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an Elephants Foot Company

Middle Head Oval, 1110 Middle Head Road, Mosman NSW 2088
Amenities Building

OPERATIONAL WASTE MANAGEMENT PLAN

7/06/2024
Report No. 5734
Revision D

Client

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REVISION REFERENCE

Revision	Date	Prepared by	Reviewed by	Description
A	25/03/2024	R.Jayaratnam	J.Parker	Draft
B	6/05/2024	R.Jayaratnam	J.Parker	Amendment
C	7/05/2024	R.Jayaratnam	J.Parker	Final
D	7/06/2024	R.Jayaratnam	J.Parker	Amendment

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TABLE OF CONTENTS

TABLE OF FIGURES	iv
LIST OF TABLES.....	iv
GLOSSARY OF ABBREVIATIONS AND TERMS	i
1 ACKNOWLEDGEMENT OF COUNTRY	3
2 INTRODUCTION	3
2.1 SCOPE OF REPORT	3
2.2 REPORT CONDITIONS	4
3 LEGISLATION & GUIDANCE	5
3.1 COUNCIL OBJECTIVES	5
4 DEVELOPMENT OVERVIEW.....	7
4.1 SITE LOCATION.....	7
5 SPORTING FACILITY WASTE MANAGEMENT	8
5.1 BIN SUMMARY	8
5.2 WASTE DISPOSAL PROCEDURES.....	8
5.3 WASTE COLLECTION PROCEDURES.....	8
5.4 OTHER WASTE MANAGEMENT CONSIDERATIONS	9
5.4.1 OFFICE and SCORERS ROOM	9
5.4.2 CHANGING FACILITIES	9
5.4.3 CANTEEN/KIOSK	9
5.4.4 BATHROOMS	10
5.4.5 COMMON AREAS.....	10
5.4.6 LIQUID WASTE	10
5.4.7 PROBLEM WASTE.....	10
6 STAKEHOLDER ROLES & RESPONSIBILITIES	11
7 SOURCE SEPARATION	12
8 EDUCATION	13
8.1 SIGNAGE.....	13
8.2 POLLUTION PREVENTION.....	13
9 WASTE ROOMS	14
10 BIN MOVING PATHS	15
11 Bin COMPOUND CONSTRUCTION REQUIREMENTS	16
12 USEFUL CONTACTS.....	17
APPENDIX A: ARCHITECTURAL PLANS.....	18
APPENDIX: A.1 GROUND FLOOR PLAN.....	19
APPENDIX B: PRIMARY WASTE MANAGEMENT PROVISIONS.....	20
APPENDIX: B.1 TYPICAL BIN SPECIFICATIONS	21
APPENDIX: B.2 SIGNAGE FOR WASTE AND RECYCLING BINS.....	22

APPENDIX: B.3	TYPICAL COLLECTION VEHICLE INFORMATION	24
APPENDIX: B.4	TYPICAL BIN MOVERS	26
APPENDIX C:	SECONDARY WASTE MANAGEMENT PROVISIONS	27
APPENDIX: C.1	TYPICAL COOKING OIL CONTAINERS	28
APPENDIX: C.2	TYPICAL SOURCE SEPARATION BINS	29

TABLE OF FIGURES

Figure 1. Site Location.....	7
------------------------------	---

LIST OF TABLES

Table 1: Stakeholder Roles and Responsibilities	11
Table 2: Operational Waste Streams.....	12
Table 3: Waste Room Areas.....	14
Table 4: Waste Room Requirements.....	14

GLOSSARY OF ABBREVIATIONS AND TERMS

TERM	DESCRIPTION
<i>Baler</i>	A device that compresses waste into a mould to form bales which may be self-supporting or retained in shape by strapping
<i>Bin-carting Route</i>	Travel route for transferring bins from the storage area to a nominated collection point
<i>Collection Area/Point</i>	The identified position or area where general waste or recyclables are loaded onto the collection vehicle
<i>Compactor</i>	A machine for compressing waste into disposable or reusable containers
<i>Composter</i>	A container/machine used for composting specific food scraps
<i>Crate</i>	A plastic box used for the collection of recyclable materials
<i>DA</i>	Development Application
<i>DCP</i>	Development Control Plan
<i>EPA</i>	Environmental Protection Authority
<i>HRV</i>	Heavy Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>L</i>	Litre(s)
<i>LEP</i>	Local Environmental Plans guide planning decisions for local government areas
<i>Liquid Waste</i>	Non-hazardous liquid waste generated by commercial premises that must be connected to sewer or collected for treatment and disposal by a liquid waste contractor (including grease trap waste)
<i>Mixed Use Development</i>	A development comprised of two or more different uses
<i>MUD</i>	Multi-Unit Dwellings comprise of a development with more than one dwelling. This ranges from dual occupancies and attached dwellings to high-rise residential developments
<i>Mobile Garbage Bin(s) (MGB)</i>	A waste container generally constructed of plastic with wheels with a capacity in litres of 120, 240, 360, 660, 1000 or 1100
<i>MRV</i>	Medium Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>Onsite Collection</i>	When the collection vehicle enters the property and services the development within the property boundary from a designated loading area
<i>Owners Corporation</i>	An organisation or group of persons that is identified by a particular name and acts, or may act, as an entity
<i>Service Bins</i>	Bin set aside to be placed under a chute while the remainder of the bins are being collected

SRV Small Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities

WHS Workplace Health and Safety

Wheel-in wheel-out service A type of waste collection service offered by local councils where the council waste collection personnel enter the premises to collect the bins and returns them to the property

1 ACKNOWLEDGEMENT OF COUNTRY

We acknowledge Australia's First Nations People as the Traditional Custodians of this land. We pay respect to ancestors and Elders, past and present. We honour Aboriginal and Torres Strait Islander people and their connection to land, waters and seas, and their vital contribution to the vibrant nation that we share, Australia.

2 INTRODUCTION

Elephants Foot Consulting (EFC) has been engaged to prepare the following waste management plan for the operational management of waste generated by the amenities building located at Middle Head Oval, 1110 Middle Head Road, Mosman NSW, 2088.

Waste management strategies and audits are required for new developments in order to support the design and sustainable performance of the building. It is EFC's belief that a successful waste management strategy contains three key objectives:

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

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

It is essential that this OWMP is integrated into the overall management of the building and is clearly communicated to all relevant stakeholders.

2.1 SCOPE OF REPORT

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

The waste management of the **construction** and **demolition** phases of the development are not addressed in this report. A construction and demolition WMP will need to be provided separately. EFC can supply this if required.

2.2 REPORT CONDITIONS

The purpose of this report is to document an OWMP as part of a development application, which is supplied by EFC with the following limitations:

- Drawings, estimates and information contained in this OWMP have been prepared by analysing the information, plans and documents supplied by the client and third parties including Council and other government agencies. The assumptions based on the information contained in the OWMP is outside the control of EFC,
- The figures presented in the report are an estimate only – the actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building management's approach to educating residents and tenants regarding waste management operations and responsibilities,
- The building manager/caretaker will adjust waste management operations as required based on actual waste volumes (e.g. if waste is greater than estimated) and increase the number of bins and collections accordingly,
- The report will not be used to determine or forecast operational costs or prepare any feasibility study or to document any safety or operational procedures,
- The report has been prepared with all due care; however no assurance is made that the OWMP reflects the actual outcome of the proposed waste facilities, services, and operations, and EFC will not be liable for plans or results that are not suitable for purpose due to incorrect or unsuitable information or otherwise,
- EFC offer no warranty or representation of accuracy or reliability of the OWMP unless specifically stated,
- Any manual handling equipment recommended in this OWMP should be provided at the recommendation of the appropriate equipment provider who will assess the correct equipment for supply,
- Design of waste management equipment and systems must be approved by the supplier,
- EFC cannot be held accountable for late changes to the design after the OWMP has been submitted to Council,
- EFC will provide specifications and recommendations on bin access and travel paths within the OWMP, however it is the architect's responsibility to ensure the architectural drawings meet these provisions,
- EFC are not required to provide information on collection vehicle swept paths, head heights, internal manoeuvring or loading requirements. It is assumed this information will be provided by a traffic consultant,
- Council are subject to changing waste and recycling policies and requirements at their own discretion.

This OWMP is only finalised once the draft watermark has been removed. If the draft watermark is present, the information in the OWMP is not confirmed.

3 LEGISLATION & GUIDANCE

Waste management and resource recovery regulation in Australia is administered by the Australian Constitution, Commonwealth laws, and international agreements. State and territory governments maintain primary responsibility for controlling development and regulating waste. The following legislation has been enacted in New South Wales, and provides the lawful underpinnings of this OWMP.

- NSW Environmental Planning & Assessment Act 1979
- NSW Protection of the Environment Operations Act 1997
- NSW Waste Avoidance & Resource Recovery Act 2001
- *Section 71 of the Sydney Harbour Federation Trust Act 2001 covers ‘**excluded State Law**’ this states that certain state laws do not apply to the Trust or to the property (including Trust Land) covering, but not exclusive of, matters of town planning, powers and functions of local Councils, standards applicable to the design, or manner of construction, of a building, structure or facility and the protection of the environment or of the natural and cultural heritage. Although for completeness and if there is a lack of Commonwealth guidance, NSW laws or standards in these matters have been assessed and reviewed as required.’*

At the local level, councils or Local Government Areas (LGAs) require OWMPs to be included in new development applications. This OWMP is specifically required by:

- Mosman Development Control Plan 2012
- Mosman Local Environmental Plan 2011

The primary purpose of a development control plan (DCP) is to guide development according to the aims of the corresponding local environmental plan (LEP). The DCP must be read in conjunction with the provisions of the relevant LEP.

Information provided in this OWMP comes from a wide range of waste management guidance at the local, state, and federal levels. The primary sources of guidance include:

- Mosman Open Space and Infrastructure Development Control Plan 2012
- Mosman Waste Minimisation Policy 2012
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- NSW Better practice guide for resource recovery in residential developments 2019
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste Classification Guidelines 2014
- Australia’s National Waste Policy 2018

3.1 COUNCIL OBJECTIVES

Mosman Council considers waste management to be highly important for the protection and enhancement of both the natural and built environments. As such, Council aims to:

- Facilitate sustainable waste management within the Mosman Local Government Area in a manner consistent with the principles of Ecologically Sustainable Development (ESD);
- Minimise adverse environmental impacts associated with waste management;
- Minimise resource consumption and waste production throughout the lifecycle of a building or premises;

- Ensure waste management systems are compatible with building type and collection services, and;
- Minimise risks associated with waste management at all stages of development.

4 DEVELOPMENT OVERVIEW

The proposed development falls under the LGA of Mosman Municipal Council.

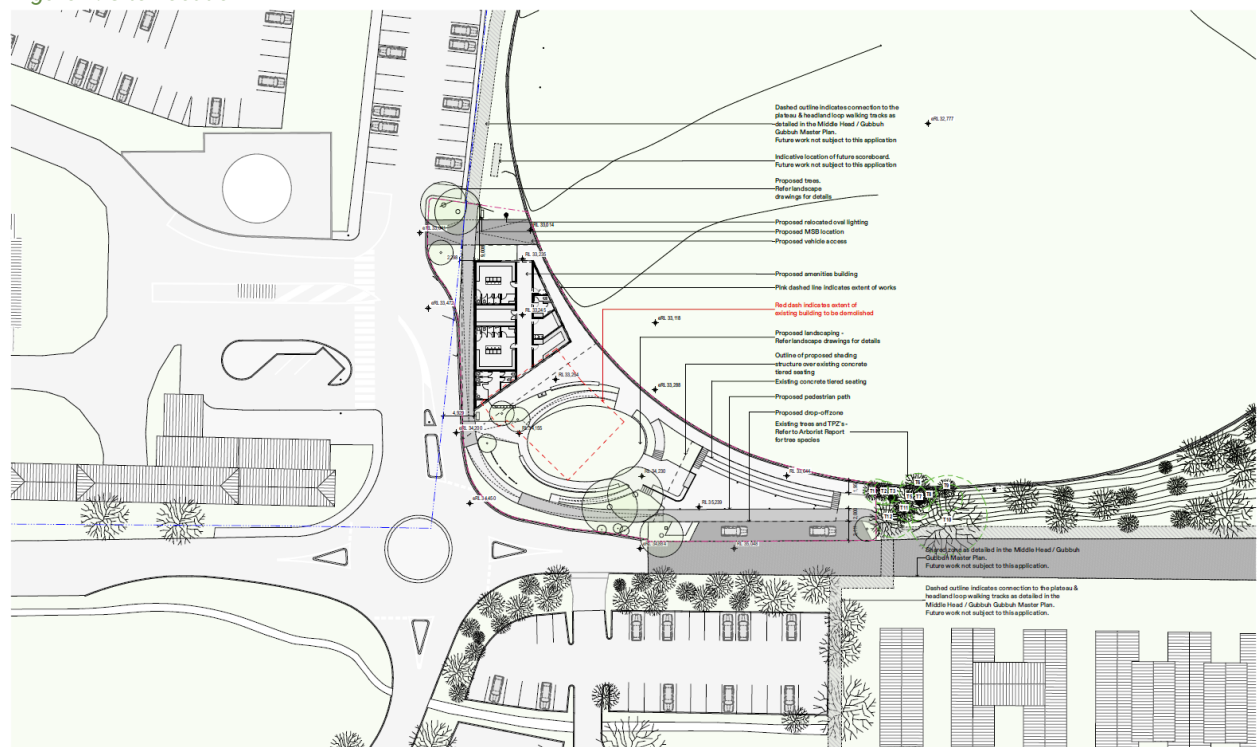
The proposed works involve the demolition of the existing building pavilion containing store room, change rooms, social space and spectator room to create an amenities building; kiosk; amenities; new community space and spectator stand with associated ancillary works.

The new amenities building of this site will utilise the existing waste storage areas, waste management strategy and collection method found within the Middle Head Oval.

4.1 SITE LOCATION

The site is located at 1110 Middle Head Road, Mosman NSW 2088 as shown in Figure.1 (boundaries are indicative only). The site has frontages to Middle Head Road, with vehicle access via Middle Head Road.

Figure 1. Site Location



Source: Archer Office

5 SPORTING FACILITY WASTE MANAGEMENT

The following section outlines best practice waste management for the development, including waste generation estimates and waste disposal and collection procedures.

5.1 BIN SUMMARY

Current existing site:

The information has been provided by the client for the current existing bin numbers and receptacles. The bin receptacles and equipment are listed below:

General Waste: 1 x 120L MGBs collected **twice daily** during summer. **Once daily** during the winter.

Recycling: 1 x 120L MGBs collected **twice daily** during summer. **Once daily** during the winter

The project will be catering the same user group with improved facilities. Building manager may modified bin sizes, quantities, and/or collection frequencies once the proposed development is operational. Building management will be required to negotiate any changes to bins or collections with the collection service provider. Seasonal peak periods such as public and school holidays should also be considered.

The number of bins provided for the Oval will remain the same and not affected due the proposed works.

5.2 WASTE DISPOSAL PROCEDURES

The Mosman Municipal Council will be responsible for their back of house waste management bins during daily operations.

During the operation stage, staff will be responsible for waste management within each area associated with the amenities building during daily operations. This will be carried out back of house where possible.

On completion of each trading day or as required, nominated staff or contracted cleaners will transport all general waste and recycling and place them into the appropriate collection bins.

5.3 WASTE COLLECTION PROCEDURES

All waste generated by this development will be collected by private contractor to an agreed schedule (this report assumes twice daily collections for both waste and recycling during summer and once daily during winter).

On the nominated waste collection day, the building caretaker will be responsible for transporting the 120L MGBs from the proposed bin compound area (beside the oval) to the kerbside collection point located at Middle Head Road.

Private waste collection vehicle will pull-up adjacent to the kerbside collection point at Middle Head Road and service the bins. Upon completion of servicing, collection staff will leave all

bins on the kerbside collection point, with the building caretaker returning all bins to the bin compound area. This procedure will occur every week daily.

5.4 OTHER WASTE MANAGEMENT CONSIDERATIONS

Based on the types of tenancies anticipated for this development, the following waste management practices are recommended.

5.4.1 OFFICE AND SCORERS ROOM

Bins for general waste and recycling are positioned in the office or meeting room. Cleaners or nominated staff will transport the general waste and recycling to the bin compound area and place into the appropriate collection bins.

5.4.2 CHANGING FACILITIES

Similar to the office areas, receptacles for both waste and recycling will be located at regular intervals throughout the changing facilities.

As is common practice, contract cleaners are expected to circulate around these areas after hours and remove bagged waste and recycling. This will be deposited into the designated bins located in the bin compound area.

5.4.3 CANTEEN/KIOSK

Staff at the canteen/kiosk in the building will be responsible for their own storage of general waste and recycling back of house (BOH).

Food handling for food heated, served and consumed on site will produce a typical waste composition of food scraps from plates, packaging waste and some plastics.

Cardboard is a major component of the waste generated by canteen/kiosk. All cardboard should be flattened (to save bin space), placed in and collected from bulk bins. Whilst cardboard is bulky, it is generally lightweight however it can be contaminated with food or liquid which makes it unsuitable for recycling.

On completion of each trading day or as required, nominated staff/cleaners will transport their general waste and recycling to the bin compound area of the building and place general waste and recycling into the appropriate collection bins.

To ensure the proper management and disposal of waste, tenants must be made aware of the following practices:

- all garbage should be bagged and garbage bins should be plastic lined;
- bagging of recyclables is not permitted;
- all interim waste storage is located BOH during operations;
- individual recycling programs are recommended for retailers to ensure commingled recycling is correctly separated;
- any food and beverage tenant will make arrangements for storing used and unused cooking oil in a bunded storage area;
- the operator will organise grease interceptor trap servicing;
- a suitable storage area needs to be provided and effectively bunded for chemicals, pesticides and cleaning products;
- dry basket arrestors need to be provided to the floor wastes in the food preparation and waste storage areas; and

- all flattened cardboard will be collected and removed to the bin compound area recycling bin

Note: It is the responsibility of the building manager/caretaker to monitor the number of bins required for the development. As waste volumes may change according to the development's management, and customer base attitudes to waste disposal and recycling, bin numbers and sizes may need to be altered to suit the building operation. Seasonal peak periods i.e. public and school holidays should also be considered.

5.4.4 BATHROOMS

Washroom facilities should be supplied with collection bins for paper towels (if used). Sanitary bins for female restroom facilities must also be arranged with an appropriate contractor.

5.4.5 COMMON AREAS

The circulation and outdoor areas will feature intermittent public place waste bins as required. These will be emptied periodically by the contract cleaners. As waste generated in these areas is expected to be minimal, this has been exempted from the waste calculations.

5.4.6 LIQUID WASTE

Liquid wastes such cleaning products, chemicals, paints, and cooking oil, etc., will be stored in a secure space that is bunded and drained to a grease trap in accordance with State government authorities and legislation.

5.4.7 PROBLEM WASTE

The building manager/caretaker is responsible for making arrangements for the disposal and recycling of problem waste streams with an appropriate contractor. Problem wastes cannot be placed in general waste as they can have adverse impacts to human health and the environment if disposed of in landfill. Building manager/caretaker will be responsible when disposing of problem waste streams.

Problem waste streams include:

- | | |
|--------------------|--------------|
| ○ Chemical Waste | ○ Lightbulbs |
| ○ Liquid wastes | ○ eWaste |
| ○ Toner cartridges | ○ Batteries |

6 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 1: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Management	<ul style="list-style-type: none"> • Ensure all waste service providers submit monthly reports on all equipment movements and waste quantities/weights; • Organise internal waste audits/visual assessments on a regular basis • Purchase any on-going waste management equipment or maintenance of equipment once building is operational; and • Manage any non-compliances/complaints reported through waste audits.
Building Manager or Waste Caretaker	<ul style="list-style-type: none"> • Coordinate general waste and recycling collections; • Clean and transport bins as required; • Organise replacement or maintenance requirements for bins; • Organise, maintain and clean the waste holding area; • Organise bulky goods collection when required • Investigate and ensure prompt clean-up of illegally dumped waste materials. • Prevent storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins) • Abide by all relevant WH&S legislation, regulations, and guidelines; • Provide staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management; • Assess any manual handling risks and prepare a manual handling control plan for waste and bin transfers; • Ensure site safety for staff, visitors and contractors; and • Ensure effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors.
Costumers/Tenants	<ul style="list-style-type: none"> • Manage the back of house storage of generated waste and recycling during daily operation. • Correctly separate waste and recycling streams; bag general waste and ensure recyclables are not bagged. • Flatten cardboard within the recycling bin. • If required, arrange for storing used and unused cooking oil in a bunded area, • Organise grease interceptor trap servicing, • Ensure dry basket arrestors are provided to the floor wastes in the food preparation, and • Ensure the suitable storage for chemicals, pesticides and cleaning products waste back of house.
Waste Collection Contractor	<ul style="list-style-type: none"> • Provide a reliable and appropriate waste collection service; • Provide feedback to building managers/residents regarding contamination of recyclables; and • Work with building managers/caretakers to customise waste systems where possible.
Gardening/Landscaping Contractor	<ul style="list-style-type: none"> • Remove all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.
Mosman Council	<ul style="list-style-type: none"> • Purchase all equipment required to implement this OWMP prior to the occupation of the building to be provided to the strata/ owners corporation.

7 SOURCE SEPARATION

Better practice waste management includes the avoidance, reuse, and recovery of unwanted items, which can be achieved through source separation. The table below outlines what is typically included in various waste streams and how they can be managed. Refer to your local council for a list of accepted materials. Planet Ark can be accessed online to find other facilities that recover unwanted items.

Table 2: Operational Waste Streams

Waste Stream	Description	Typical Destination	Waste Stream Management
General Waste	The remaining portion of the waste stream that is not recovered for re-use, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc.	Landfill	Waste should be bagged before placing in the designated waste bins.
Recycling	A mixture of items that are commonly recycled usually segregated through a MRF. Typically include food and beverage containers (e.g. aluminium, glass, steel, hard plastics, cartons). Also included cardboard and paper products.	Resource Recovery Centre	Recycling must not be bagged, and instead should be placed loosely in the designated recycling bins. Cardboard should be flattened before placing in the designated recycling bin.
Green Waste	Green waste consists of unwanted organic materials that are easily biodegradable and/or compostable (e.g. lawn clippings, branches)	Resource Recovery Centre	Landscape Maintenance Contractors will remove the green waste from site during scheduled maintenance.
Food Waste	Food waste consists of unwanted or uneaten kitchen scraps that are easily compostable/biodegradable (e.g. vegetable peels, fruit rinds, coffee grounds).	Composting facility or Landfill	Food waste can be composted on-site, off-site, or else included in the general waste stream.
Electronic Waste	Discarded e-waste, electronic components and materials such as computers, mobile phones, keyboards, etc.	Resource Recovery Centre	Building manager/caretaker arranges recycling of e-waste.
Bulky Items	Items that are too large to place into general rubbish collection. This includes disused and/or broken furniture, mattresses, white goods, etc.	Resource Recovery Centre or Landfill	The building manager/caretaker is responsible for bulky waste items.
Sanitary Waste	Feminine hygiene waste generated from female bathrooms.	Incineration or Landfill	Sanitary bins are serviced by sanitary waste contractor.
Other	Other recyclable items that require special recovery may include ink cartridges, batteries, chemical waste, fluorescent tubes, etc.	Resource Recovery Facility	Building manager/caretaker arranges collection by appropriate recycling services when required.

8 EDUCATION

Educational materials encouraging correct separation of general waste and recyclables must be provided to each customer and staff member. This should include the correct disposal process for bulky waste such as old furniture, large discarded items, and other materials including electronic and chemical wastes. It is recommended that the building caretaker provides information in multiple languages to support correct behaviours, and to minimise the possibility of contamination in communal waste bins.

8.1 SIGNAGE

Signage and education are essential components to support best practice waste management including resource recovery, source separation, and diversion of waste from landfill.

Signage should include:

- Clear and correctly labelled waste and recycling bins,
- Instructions for separating and disposing of waste items. Different languages should be considered,
- Locations of, and directions to, the waste storage areas with directional signs, arrows, or lines,
- The identification of all hazards or potential dangers associated with the waste facilities, and
- Emergency contact information should there be issues with the waste systems or services in the building.

The building manager/caretaker is responsible for waste room signage including safety signage. Appropriate signage must be prominently displayed on doors, walls and above all bins, clearly stating what type of waste or recyclables is to be placed in each bin.

All signage should conform to the relevant Australian Standards.

8.2 POLLUTION PREVENTION

Building management shall be responsible for the following to minimise dispersion of site litter and prevent stormwater pollution to avoid impact to the environment and local amenity:

- Promoting adequate waste disposal into the bins
- Securing all bin rooms (whilst affording access to staff/contractors)
- Prevent overfilling of bins, keep all bin lids closed and bungs leak-free
- Taking action to prevent dumping or unauthorised use of waste areas
- Require collection contractor/s to clean up any spillage when clearing bins

9 WASTE ROOMS

The areas allocated for waste storage and collection areas are detailed in the table below, and are estimates only. Final areas will depend on room and bin layouts.

Table 3: Waste Room Areas

Level	Waste Room Type	Equipment and MGBs	Estimated Area Required (m ²)
G	Bin Compound Area	1 x 120L MGB (General Waste) 1 x 120L MGB (Recycling)	1.5

EFC recommends bins sizes, collection frequencies and/or equipment for best practice waste management at this site, however EFC also acknowledges there are a range of other suitable options that may alter waste room requirements (e.g. floor area, accessibility, head height, etc.)

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 70% of bin GFA factored in for manoeuvrability.

In addition, all doorways and passageways facilitating the movement of bins and/or bulky waste items must be at least 1500mm wide. The following table provides further waste room requirements.

Table 4: Waste Room Requirements

Waste Room Type	Waste Room Requirements
Bin Compound Area	<ul style="list-style-type: none"> In order to ensure staff and public safety, all bins should be arranged so they can be accessed without moving another bin

10 BIN MOVING PATHS

The building manager/ caretaker is responsible for the transportation of bins as required from their designated operational locations to the bin holding room as required and returning them once emptied to resume operational use.

Transfer of bins should minimise manual handling where possible, as bins become heavy when full. The building manager/caretaker must assess manual handling risks and provide any relevant documentation to key personnel.

The routes along the bin moving path should;

- Allow for a continuous route that is wholly within the property boundary.
- Be free from obstruction and obstacles such as steps and kerbs.
- Be constructed of solid materials with a non-slip surface
- Be a minimum of 300mm wider than the largest bin used onsite.
- If bins are moved manually, the route must not exceed a grade of 1:14.
- If a bin moving device is used, the route cannot exceed the maximum operating grade of the device. This is typically a grade of 1:4, however this will vary depending on the model of bin moving device acquired for the site.

The Council is responsible for supplying all equipment required for moving bins this includes any bin lifters, bin moving devices and waste transfer bins. This equipment must be new and appropriate for the site. The developer should contact a bin-tug, trailer or tractor consultant to provide equipment recommendations.

Mosman City Council will be responsible for maintaining, repairing and replacing waste management equipment.

11 BIN COMPOUND CONSTRUCTION REQUIREMENTS

The construction must comply with the minimum standards as outlined in *the Mosman Development Control Plan 2012*, in order to minimise odours, deter vermin, protect surrounding areas, and make it a user-friendly and safe area.

The *NSW Better practice guide for resource recovery in residential developments (2019)* also states that better practice bin compound areas should achieve more than the minimum compliance requirements, which are as follows:

- Ensuring BCA compliance, including ventilation. Where required, ventilation system must comply with AS1668.4-2012 The use of ventilation and air conditioning in buildings.
- Ensuring storage areas are well lit (sensor lighting preferred) and have lighting available 24 hours a day.
- Provision of bin washing facilities, including taps for hot and cold water provided through a centralised mixing valve. The taps must be protected from bins and be located where they can be easily accessed even when the area is at bin capacity.
- Floor constructed of concrete at least 75mm thick.
- Floor graded so that any water is directed to a sewer authority approved drainage connection to ensure washing bins and/or waste storage areas do not discharge flow into the stormwater drain.
- Provision of smooth, cleanable and durable floor and wall surfaces that extend up the wall to a height equivalent to any bins held in the area.
- Recommended ceilings are finished with a smooth-faced non-absorbent material capable of being cleaned.
- All surfaces (walls, ceiling and floors) finished in a light colour.

12 USEFUL CONTACTS

EFC does not warrant or make representation for goods or services provided by suppliers.

LOCAL COUNCIL

Mosman Council Customer Service Ph: (02) 9978 4000 E: council@mosman.nsw.gov.au

PRIVATE WASTE COLLECTION PROVIDER

Capital City Waste Services	Ph: 02 9599 9999	E: service@ccws.net.au
Remondis	Ph: 02 9032 7100	
Suez Environmental	Ph: 13 13 35	
Wastewise NSW	Ph: 1300 550 408	E: admin@wastewise.com.au

BIN MOVING DEVICE SUPPLIERS

Electrodrive	Ph: 1800 333 002	E: sales@electrodrive.com.au
Sitecraft	Ph: 1300 363 152	E: sales@sitecraft.com.au
Spacepac	Ph: 1300 763 444	

ORGANIC DIGESTERS AND DEHYDRATORS

Closed Loop	Ph: 1300 762 166	
Orca		E: contact.australia@feedtheorca.com
Soil Food	Ph: 1300 556 628	
Waste Master	Ph: 1800 614 272	E: hello@wastemasterpacific.com.au

COOKING OIL CONTAINERS AND DISPOSAL

Auscol	Ph: 1800 629 476	E: sales@auscol.com
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ODOUR CONTROL

EF Neutralizer	Ph: 1300 435 374	E: info@elephantsfoot.com.au
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SOURCE SPERATION BINS

Source Separation Systems	Ph: 1300 739 913	E: info@sourceseparationsystems.com.au
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MOBILE GARBAGE BINS, BULK BINS AND BIN EQUIPMENT

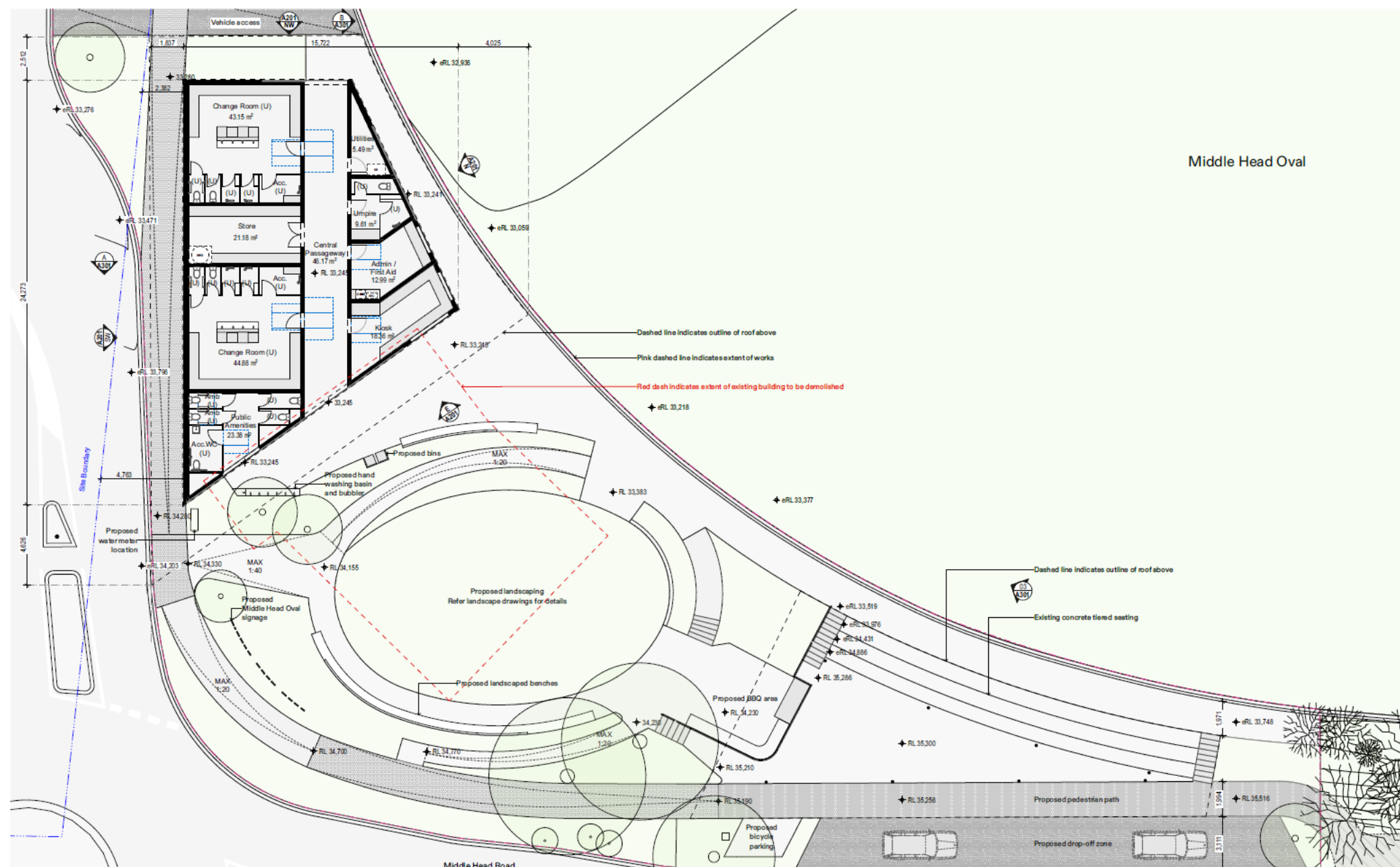
SULO	Ph: 1300 364 388	E: sales@sulo.com.au
OTTO Australia	Ph: 02 9153 6999	

CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

Elephants Foot	Ph: 1800 025 073	E: info@elephantsfoot.com.au
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APPENDIX A: ARCHITECTURAL PLANS

APPENDIX: A.1 GROUND FLOOR PLAN



Source: Archer Office; Project Number 1903; Drawing Number A101; Revision A; Middle Head Oval Amenities – Ground Floor Plan

APPENDIX B: PRIMARY WASTE MANAGEMENT PROVISIONS

APPENDIX: B.1 TYPICAL BIN SPECIFICATIONS


Mobile bins

Mobile bins come in a variety of sizes and are designed for lifting and emptying by purpose-built equipment.

Mobile bins with capacities of up to 1700L must comply with *AS4123.6-2006 Mobile waste containers* which specifies standard sizes and sets out the colour designations for the bodies and lids of mobile waste containers indicating the type of materials they are used to collect.

The most common bin sizes are provided below, although not all sizes are shown. The dimensions are a guide only and differ slightly between manufacturers. Some bins have flat or domed lids and are used with different lifting devices. Refer to *AS4123.6-2006* for further details.

Table G1.1: Average dimension ranges for two-wheel mobile bins




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

Wheelie bin

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

Table G1.2: Average dimension ranges for four-wheel bulk bins



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

Dome or flat lid container

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

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

APPENDIX: B.2 SIGNAGE FOR WASTE AND RECYCLING BINS

Waste signs

Signs and educational materials perform several functions including:

- informing residents why it is important to recover resources and protect the environment
- providing clear instructions on how to use the bins and services provided
- alerting people to any dangers or hazards within the bin storage areas.

All waste, recycling and organic bins should be Australian Standard colours and clearly and correctly labelled, such as by a sticker on the lid and/or the body of the bin.

Communal bin storage areas should be clearly signposted with signs outlining how to correctly separate waste into the bins provided. The local council responsible for waste services may be a good source of signs and posters and can advise on what signs are suitable.

Information on who to contact to find out more about the recycling and/or other resource recovery services in the building should also be displayed in communal areas, such as on a noticeboard.

The Planet Ark website also has resources available free of charge for use by businesses and councils. These signs can be found at businessrecycling.com.au/research/signage.cfm

Figure I1.1: Examples of waste wall posters (EPA supplied)



Figure I1.2: Examples of bin lid stickers (EPA supplied)



Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

Problem waste signs

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

Figure I2.1: Problem waste signs



Safety signs

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

Figure I3.1: Example safety signs



Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

APPENDIX: B.3 TYPICAL COLLECTION VEHICLE INFORMATION

General

Appropriate heavy rigid vehicle standards should be incorporated into the road and street designs in new developments where onsite collections are proposed. Road and street designs must comply with relevant Acts, regulations, guidelines, and codes administered by Austroads, Standards Australia, NSW Roads and Maritime Services, WorkSafe NSW and any local council traffic requirements.

Applicants and building designers should consult with councils and other relevant authorities before designing new roads or streets and access points for waste collection vehicles to establish specific design requirements.

Table H4.1: Australian Standards for turning circles for medium and heavy rigid class vehicles

Vehicle class	Overall length (m)	Design width (m)	Design turning radius (m)	Swept circle (m)	Clearance (travel) height (m)
Medium rigid vehicle	8.80	2.5	10.0	21.6	4.5
Heavy rigid vehicle	12.5	2.5	12.5	27.8	4.5

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

Large collection vehicles

Waste collection vehicles may be side-loading, rear-loading, front-lift-loading, hook or crane lift trucks. Vehicle dimensions vary by collection service, manufacturer, make and model. It is not possible to provide definitive dimensions, so architects and developers should consult with the local council and/or contractors.

The following characteristics represent typical collection vehicles and are provided for guidance only. Reference to *AS2890.2 Parking facilities: off-street commercial vehicle facilities* for detailed requirements, including vehicle dimensions, is recommended.

Table B2.1: Collection vehicle dimensions

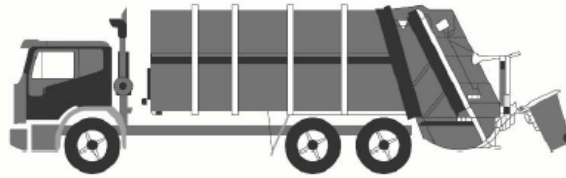
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0	13.0
Maximum payload (t)	10.0	10.8	11.0	14.5	9.5
Turning circle (m)	25.0	21.4	25.0	25.0	18

* The maximum reach of a side arm is 3 m.

Sources: JJ Richards, SUEZ, MacDonald Johnson, Cleanaway, Garwood, Ros Roca, Bingo and Edbro. Figures shown represent the maximum dimensions for each vehicle type.

Rear-loading collection vehicles

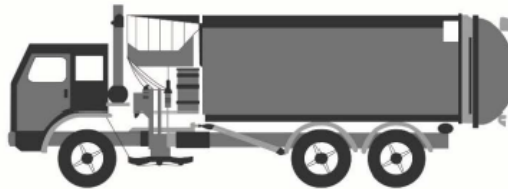
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



Rear-loading waste collection vehicle

Side-loading collection vehicles

This is the most commonly used vehicle for domestic waste, recycling and organics collections. It is only suitable for collecting mobile bins up to 360L in capacity.



Side-loading waste collection vehicle

Front-lift-loading collection vehicles

These vehicles are commonly used for collecting commercial and industrial waste. They can only collect specially designed front-lift bulk bins and not mobile bins.



Front-lift-loading waste collection vehicle

Small collection vehicles

Typically, councils and their contractors operate with large collection vehicles (heavy rigid class vehicles) because they carry greater payloads and allow for more cost-effective collection services. Some councils, or their contractors, may have smaller collection vehicles in their fleet. Early discussion with the council is important to confirm this, but it should not be assumed that the council will have access to small collection vehicles.

The waste management systems and the location of the collection point should always be designed so that the council can provide the standard domestic waste service.

Source: *Better Practice Guide For Resource Recovery In Residential Developments 2019*, NSW Environmental Protection Authority

APPENDIX: B.4 TYPICAL BIN MOVERS

Battery powered tug with a 1 or 2 tonne tow capacity



Features at a glance

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

Auto latching hitch

Three speed motor with emergency stop

Typical applications

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

Features:

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

Safety Features:

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

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

APPENDIX C: SECONDARY WASTE MANAGEMENT PROVISIONS

APPENDIX: C.1 TYPICAL COOKING OIL CONTAINERS



Drums 205L



Pour in Bulk Tank

[View Brochure](#)



Oil Kaddy System

[View Brochure](#)



Eco System 700L Fixed

Eco System 310L mobile

Eco Systems



Direct-Connect to Fryer

Source: <http://www.auscol.com/services/collection-systems/>

APPENDIX: C.2 TYPICAL SOURCE SEPARATION BINS



Source: <https://www.sourceseparationsystems.com.au/>