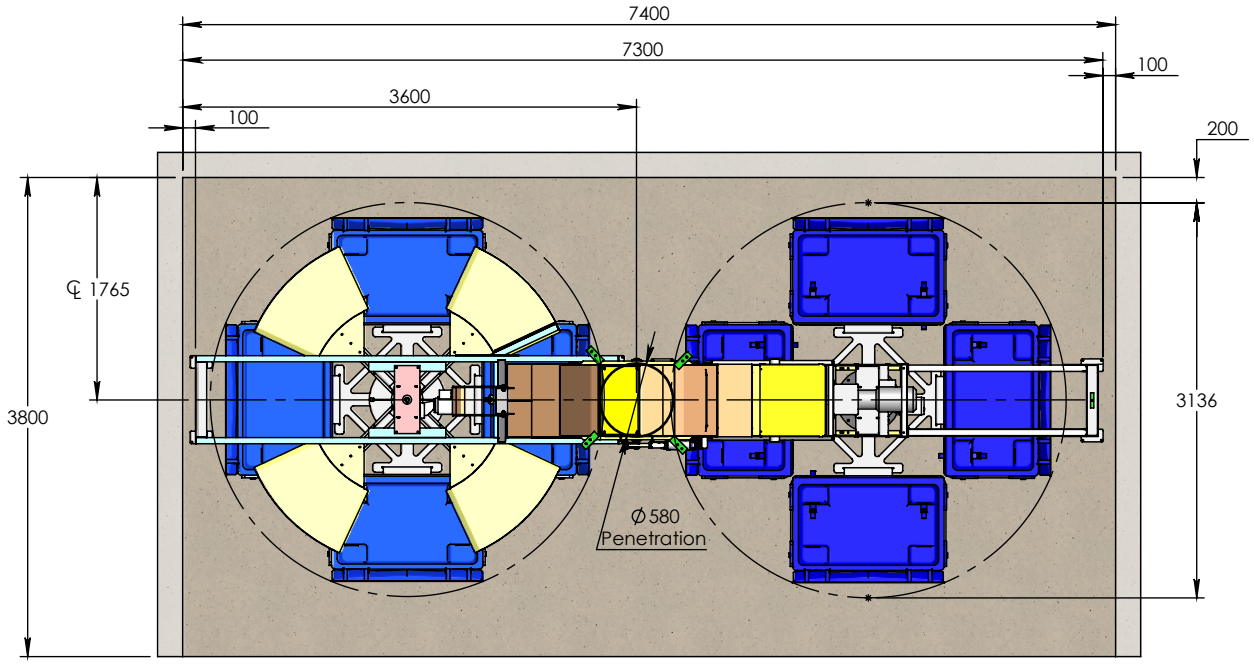
MATERIAL:

FINISH: NATURAL
.

DRAWN: J.M
CHECKED: C.K. / S.F.
DATE: 14/05/2015
MASS: 153161.33

TITLE:
# Refuse Room Minimum Dimensions Option 3: Ecopac and Carousel

SCALE: 1:60
File: **35.34.67**
REV.
SHEET: 1 OF 2
A4




**Power Supply:**
**Diverter Chute**
**Single Phase (240V)**
**Standard GPO**

**Ecopac and Carousel**
**15 amp 5 pin plug**
**3 phase (415V)**

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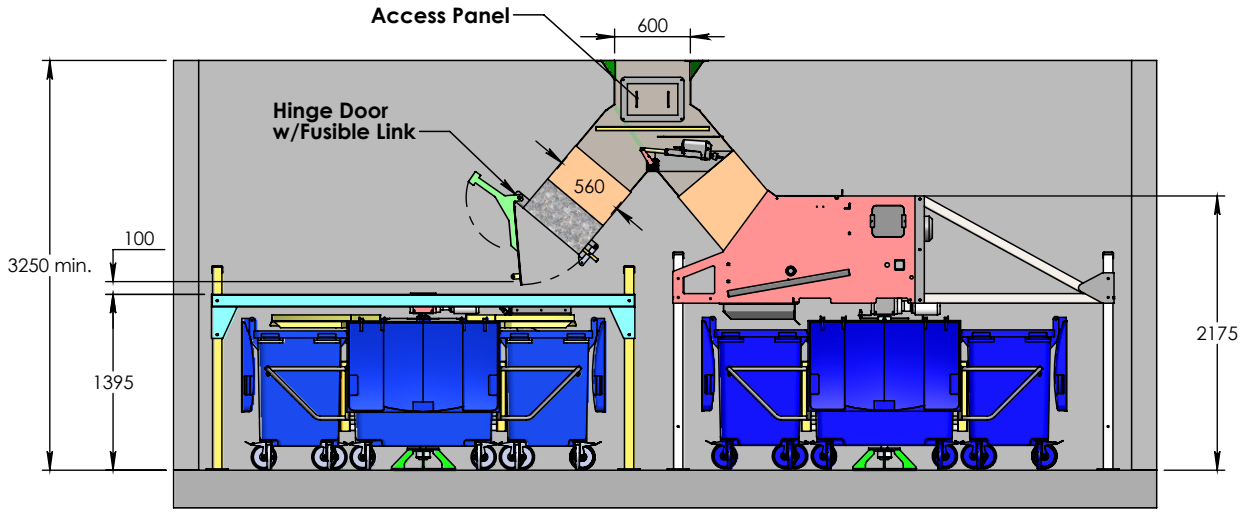


TOLERANCES UNLESS OTHERWISE SPECIFIED:

| | |
|---|---|
| UP TO 10 | ± 0.25 |
| OVER 10 UP TO 100 | ± 0.5 |
| OVER 100 | ± 1 |
| ALL ANGLES | ± 1° |



File: J:\STANDARD PRODUCTS\Sales Layouts\

DRAFTING STANDARD AS1100 - 1992

All Welds to A.S. 1554

WASTECH ENGINEERING
33 Wedgewood Rd, Hallam
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Ph: +61 3 8787 1600
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MATERIAL:

FINISH: NATURAL
.

DRAWN: J.M
CHECKED: C.K. / S.F.
DATE: 14/05/2015
MASS: 153161.33

TITLE:
# Refuse Room Minimum Dimensions Option 3: Ecopac and Carousel

SCALE: 1:60
File: **35.34.67**
REV.
SHEET: 2 OF 2
A4

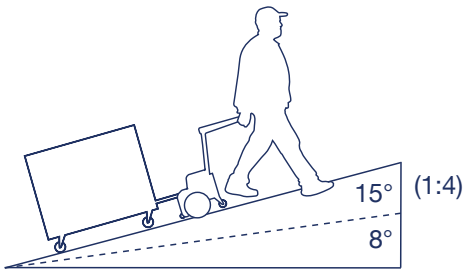
# Tug Rise POWERED TUG


The Tug Rise pedestrian operated electric tug has been designed to tow on slopes or ramps, and is capable of towing up to 1 tonne on a 15 degree ramp with ease, or up to 5 tonne on a flat surface.

The Tug Rise is the ideal solution for moving 660 litre and 1100 litre bins on ramps with an incline of 1:4. Universal towing devices (to suit 660 and 1100 litre bins) are also available, as well as directional lock mechanisms for swivel castors to help improve your waste management.

The Tug Rise is designed to improve safety and efficiency, whilst reducing the risk of accidents that can occur when manually moving very heavy loads.

MADE IN AUSTRALIA




## Typical applications

Suitable for moving heavy bins or trolleys on sloped driveways/ ramps, around high-rise building basements, or caravan parks.

## Features

| | |
|---|---|
| **Tow capacity** | 1000 kg up a 15 degree incline, (or up to 5,000 kg on a flat surface). |
| **Max. speed** | Up to 4 km/hour |
| **Speed mode** | Three speed control with forward, reverse and emergency stop. |
| **Usability** | • Ergonomic design with folding tiller handle.<br>• Turret with turret lock for easy reversing.<br>• Heavy duty high-traction wheels (black).<br>• Park brake release—to enable manual operation in the event of a flat battery.<br>• Low maintenance |
| **Hitching** | • Wide variety of hitches available.<br>• Universal towing device to suit 660 litre and 1100 litre bins available. |
| **Towing options** | • Can tow multiple bins.<br>• Move 660 litre and 1100 litre bins on a 15 degree ramp or incline.<br>• Directional lock mechanism for swivel castors is available. |
| **Dimensions (L/W/H)** | 1800/902/894 mm (approx.) |
| **Battery** | Two 12V-70Ah rechargeable batteries (deep cycle, long lasting, maintenance-free) with 24V smart charger.<br>*Optional upgrade: 100Ah batteries.* |

## Safety features

- Emergency stop button; Emergency back-off button;
- Electromechanical park brake.

| | ORDER CODES |
|---|---|
| Tug Rise 1 Tonne (no hitch) | TUGRISE1TNH |
| Pin hitch (19 mm) | EDHT1316 |
| Pin hitch (29 mm) standard for 660/1100L bins | EDHT1810-052 |
| Auto-latching hitch | EDHT1810-024 |

APPENDIX

# D

## Refuse Signage

# D.1 Refuse Signage Resource

Free signage is available from the BBC website using the link below:

https://www.brisbane.qld.gov.au/clean-and-green/rubbish-tips-and-bins/reducing-waste-at-work-in-schools-and-in-the-community/free-recycling-resources-for-businesses-schools-and-community-groups

# *What* goes in the BULK RECYCLING BIN?


**The items below should not be placed in your recycling bin.**


Place your recyclables in your recycling bin loose rather than putting them in plastic bags. For more information call Brisbane City Council on 3403 8888 or visit bisbane.qld.gov.au

I ♥ BNE Keeping Brisbane clean, green and sustainable

BRISBANE CITY *Dedicated to a better Brisbane*