

Waste Management Plan

Prepared for: Meriton Apartments

Project Site: 52 Walker Street Rhodes NSW

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1. INTRODUCTION

Wastech Engineering Pty Ltd was commissioned by Meriton Apartments to prepare a waste and recycling plan associated with a proposed development to be located at 52 Walker Street Rhodes New South Wales.

The project consists of:

- Four (4) Residential Apartment Buildings incorporating;
- 198 Residential Units to Block A
- 93 Residential Units to Block B
- 208 Residential Units to Block C
- 84 Residential Units to Block D
- Child Care Facility (329 m², estimated) Block A;
- Gym Facilities (93 m², estimated) Block A; and
- Retail Tenancy (130 m², estimated) Block A;

Scope: Wastech Engineering will review the building layout drawings and apartment details and provide a Waste Management Plan including the following:

- Calculation of weekly waste and recyclable volumes
- Provide recommendations for compaction, storage and transportation of waste and recyclables within the building
- Highlight relevant design issues that may affect the handling and movement of Waste and Recyclables within the development
- Include technical brochures and drawings for recommended equipment
- Provide recommendation for collection vehicle type
- Reference collection companies and/or council collection/disposal services
- Provide a bound, hard copy and electronic version of the report

All recommendations and equipment shall be in compliance with council codes, BCA, Australian Standards, and statutory requirements.

The results of the above analyses are outlined in the following sections.

2. SUMMARY

- Residents will be responsible for disposing of bagged garbage into the garbage chutes
- Residents will separate recyclable waste from garbage waste for disposal into 120 litre bins at each apartment level
- The building manager will collect 120 litre bins from each apartment level for emptying into the 660 litre collection bins located in the parking level 3 refuse rooms
- The building manager will be responsible for monitoring garbage bin levels ensuring clean empty bins are available to receive waste from the chutes
- The building manager will be responsible for transferring all full bins for collection from the parking level 3 and ground level refuse rooms to the collection points and return to refuse rooms upon completion of collection
- Residential waste collections shall be performed twice weekly, between 7am and 4pm Monday to Friday, for the garbage and recycling waste streams by a private contractor from the collection points in Block A, with entry off Nina Grey Avenue, and Block D, with entry off Meredith Avenue
- Childcare staff will separate recyclable waste from garbage waste prior to disposal. Childcare staff shall dispose of garbage and recyclables into the respective 660 and 240 litre collection bins located in the retail refuse room at ground level as required
- Retail staff will separate recyclable waste from garbage waste prior to disposal. Retail staff shall dispose of garbage and recyclables into the respective 660 and 240 litre collection bins located in the retail refuse room at ground level as required
- Gym cleaning staff will separate recyclable waste from garbage waste prior to disposal. Gym cleaning staff shall dispose of garbage and recyclables into the respective 660 litre collection bins located in the retail refuse room at ground level as required
- The building manager will be responsible for transferring all full bins for collection from the retail refuse room to the collection point and return to the retail refuse room upon completion of collection
- Retail waste collections shall be performed three times a week for garbage and weekly for the cardboard and container recycling waste streams, between 7am and 4pm Monday to Friday, by a private contractor from the collection point in Block A with entry off Nina Grey Avenue

3. WASTE MANAGEMENT PLAN

This waste management plan is based on the following conditions

3.1 Inclusions

- On-going use of the premises. Does not include demolition or construction stages.
- Figures and calculations are based on drawings and information supplied by Meriton Apartments.
- Waste volume figures are estimates only and will be influenced by the tenant, resident and operator's disposition toward waste disposal and recycling, and by the development's occupancy rate. Refer to the enclosed tables for rates and assumptions.

3.2 Exclusions

- Hard rubbish and green/garden wastes. Disposal shall be arranged by the building manager via appropriate contractors.

3.3 Waste Room Dimensions

The residential waste rooms, as shown on drawings DA22 rev A and DA30 rev B, are sufficient to accommodate the garbage equipment and bins specified within this report.

The bin holding rooms at the collection points, as shown on drawing DA22 rev A and DA30 rev B, are sufficient to accommodate the quantity of bins presented for collection.

The retail refuse room, as shown on drawing DA30 rev B, is sufficient to accommodate the garbage equipment and bins specified within this report.

4. GENERATED WASTE VOLUME ESTIMATE

The enclosed waste estimates, expressed in uncompacted cubic metres per week, are summarised as follows;

Refer to the enclosed waste generation calculations for further detail.

RETAIL WASTE	Garbage	Cardboard	Containers
Child Care	2.76	0.35	0.69
Gym	0.03	-	0.01
Retail	0.46	0.23	-
Total (m³/wk uncompacted)	3.24	0.58	0.70
Bin	660 litre bins	660 litre bins	240 litre bins

RESIDENTIAL WASTE	Garbage	Commingled Recycling
Block A Residential Apartments	16.00	8.00
Block B Residential Apartments	6.02	3.01
Block C Residential Apartments	16.70	8.35
Block D Residential Apartments	5.36	2.68
Total (m³/wk uncompacted)	44.08	22.04
Bin	240 and 660 litre bins	660 litre bins

Note: Commingled Recycling incorporates Glass, HDPE and PET containers, paper and cardboard.

5. RESIDENTIAL WASTE MANAGEMENT

The following is recommended:

5.1 Waste Streams

Residential waste shall be sorted on-site by the residents into the following streams and associated bins:

- Garbage; and
- Recycling (PET, aluminium, steel, HDPE, and Paper/Cardboard).

5.2 Residential Garbage Disposal

Residential apartments shall be furnished with plastic lined under bench storage bins, with a minimum capacity of 15 litres, for the temporary holding of garbage waste. Residents shall transfer bagged garbage to the garbage chutes for disposal. Each chute shall serve all apartment levels and discharge into compactors with bins located at parking level 3 for Block B, C and D and ground level for Block A. The building manager shall replace full bins under each chute with clean, empty ones as required.

5.3 Residential Recyclable Disposal

Residential apartments shall be furnished with under bench storage bins for the temporary holding of recyclable waste with a minimum capacity of 10 litres. Residents shall transfer recyclables into 120 litre bins located within the chute airlock at each apartment level for disposal. Cardboard shall be flattened and containers rinsed and cleaned prior to disposal.

The building manager shall collect the 120 litre bins, as required, from each apartment level and transfer recyclables to the 660 litre collection bins located in the refuse rooms at parking level 3 for Block B, C and D and ground level for Block A. The building manager shall utilise the bin lifter in each refuse room to transfer recyclables from 120 litre bins into 660 litre collection bins to comply with OH&S regulations.

5.4 Residential Garbage & Recycling Collection

Block A and B

The building manager shall make 240 and 660 litre bin transfers between the refuse rooms and the bin store room/holding zone in building A at ground level. Transfer of bins from parking level 3 to the ground level will be via a bin hoist/goods lift. The building manager shall prepare bins for collection and coordinate with collection vehicle arrival so that bins do not impede vehicle access into the loading zone or carpark entry at building A. Full bins only are to be transferred to the bin store room/bin holding zone on day of collection, utilising a bin trailer/bin tug or similar, and returned to the parking level 3 and ground level refuse rooms upon completion of collection.

Twice weekly garbage and recycling collections are envisaged.

The collection of waste and recycling bins is to be performed by a private contractor, to be confirmed by Meriton Apartments, from the designated collection point at ground level of Building A which has entry off Nina Grey Avenue. All collections shall be performed between the hours of 7am and 4pm Monday to Friday. The collection contractor shall transfer bins presented for collection from the bin store room/holding zone to the collection vehicle and return emptied bins to the

bin store room/holding zone upon completion of collection. It is suggested that garbage and recycling collections are conducted on alternate days to reduce the number of bins presented for collection at one time.

There is no waste collection vehicle type that can perform bin pick up from within parking level 3 with a ceiling height of 2.8m. Minimum overhead clearance height for a rear lift garbage collection truck is 3.5m. Attached drawings SP3 and SP4, provided by Transport and Traffic Planning Associates, confirms sufficient area is provided for the collection vehicle turning circle and swept path along Nina Grey Avenue to the collection point within Block A.

Block C and D

The building manager shall make 240 and 660 litre bin transfers between the refuse rooms and the bin store room/holding zone in building D at parking level 3. The building manager shall prepare bins for collection and coordinate with collection vehicle arrival so that bins do not impede vehicle access into the loading zone or carpark entry at building D. Full bins only are to be transferred to the bin store room/holding zone on day of collection, utilising a bin trailer/bin tug or similar, and returned to each parking level 3 refuse room upon completion of collection.

Twice weekly garbage and recycling collections are envisaged.

The collection of waste and recycling bins is to be performed by a private contractor, to be confirmed by Meriton Apartments, from the designated collection point at parking level 3 of Building D which has entry off Meredith Avenue. All collections shall be performed between the hours of 7am and 4pm Monday to Friday. The collection contractor shall transfer bins presented for collection from the bin store room/holding zone to the collection vehicle and return emptied bins to the bin store room/holding zone upon completion of collection. It is suggested that garbage and recycling collections are conducted on alternate days to reduce the number of bins presented for collection at one time.

Minimum overhead clearance height for a rear lift garbage collection truck is 3.5m. Attached drawings SP1 and SP2, provided by Transport and Traffic Planning Associates, confirms sufficient area is provided for the collection vehicle turning circle and swept path along Nina Grey Avenue to the collection point within Block A.

6. RESIDENTIAL WASTE HANDLING EQUIPMENT

The following waste handling equipment is recommended:

Garbage Chute: 530mm diameter galvanised steel or Smoothubes® chute serving all apartment levels, as supplied by Wastech Engineering (or equivalent).

Quantity required four (4); one per block

Bin Lifter: A “Liftezy” bin lifter, as supplied by Wastech Engineering or equivalent, to enable transfer of recyclables from 120 litre bins into 660 litre collection bins

Quantity required = four (4) One per refuse room

Note: to be operated by building manager only

6.1 Residential Waste Calculations

Block A - 52 Walker St Rhodes		
GARBAGE		
Weekly Garbage Volume (Uncompacted)	16.00	cubic metres
Weekly Garbage Volume (Compacted 3:1)	5.33	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection (volume / bin capacity)	4	
Spare Bins required	4	
Garbage Total bins required	8	

RECYCLING		
Weekly Recycling Volume	8.00	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection	6	
Spare Bins required	1	
Recycling Total bins required	7	

Block B - 52 Walker St Rhodes		
GARBAGE		
Weekly Garbage Volume (Uncompacted)	6.02	cubic metres
Weekly Garbage Volume (Compacted 3:1)	2.01	cubic metres
Bin Type	240	litre
Frequency of collection	2	per week
Bins required for collection (volume / bin capacity)	4	
Spare Bins required	4	
Garbage Total bins required	8	

RECYCLING		
Weekly Recycling Volume	3.01	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection	2	
Spare Bins required	1	
Recycling Total bins required	3	

Block C - 52 Walker St Rhodes		
GARBAGE		
Weekly Garbage Volume (Uncompacted)	16.70	cubic metres
Weekly Garbage Volume (Compacted 3:1)	5.57	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection (volume / bin capacity)	4	
Spare Bins required	4	
Garbage Total bins required	8	

RECYCLING		
Weekly Recycling Volume	8.35	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection	6	
Spare Bins required	1	
Recycling Total bins required	7	

Block D - 52 Walker St Rhodes		
GARBAGE		
Weekly Garbage Volume (Uncompacted)	5.36	cubic metres
Weekly Garbage Volume (Compacted 3:1)	1.79	cubic metres
Bin Type	240	litre
Frequency of collection	2	per week
Bins required for collection (volume / bin capacity)	4	
Spare Bins required	4	
Garbage Total bins required	8	

RECYCLING		
Weekly Recycling Volume	2.68	cubic metres
Bin Type	660	litre
Frequency of collection	2	per week
Bins required for collection	2	
Spare Bins required	1	
Recycling Total bins required	3	

7. RETAIL WASTE MANAGEMENT

The following is proposed:

7.1 Waste Streams

Business trade waste shall be sorted on-site by the occupiers into the following streams and associated bins:

- Garbage;
- Containers (PET, aluminium, steel, HDPE, etc); and
- Cardboard.

All garbage shall be placed in tied plastic bags prior to transferring into the collection bins.

7.2 Childcare

Plastic lined garbage bins of suitable capacity shall be provided for the Childcare Centre and kept at BOH. Staff shall transfer bagged garbage, as required, between BOH and the 660 litre collection bins located in the retail refuse room at ground level in Block A for garbage disposal.

Container recycling bins, 240 litre capacity, shall be provided for the Childcare Centre and kept at BOH. Staff shall transfer full bins to the retail refuse room located at ground level in Block A for disposal. Staff shall collect a clean empty bin for return to BOH upon deposit of full bin.

Cardboard shall be flattened prior to disposal. Staff shall transfer flattened cardboard, utilising a cleaner's trolley or similar, to the 660 litre collection bins located in the retail refuse room at ground level of Block A for disposal.

7.3 General Retail

Plastic lined garbage bins of suitable capacity shall be provided for this tenancy and kept at BOH. Staff shall transfer bagged garbage, as required, between BOH and the 660 litre collection bins located in the retail refuse room at ground level in Block A for garbage disposal.

Cardboard shall be flattened prior to disposal. Staff shall transfer flattened cardboard, utilising a cleaner's trolley or similar, to the 660 litre collection bins located in the retail refuse room at ground level of Block A for disposal.

7.4 Gym

Plastic lined garbage bins of suitable capacity shall be provided for this facility. Cleaning staff shall transfer bagged garbage, as required, between the gym and the 660 litre collection bins located in the retail refuse room at ground level in Block A for garbage disposal.

A container recycling bin, 240 litre capacity, shall be provided for this facility. Cleaning staff shall transfer the full bin to the retail refuse room located at ground level in Block A for disposal. Cleaning staff shall collect a clean empty bin for return to the gym upon deposit of full bin.

7.5 Retail Garbage & Recycling Collection

The building manager shall make 240 and 660 litre bin transfers between the retail refuse room and the bin store room/holding zone in building A at ground level. The building manager shall prepare bins for collection and coordinate with collection vehicle arrival so that bins do not impede vehicle access into the loading zone or carpark entry at building A. Full bins only are to be transferred to the bin store room/holding zone on day of collection, utilising a bin trailer/bin tug or similar, and returned to retail refuse room upon completion of collection.

Three times a week garbage and weekly container and cardboard recycling collections are envisaged.

The collection of waste and recycling bins is to be performed by a private contractor, to be confirmed by Meriton Apartments, from the designated collection point at ground level of Building A which has entry off Nina Grey Avenue. All collections shall be performed between the hours of 7am and 4pm Monday to Friday. The collection contractor shall transfer bins presented for collection from the bin store room/holding zone to the collection vehicle and return emptied bins to the bin store room/holding zone upon completion of collection.

Minimum overhead clearance height for a rear lift garbage collection truck is 3.5m. Attached drawings SP1 and SP2, provided by Transport and Traffic Planning Associates, confirms sufficient area is provided for the collection vehicle turning circle and swept path along Nina Grey Avenue to the collection point within Block A.

8. Retail Waste Calculations

CHILDCARE / GYM / RETAIL		
GARBAGE		
Weekly Garbage Volume	3.24	cubic metres
Bin Type	660	litre
Frequency of collection	3	per week
Bins required for collection	2	
Spare Bins required	1	
Garbage Total bins required	3	

CONTAINERS		
Weekly Container Volume	0.70	cubic metres
Bin Type	240	litre
Frequency of collection	1	per week
Bins required for collection	3	
Spare Bins required	1	
Container Total bins required	4	

CARDBOARD		
Weekly Cardboard Volume	0.57	cubic metres
Bin Type	660	litre
Frequency of collection	1	per week
Bins required for collection	1	
Spare Bins required	1	
Cardboard Total bins required	2	

9. BIN SUMMARY

9.1 Residential Waste Refuse Rooms

Block A Refuse Room

660 litre Garbage bins	4
Spare 660 litre Garbage bins	4
660 litre Recycling bins	6
Spare 660 litre Recycling bins	1
TOTAL BINS REQUIRED	15

Block B Refuse Room

240 litre Garbage bins	4
Spare 240 litre Garbage bins	4
660 litre Recycling bins	2
Spare 660 litre Recycling bins	1
TOTAL BINS REQUIRED	11

Block C Refuse Room

660 litre Garbage bins	4
Spare 660 litre Garbage bins	4
660 litre Recycling bins	6
Spare 660 litre Recycling bins	1
TOTAL BINS REQUIRED	15

Block D

240 litre Garbage bins	4
Spare 240 litre Garbage bins	4
660 litre Recycling bins	2
Spare 660 litre Recycling bins	1
TOTAL BINS REQUIRED	11

9.2 Residential Bins Presented For Collection

Block A and B

660 litre Garbage bins	4
240 litre Garbage bins	4
660 litre Recycling bins	8
TOTAL BINS PRESENTED	16

Block C and D

660 litre Garbage bins	4
240 litre Garbage bins	4
660 litre Recycling bins	8
TOTAL BINS PRESENTED	16

9.3 Retail Waste Refuse Room

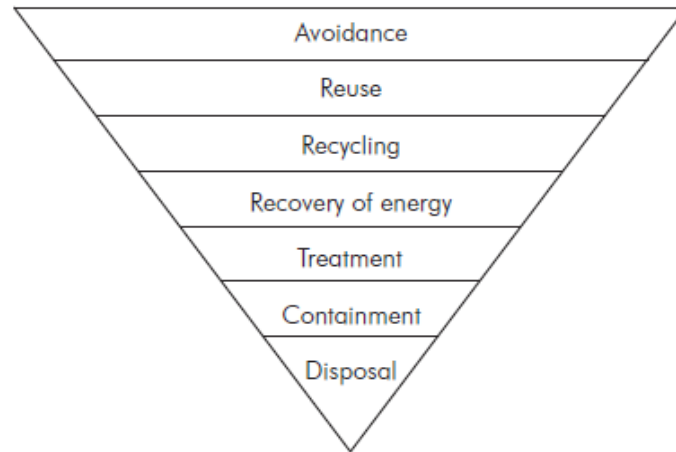
660 litre Garbage bins	2
Spare 660 litre Garbage bins	1
240 litre Container bins	3
Spare 240 litre Container bins	1
660 litre Cardboard bins	1
Spare 660 litre Cardboard bins	1
TOTAL BINS REQUIRED	9

9.4 Retail Bins Presented For Collection

660 litre Garbage bins	2
240 litre Container bins	3
660 litre Cardboard bins	1
TOTAL 1100 LITRE BINS PRESENTED	6

10. WASTE MINIMISATION STRATEGIES

The operator (Body Corporate) will be responsible for the education of residential and commercial tenants in the practices of waste reduction/minimisation to divert waste from landfill. This will be achieved by the following:



- Document and distribute details of the waste management system that is in place on site to all tenants
- Distribution of notices to all tenants and residents encouraging waste separation
- All bins to be labelled and colour coded stating types of waste that can be deposited i.e. paper/cardboard bins, container recycling bins, garbage bins
- Residential tenants will be provided with a manual, upon residency, detailing items that can be disposed of via the garbage chute in accordance with the manufacturers recommendations
- Any future change to regulatory requirements or to the developments' waste generation rates will require the operator to conduct a waste audit and revise the waste management system that is in place accordingly

11. ADDITIONAL WASTE MANAGEMENT INFORMATION

As bins would be “wheeled” throughout the building, any ramps would require a maximum gradient of 1:14 to meet regulatory requirements. Steps are not permitted.

Items unsuitable for disposal via garbage or recycling bins would need to be disposed of with the assistance of the building manager. This would include: large, heavy, and liquid waste items.

To minimise security, vandalism, odour/visual impact, and health/safety issues, the following shall be implemented:

- Transferring waste and shifting bins shall require the minimum possible manual handling. The operator will assess manual handling risks as per regulatory requirements and provide appropriate documentation to the building manager;
- Signage and usage labels for the garbage and recycling bins will be provided by the operator;
- Bin stores will be secure and vermin proof;
- The bin stores shall be ventilated in accordance with Australian Standard AS 1668.2;
- A bin wash area comprising a tap and floor drain with trap and sewer connection will be located within each bin store;
- The building manager shall keep clean the bin stores, keep bin lids closed and wash bins regularly;
- The operator shall consider providing 660 litre charity/donation bins for the collection of clothing, whitegoods etc to divert waste from landfill. Donation bins would be maintained and collected by the charity organisation;
- A designated hard rubbish collection point shall be provided with a minimum footprint of 2m² to each building for residents to place hard rubbish for collection on specified days;
- The building manager will ensure prompt return of empty bins once collection has occurred;
- The building manager shall prepare operational instructions and an operational health and safety procedure for site staff; and
- A traffic management plan and collection-vehicle safe operation procedure shall be prepared by the operator of the development in consultation with the private collection contractor, when appointed, and submitted to the City of Canada Bay for approval prior to collections being performed on site.

12. CONTACT INFORMATION

City of Canada Bay

Canada Bay Civic Centre Drummoyne
1a Marlborough Street
Drummoyne 2047
Ph 9911 6555
<mailto:council@canadabay.nsw.gov.au>

Cleanaway

Quarry Rd
Erskine Park NSW 2759
Ph 9834 0400

Electrodrive Pty Ltd

(tug manufacturer)
C/o Wastech Engineering

Eco-Safe Technologies

(odour control equipment supplier)
C/o Wastech Engineering

Wastech Engineering Pty. Ltd.

Waste Equipment Designer & Manufacturer
Valerie Collins
National Sales Executive
33 Wedgewood Road, Hallam VIC 3803
Ph 03 8787 1600
valerie@wastech.com.au



WASTE ESTIMATE Residential

Job:	Block A - 52 Walker St Rhodes		Date:	28-Apr-10
<u>No. OF 1 BEDROOM RESIDENTIAL APARTMENTS</u>		36		
Garbage (m ³ /week uncompacted):	2.16	(Rate/apartment) ¹ :	0.060	
Commingled Recycling (m ³ /week uncompacted):	1.08	(Rate/apartment) ¹ :	0.030	
<u>No. OF 2 BEDROOM RESIDENTIAL APARTMENTS</u>		140		
Garbage (m ³ /week uncompacted):	11.20	(Rate/apartment) ¹ :	0.080	
Commingled Recycling (m ³ /week uncompacted):	5.60	(Rate/apartment) ¹ :	0.040	
<u>No. OF 3 BEDROOM RESIDENTIAL APARTMENTS</u>		22		
Garbage (m ³ /week uncompacted):	2.64	(Rate/apartment) ¹ :	0.120	
Commingled Recycling (m ³ /week uncompacted):	1.32	(Rate/apartment) ¹ :	0.060	

<u>TOTAL RESIDENTIAL APARTMENT WASTE BLOCK A</u>	
Garbage (m ³ /week uncompacted):	16.00
Commingled Recycling (m ³ /week uncompacted):	8.00

COMPACTOR DETAILS (garbage only - via refuse chute)				
Bin Size (litres)	Compaction Ratio	No. of Bins in Rotofeed	No. of Days to Fill-up Rotofeed	No. of Bins Filled per Week
660	0.33	4	3.5	8.1

COLLECTIONS	Collections Per Week	No. of Bins Collected
Garbage Disposal	2 per week (660 litre bins)	4.0
Commingled Recyc.	2 per week (660 litre bins)	6.1

References/Notes:

- 1) Better Practice Guide for Waste Management in Multi Unit Dwellings - 2008



WASTE ESTIMATE Residential

Job:	Block B - 52 Walker St Rhodes	Date:	28-Apr-10
<u>No. OF 1 BEDROOM RESIDENTIAL APARTMENTS</u>		71	
Garbage (m ³ /week uncompacted):	4.26	(Rate/apartment) ¹ :	0.060
Commingled Recycling (m ³ /week uncompacted):	2.13	(Rate/apartment) ¹ :	0.030
<u>No. OF 2 BEDROOM RESIDENTIAL APARTMENTS</u>		22	
Garbage (m ³ /week uncompacted):	1.76	(Rate/apartment) ¹ :	0.080
Commingled Recycling (m ³ /week uncompacted):	0.88	(Rate/apartment) ¹ :	0.040
<u>No. OF 3 BEDROOM RESIDENTIAL APARTMENTS</u>		0	
Garbage (m ³ /week uncompacted):	0.00	(Rate/apartment) ¹ :	0.120
Commingled Recycling (m ³ /week uncompacted):	0.00	(Rate/apartment) ¹ :	0.060

<u>TOTAL RESIDENTIAL APARTMENT WASTE BLOCK B</u>	
Garbage (m ³ /week uncompacted):	6.02
Commingled Recycling (m ³ /week uncompacted):	3.01

COMPACTOR DETAILS (garbage only - via refuse chute)				
Bin Size (litres)	Compaction Ratio	No. of Bins in Rotofeed	No. of Days to Fill-up Rotofeed	No. of Bins Filled per Week
240	0.33	4	3.3	8.4

COLLECTIONS	Collections Per Week	No. of Bins Collected
Garbage Disposal	2 per week (240 litre bins)	4.2
Commingled Recyc.	2 per week (660 litre bins)	2.3

References/Notes:

- 1) Better Practice Guide for Waste Management in Multi Unit Dwellings - 2008



WASTE ESTIMATE Residential

Job:	Block C - 52 Walker St Rhodes	Date:	28-Apr-10
<u>No. OF 1 BEDROOM RESIDENTIAL APARTMENTS</u>		41	
Garbage (m ³ /week uncompacted):	2.46	(Rate/apartment) ¹ :	0.060
Commingled Recycling (m ³ /week uncompacted):	1.23	(Rate/apartment) ¹ :	0.030
<u>No. OF 2 BEDROOM RESIDENTIAL APARTMENTS</u>		145	
Garbage (m ³ /week uncompacted):	11.60	(Rate/apartment) ¹ :	0.080
Commingled Recycling (m ³ /week uncompacted):	5.80	(Rate/apartment) ¹ :	0.040
<u>No. OF 3 BEDROOM RESIDENTIAL APARTMENTS</u>		22	
Garbage (m ³ /week uncompacted):	2.64	(Rate/apartment) ¹ :	0.120
Commingled Recycling (m ³ /week uncompacted):	1.32	(Rate/apartment) ¹ :	0.060
<u>TOTAL RESIDENTIAL APARTMENT WASTE BLOCK C</u>			
Garbage (m ³ /week uncompacted):	16.70		
Commingled Recycling (m ³ /week uncompacted):	8.35		

COMPACTOR DETAILS (garbage only - via refuse chute)				
Bin Size (litres)	Compaction Ratio	No. of Bins in Rotofeed	No. of Days to Fill-up Rotofeed	No. of Bins Filled per Week
660	0.33	4	3.3	8.4

References/Notes:

COLLECTIONS	Collections Per Week	No. of Bins Collected
Garbage Disposal	2 per week (660 litre bins)	4.2
Commingled Recyc.	2 per week (660 litre bins)	6.3

References/Notes:

- 1) Better Practice Guide for Waste Management in Multi Unit Dwellings - 2008



WASTE ESTIMATE Residential

Job:	Block D - 52 Walker St Rhodes	Date:	28-Apr-10
<u>No. OF 1 BEDROOM RESIDENTIAL APARTMENTS</u>		68	
Garbage (m ³ /week uncompacted):	4.08	(Rate/apartment) ¹ :	0.060
Commingled Recycling (m ³ /week uncompacted):	2.04	(Rate/apartment) ¹ :	0.030
<u>No. OF 2 BEDROOM RESIDENTIAL APARTMENTS</u>		16	
Garbage (m ³ /week uncompacted):	1.28	(Rate/apartment) ¹ :	0.080
Commingled Recycling (m ³ /week uncompacted):	0.64	(Rate/apartment) ¹ :	0.040
<u>No. OF 3 BEDROOM RESIDENTIAL APARTMENTS</u>		0	
Garbage (m ³ /week uncompacted):	0.00	(Rate/apartment) ¹ :	0.120
Commingled Recycling (m ³ /week uncompacted):	0.00	(Rate/apartment) ¹ :	0.060
<u>TOTAL RESIDENTIAL APARTMENT WASTE BLOCK D</u>			
Garbage (m ³ /week uncompacted):	5.36		
Commingled Recycling (m ³ /week uncompacted):	2.68		

COMPACTOR DETAILS (garbage only - via refuse chute)				
Bin Size (litres)	Compaction Ratio	No. of Bins in Rotofeed	No. of Days to Fill-up Rotofeed	No. of Bins Filled per Week
240	0.33	4	3.8	7.4

References/Notes:

COLLECTIONS	Collections Per Week	No. of Bins Collected
Garbage Disposal	2 per week (240 litre bins)	3.7
Commingled Recyc.	2 per week (660 litre bins)	2.0

References/Notes:

- 1) Better Practice Guide for Waste Management in Multi Unit Dwellings - 2008



WASTE ESTIMATE Commercial

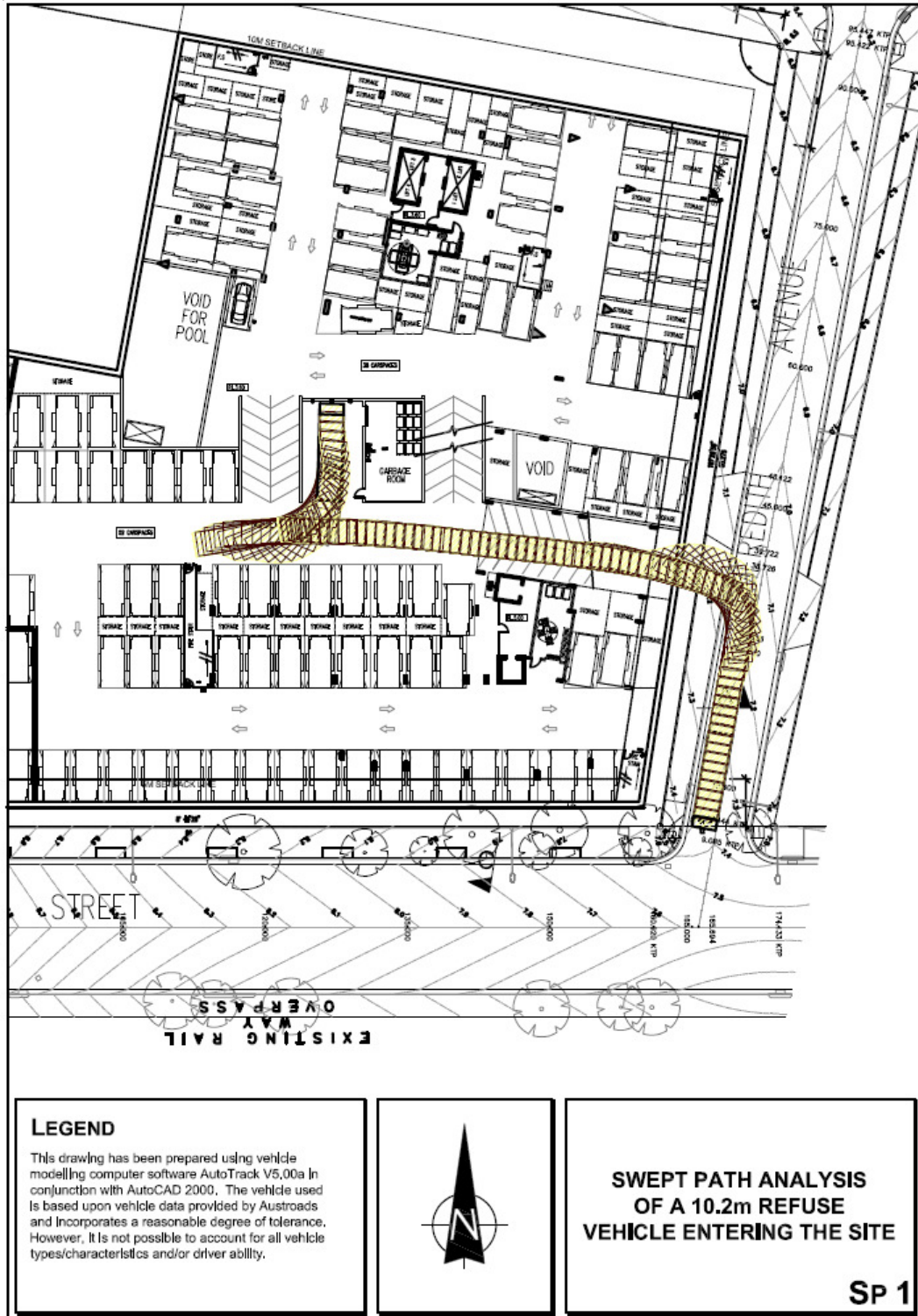
Job:	52 Walker St Rhodes	Date:	28-Apr-10
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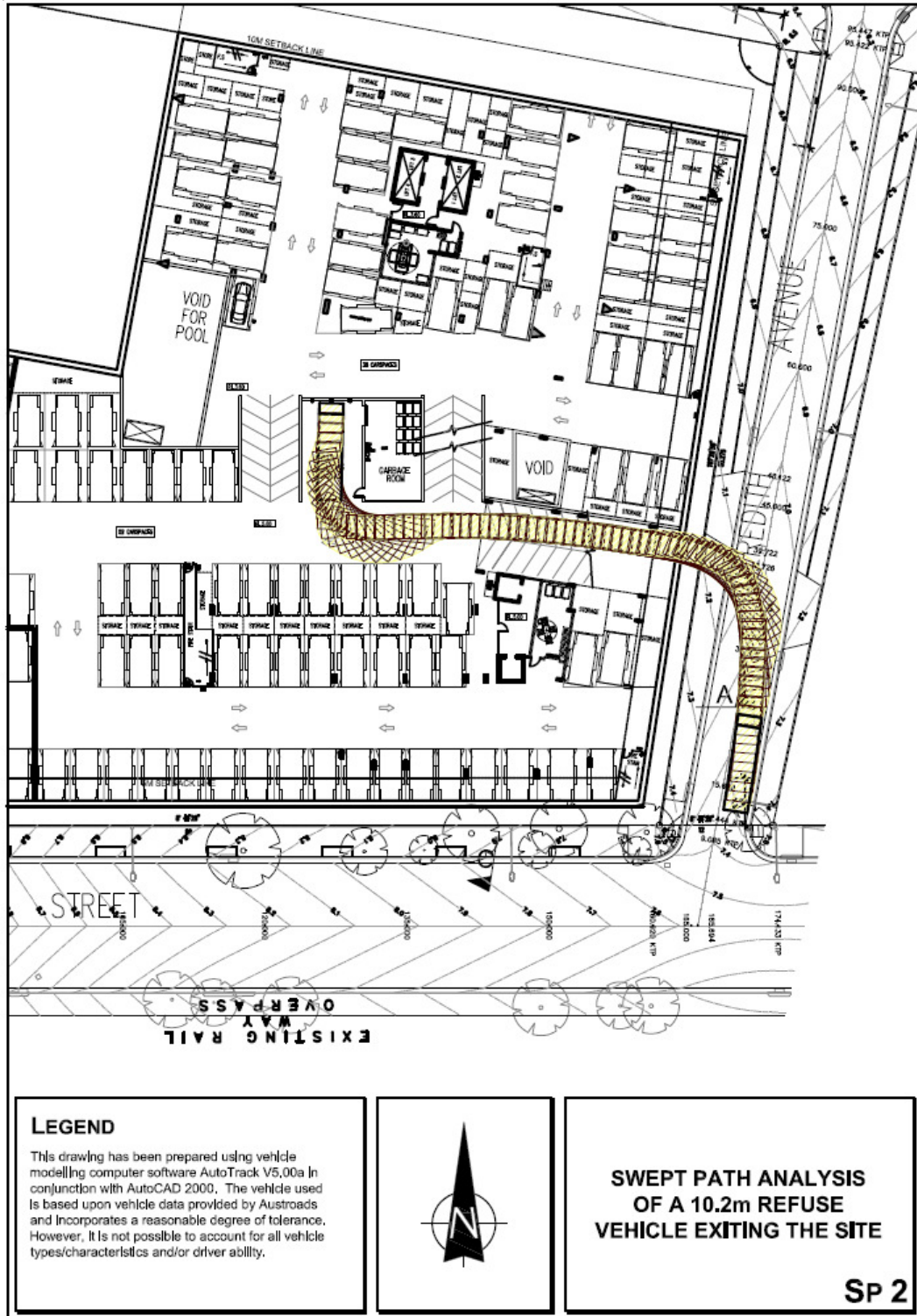
CHILDCARE			
NLA (m ² , estimated)	329	Usage: 7 days per week	
Garbage (m ³ /wk uncompacted):	2.76	m ³ /day/100m ² area ³	(Rate: 0.120
Containers (m ³ /wk uncompacted):	0.69	m ³ /day/100m ² area ¹	(Rate: 0.030
Cardboard (m ³ /wk uncompacted):	0.35	m ³ /day/100m ² area ³	(Rate: 0.015
GYM			
NLA (m ² , estimated)	93	Usage: 7 days per week	
Garbage for Disposal (m ³ /wk uncompacted):	0.03	m ³ /day/100m ² area ¹	(Rate: 0.004
Containers (m ³ /wk uncompacted):	0.01	m ³ /day/100m ² area ¹	(Rate: 0.002
RETAIL			
Floor Area (m ² , estimated)	130	Usage: 7 days per week	
Garbage for Disposal (m ³ /wk uncompacted):	0.46	m ³ /day/100m ² area	(Rate: 0.050
Cardboard (m ³ /wk uncompacted):	0.23	m ³ /day/100m ² area	(Rate: 0.025
TOTAL			
Garbage (m³/wk uncompacted):	3.24		
Containers (m³/wk uncompacted):	0.70		
Cardboard (m³/wk uncompacted):	0.57		

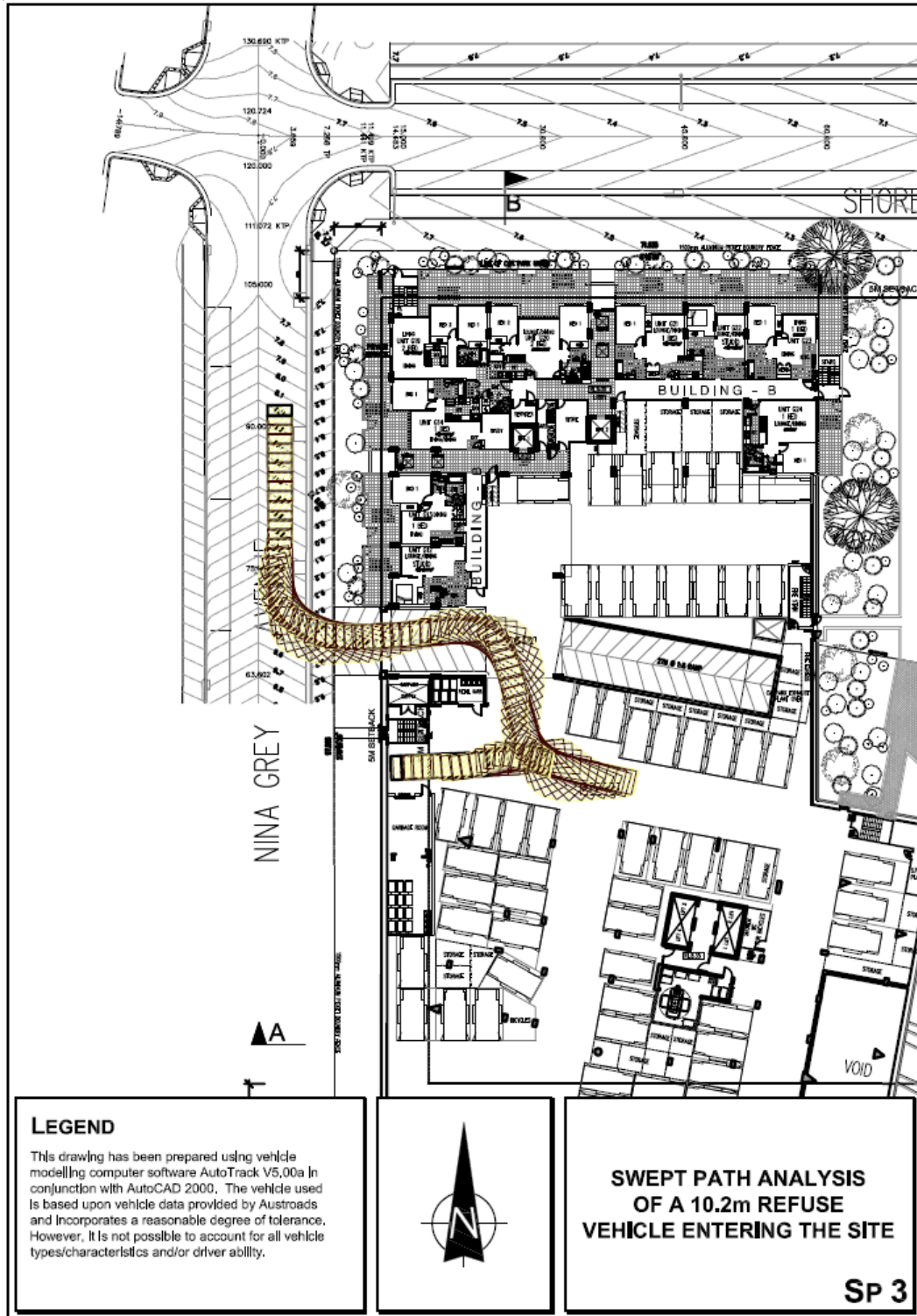
References/Notes:

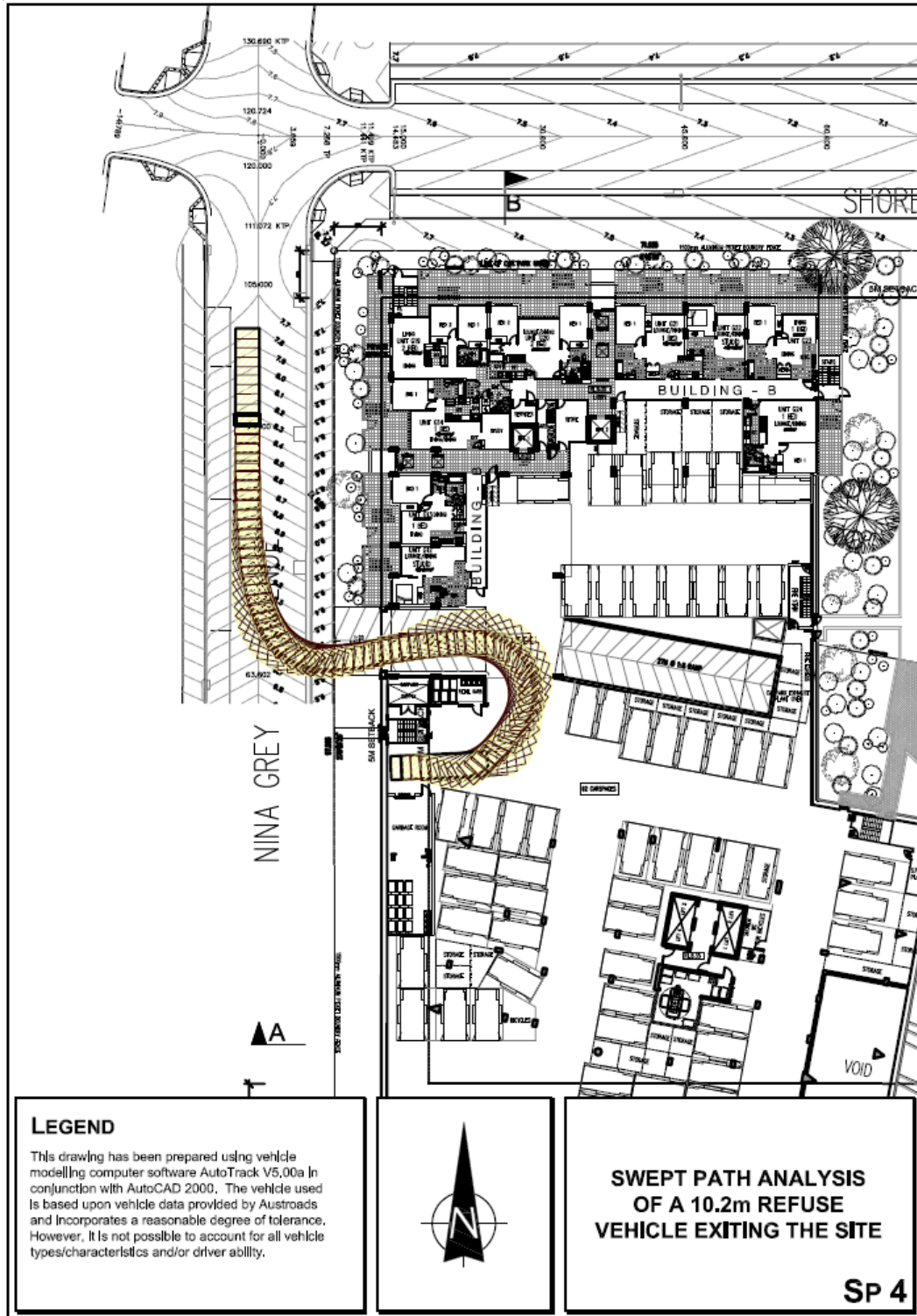
Brisbane City Council - "Draft" Development Applications - Waste Management and Resource Recovery Guidelines 2007

Combined Sydney Region of Councils - Draft Waste Management Guidelines 2005 and 2008











COMPACTION BLADE

Eco-Pack WASTE CHUTE COMPACTOR

Eco-Pack Waste Chute Compactor

The Patented Eco-Pack compactor has been specifically developed for compaction of waste delivered via an overhead chute in multi story apartments and entertainment venues.

Designed to suit tight room restraints, the Eco-Pack is a true hydraulic compactor that contains the high packing forces within itself to eliminate O,H&S issues and bin damage.



SPECIAL FEATURES

- High Compaction to reduce number of bins required thus reducing floor space.
- Compaction blade and ejection door constantly seal the waste chute to reduce odour and also eliminate the risk of fire transfer up the waste chute.
- Autocycle operation via 'photo cell' to reduce power consumption.
- Enclosed chamber design provides protection from glass explosion if bottles are dropped from upper levels.
- Ejection of compacted waste plugs into Bins sized from - 240 to 1,500 Ltr.
- Robust High tensile steel construction to Australian Standards AS4100.
- Compliance to all current O,H&S and WorkCover requirements.
- Quiet and efficient hydraulic system.
- Option of Roto Feed or Conveyor Feed to suit all installations.

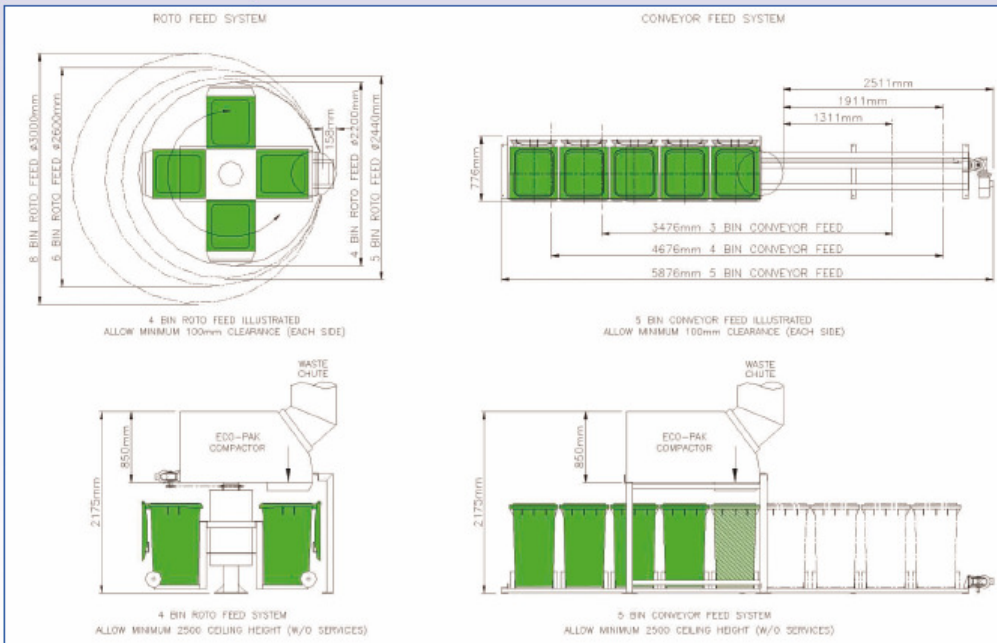


Eco-Pack

APARTMENT COMPACTOR

Specifications

Compaction Ratio :	3:1 to 10:1 dependent on waste types.
Construction :	5mm and 20mm grade 350 high tensile steel plate.
Chamber dimensions :	560 wide x 600mm long.
Waste Capacity :	80 Ltr per 15 second cycle = 20m ³ /hr
Power requirements :	415v / 20A / 5pin power point .
Hydraulic Specs :	12 Lpm Pump, 5.5Kw Motor
Compaction Force :	62 kn or 6.3 tonnes force @ 14 Mpa
Waste bin Qty :	1 x 240 Ltr bin to 8 bins on Roto Feed and up to 660, 1500 litre bin Roto Feed.
Electric Control :	PLC control with electronic cycle control and photo cell monitoring.
Service :	Comprehensive fixed price service / inspection program available.
Warranty :	12 Month Warranty subject to our Standard Terms and Conditions.

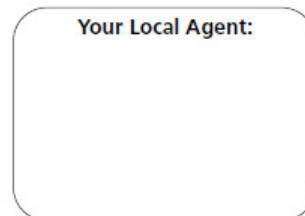


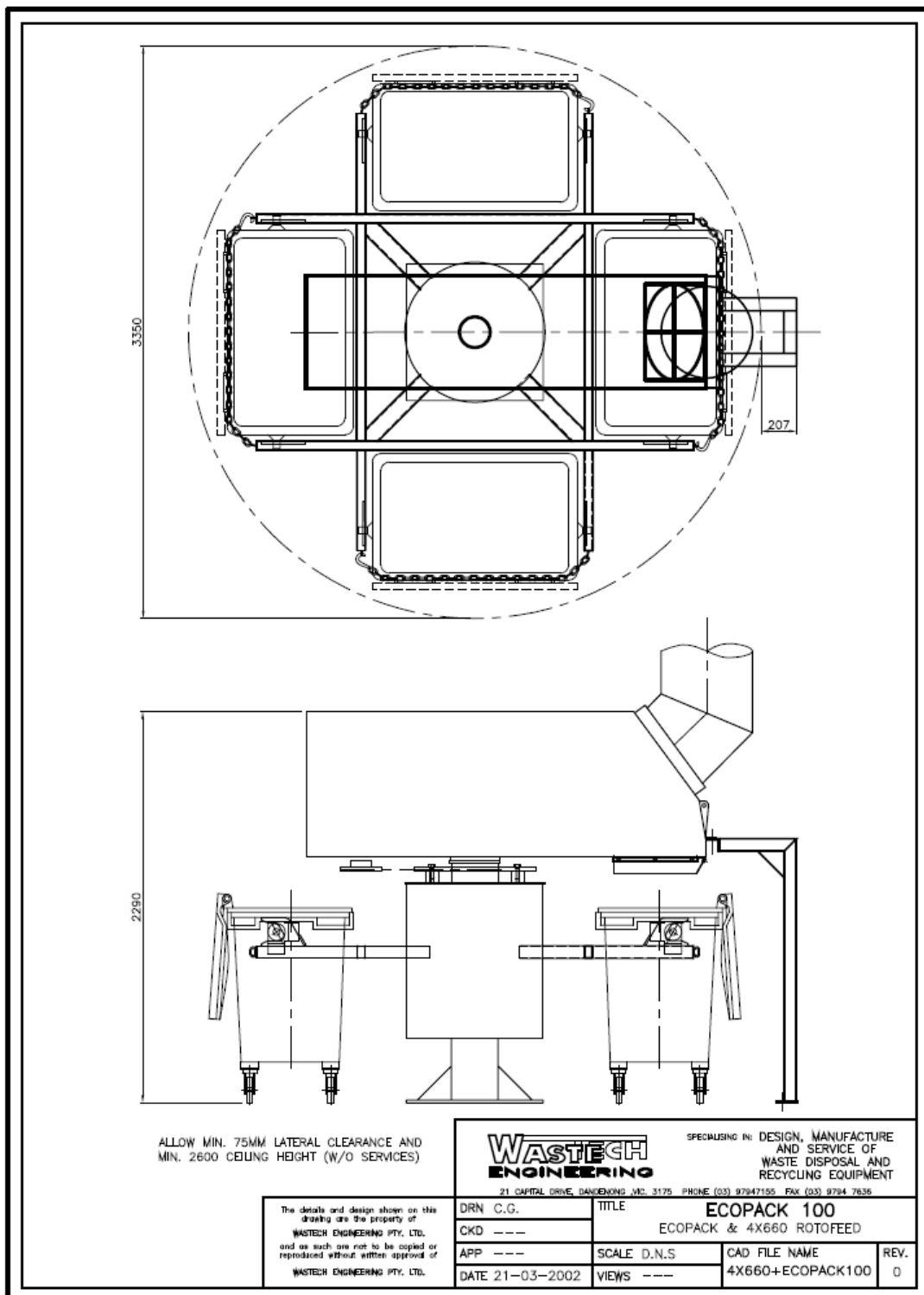
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www.wastech.com.au

FOR YOUR LOCAL AGENT
IN YOUR STATE PLEASE CALL

FREE CALL:
1800 465 465

Your Local Agent:





120 LITRE CONTAINER

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

Advantages

- Easy to manoeuvre
- Versatile, with a comprehensive accessories range
- Complies with EN840 and AS4123 quality requirements
- Particularly stable due to external position of wheels
- Safe and easy to handle
- Suitable for all DIN lifting equipment
- Double angle rail for greater safety when emptying
- Compatible with identification and weighing systems
- Special ribs prevent containers from becoming jammed when stacked

Imprints and markings

- Manufacturer, year of manufacture, material
- Nominal volume, max permitted total weight
- EN 840 and AS4123 markings
- Individual markings with imprints, hot-foil printing or adhesive labels*
- Customer specific serial numbers if required*

Accessories

- For accessories and special design variations such as lid apertures and locks please refer to the separate accessories sheet for 2-wheeled containers

SULO®

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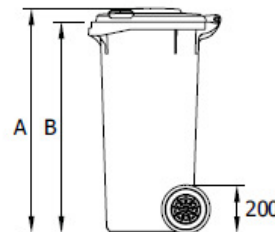
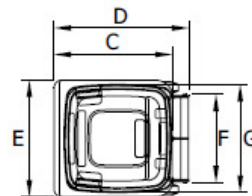
Quality

- Certified according to EN840
- Manufactured in accordance with AS4123

Dimensions - Weights - Standards

- Nominal volume: 120 litres
 - Net weight: approx 9.3 kg
 - Max load: 48 kg
 - Permitted total weight: 60 kg
- | | | |
|------------|------------|------------|
| ■ A 930 mm | ■ D 545 mm | ■ G 480 mm |
| ■ B 870 mm | ■ E 480 mm | |
| ■ C 480 mm | ■ F 335 mm | |

Measurements to be used as a guide only – variations will occur



Colours

- Standard colours: black, nature green, dark green, grey
- Special colours are available on request* – common colours include blue, yellow, red, brown, orange, purple



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sulo-408

240 LITRE CONTAINER

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

Advantages

- Easy to manoeuvre
- Versatile, with a comprehensive accessories range
- Complies with EN840 and AS4123 quality requirements
- Particularly stable due to external position of wheels
- Safe and easy to handle
- Suitable for all DIN lifting equipment
- Double angle rail for greater safety when emptying
- Compatible with identification and weighing systems
- Special ribs prevent containers from becoming jammed when stacked

Imprints and markings

- Manufacturer, year of manufacture, material
- Nominal volume, max permitted total weight
- EN 840 and AS4123 markings
- Individual markings with imprints, hot-foil printing or adhesive labels*
- Customer specific serial numbers if required*

Accessories

- For accessories and special design variations such as lid apertures and locks please refer to the separate accessories sheet for 2-wheeled containers

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Quality

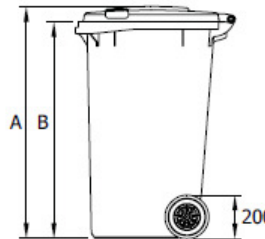
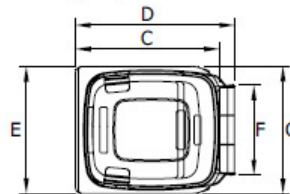
- Certified according to EN840
- Manufactured in accordance with AS4123

Dimensions - Weights - Standards

- Nominal volume: 240 litres
- Net weight: approx 13 kg
- Max load: 96 kg
- Permitted total weight: 110 kg

- A 1060 mm ■ D 730 mm ■ G 550 mm
- B 990 mm ■ E 585 mm
- C 660 mm ■ F 400 mm

Measurements to be used as a guide only – variations will occur



Colours

- Standard colours: black, nature green, dark green, grey
- Special colours are available on request* – common colours include blue, yellow, red, brown, orange, purple



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Fax: +64 9 - 968 2188

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SULO 2009

660 litre container

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

Advantages

- Easy handling
- Easy filling
- Easy grip handles on front and sides of lid
- Stable and light weight lid
- Safe manoeuvring
- Easy grip handles on three sides
- Wide handles, easy to use when wearing thick gloves
- User-friendly handles
- Handles available in alternative colours
- Complies fully with EN or RAL quality requirements
- Versatile, with a comprehensive accessories range
- Various wheel assembly configurations for different applications
- Water drainage plug as standard
- Compatible with identification and weighing systems
- Suitable for all lifting equipment in accordance with EN 840
- Rounded lid profile for improved rainwater dispersal

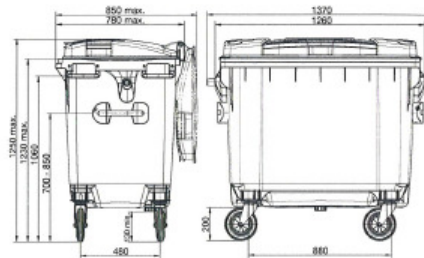


SULO

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 Telefon +49 (0) 52 21 598-207
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 Internet: www.sulo.com
 e-mail: info@sulo.de

Dimensions and Weights

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



all dimensions according to EN 840

Colours

- Standard colours: grey, green, blue, yellow, brown, red
- Special colours are available on request
- All additives are cadmium free and environmentally friendly



Imprints and markings

- Manufacturer
- Month and year of manufacture
- Nominal volume, max. permitted total weight
- "No hot ashes" symbol
- Material
- EN 840, RAL markings
- Individual markings with imprints, screen printing, hot-foil printing or adhesive labels

Accessories

- For accessories and special design variations such as lid apertures, locks, towing brackets and fork lift sleeves, please refer to the separate accessories sheet for 4-wheeled containers

06-2004/ Subject to technical amendments

1 100 Litre Domed Lid Container

Material

- Polymer components:
 - Injection moulded from specially designed HDPE
 - Resistant to decay, frost, heat and chemicals
 - Special UV-stabilisers provide excellent ageing characteristics
- Corrosion resistant steel components
- Noise reduction:
 - Wheel assemblies with solid rubber tyres
- Long service life:
 - High quality materials
 - Excellent manufacturing processes
 - Withstands exposure to high mechanical stress levels
- Recycling:
 - All container parts are recyclable

Design

- Easy to use lid, lockable, with adjustable spring support system
- High degree of safety - integrated child safety device prevents accidental closing of lid
- Versatile, with a comprehensive accessories range
- Easy grip handles on all sides
- Safe, easy handling, even with heavy loads
- Wide lifting trunnions for improved safety during lifting, even with awkward loads
- Various wheel assembly configurations for different applications
- Water drainage plug as standard*
- Compatible with identification and weighing systems
- Domed lid with unique opening mechanism reduces wind problems during emptying
- Easy to clean due to smooth surfaces and rounded internal surfaces
- Reinforced base, front and rear panels for greater stability

Accessories

- For accessories and special design variations such as lid apertures, locks and towing brackets, please refer to the separate accessories sheet for 4-wheeled containers

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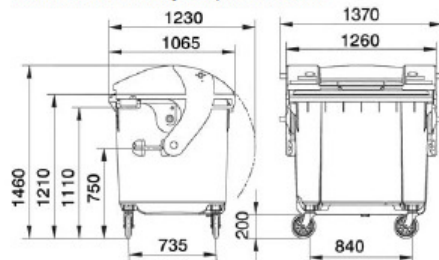
Quality

- Certified according to DIN EN 840 and RAL GZ 951/1
- Constant quality control through manufacturers laboratory as well as independent institutes

Dimensions - Weights - Standards

- Nominal volume: 1100 litres
- Net weight: approx. 65 kg
- Max. load: 440 kg
- Permitted total weight: 510 kg

Measurements to be used as a guide only - variations will occur



Note: Certification and Quality Marks depicted in this brochure are registered to SULO Umwelttechnik GmbH & Co. KG

Colours

- Standard colours: green, blue, yellow
- Special colours are available on request*
- All additives are cadmium free and environmentally friendly



Imprints and markings

- Manufacturer, year of manufacture, material
- Nominal volume, max. permitted total weight
- EN 840, RAL markings
- Individual markings with imprints, hot-foil printing or adhesive labels available on request*

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51100-409

“LIFTEZY” Bin Lifter



“LIFTEZY” Bin Lifter

The “LIFTEZY” is a heavy duty designed Bin Lifter for lifting and tipping of MGB Bins of all sizes. Incorporating a unique direct drive system the lifter has minimal moving parts and no Hydraulics making it ideal for high use environments and food manufacturers.

The ‘sealed for life’ bearings and drive assembly require minimal maintenance for increased working life and reduced operating costs.

A fully enclosed and interlocked safety cage compliments the lifter to provide a safe, durable and reliable Bin Lifter.

The “LIFTEZY” is available in 240v, 415v or rechargeable battery. Lifters can be fitted with castors or bolted down to suit application. Interface is available to suit auto starting of compactors or feed conveyors.

Specifications -

Bin Lifter Size (Ltr)	80/120 & 240	660/1000 & 1100
Lifter Lift Capacity (kg)	250	350
Foot Print (mm)	1100 x 1050	1700 x 1500
Weight (kg)	135	195
Voltage (v)	240 & 415	240 & 415
Motor Size (kw)	1.5	1.5
Cycle Time (sec)	24	24
Min. Tip Height (mm)	1200	1200
Max. Tip Height (mm)	6000	6000

WASTECH
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AGENTS ALL STATES - TOLL FREE: 1800 465 465

Email: info@wastech.com.au Web: www.wastech.com.au

Specifications >>



Rear Lift Collection System

Container Specifications

	Plastic (polyethelene)				Metal (galvanised steel)	
Capacity	120l	240l	660l	1100l	1.5m ³	3.0m ³
Height	0.92m	1.075m	1.235m	1.485m	1.3m	1.3m
Width	0.54m	0.58m	1.36m	1.36m	2.4m	2.4m
Length	0.62m	0.715m	0.765m	1.07m	1.25m	2.25m
Weight	9.5kg	13.5kg	45kg	65kg	300kg	400kg

Vehicle Specifications

Overall length	8.0m
Overall width	2.5m
Height (travel)	3.4m
Height (in operation)	3.4m
Weight (vehicle only)	13.0t
Weight (payload)	9.5t
Turning circle	25.0m

Rear Lift Collection Operation



Containers are lifted automatically, emptied into vehicle and compacted.



Vehicle Safety Features

- On board reversing camera
- Hydraulic valves, lifting gear and doors
- Heated external mirrors
- Reversing lights and beepers

Container Options

- Foot operated lid
- Electronic chip provision
- Wheel locking device
- Divider system
- Size
- Flip top and roll top lids
- Colours (according to national standards) and decals

Container Accessories

- Wheel brakes
- Liners
- Security posts
- Padlocks and chains
- Cart cradle
- Waste ID labels
- Bin lifter

Note Specifications are a guide only. Printed on recycled paper using environmentally friendly soy-based inks.











SITA's Range of Services include Small Business Waste, Commercial Waste, Industrial Waste, Recycling, Product Destruction, Waste Audits, Government, Domestic Waste, Liquid Waste, Medical Waste, Security Disposal, Builders Bins, Temporary Bins and Hygiene Services

Call 13 13 35 or visit sita.com.au



Electrodrive Waste Bin system

The Waste Bin System is an ideal solution for large facilities with centralised dumping points. Quickly and easily bring your waste bins to the one place for emptying. Safety features include: horn, flashing light, and back off button.

-  Features an Electrodrive Tug and a Waste Bin Mover
-  Carries up to 4 x 240L wheelie bins
-  Easy to manoeuvre with forward and reverse drive
-  Customised movers available to suit your facility
-  Electric powered: 24V deep cycle, sealed gel cell batteries
-  Easily traverses outdoor terrain and is weatherproof
-  Equipment training and servicing programs available
-  Simple to use, no driver's licence required

Specifications

Waste Bin Mover Dimensions:
Height: 1400
Length: 1600 (2 Bin), 2100 (3), 2600 (4)
Width: 715

Tug Dimensions:
Height: 890
Length: 1450 (flatter handle down)
Width: 630
Capacity: 1000kg
Weight: 170kg
Voltage: 24V
Range: 12km

