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an Elephants Foot Company

7A-11 Racecourse Rd. 5-9 Faunce St. & 36 Young St.
West Gosford
Bus Depot Development

OPERATIONAL WASTE MANAGEMENT PLAN

14/12/2022
Report No. 4706
Revision B

Client

Waluya Pty Ltd
ABN -57129007053



REVISION REFERENCE

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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 INTRODUCTION

Elephants Foot Recycling Solutions (EFRS) has been engaged to prepare the following waste management plan for the operational management of waste generated by proposed Bus Depot development located at 7A-11 Racecourse Rd. 5-9 Faunce St. and 36 Young St. West Gosford.

Waste management strategies and audits are required for new developments in order to support the design and sustainable performance of the building. It is EFRS'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.

1.1 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 be provided separately.

1.2 REPORT CONDITIONS

The purpose of this report is to document an OWMP as part of a development application, which is supplied by EFRS 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 EFRS,
- The figures presented in the report are an estimate only – the actual amount of waste generated will be dependent on the occupancy rate of the building/s and waste generation intensity as well as the building management's approach to educating residents and tenants regarding waste management operations and responsibilities,
- The building manager 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 EFRS will not be liable for plans or results that are not suitable for purpose due to incorrect or unsuitable information or otherwise,
- EFRS 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,
- EFRS cannot be held accountable for late changes to the design after the OWMP has been submitted to Council,
- EFRS 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,
- EFRS 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.

2 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

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:

- Gosford Development Control Plan 2013
- Gosford Local Environmental Plan 2014

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:

- Gosford Development Control Plan 2013, Part 7.2 – Waste Management
- 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

2.1 COUNCIL OBJECTIVES

Central Coast Council recognises sustainability as a key component in the design process in order to make efficient use of natural resources, energy, and water throughout its life cycle. In this regard, Council's objectives for new developments include:

- Avoiding the generation of waste through design, material selection and building practices
- Planning for the types, amount, and disposal of waste to be generated during demolition, excavation and construction of developments
- Encouraging waste minimisation, including material separation, reuse and recycling
- Ensuring efficient storage and collection of waste and quality designs of facilities.

3 DEVELOPMENT OVERVIEW

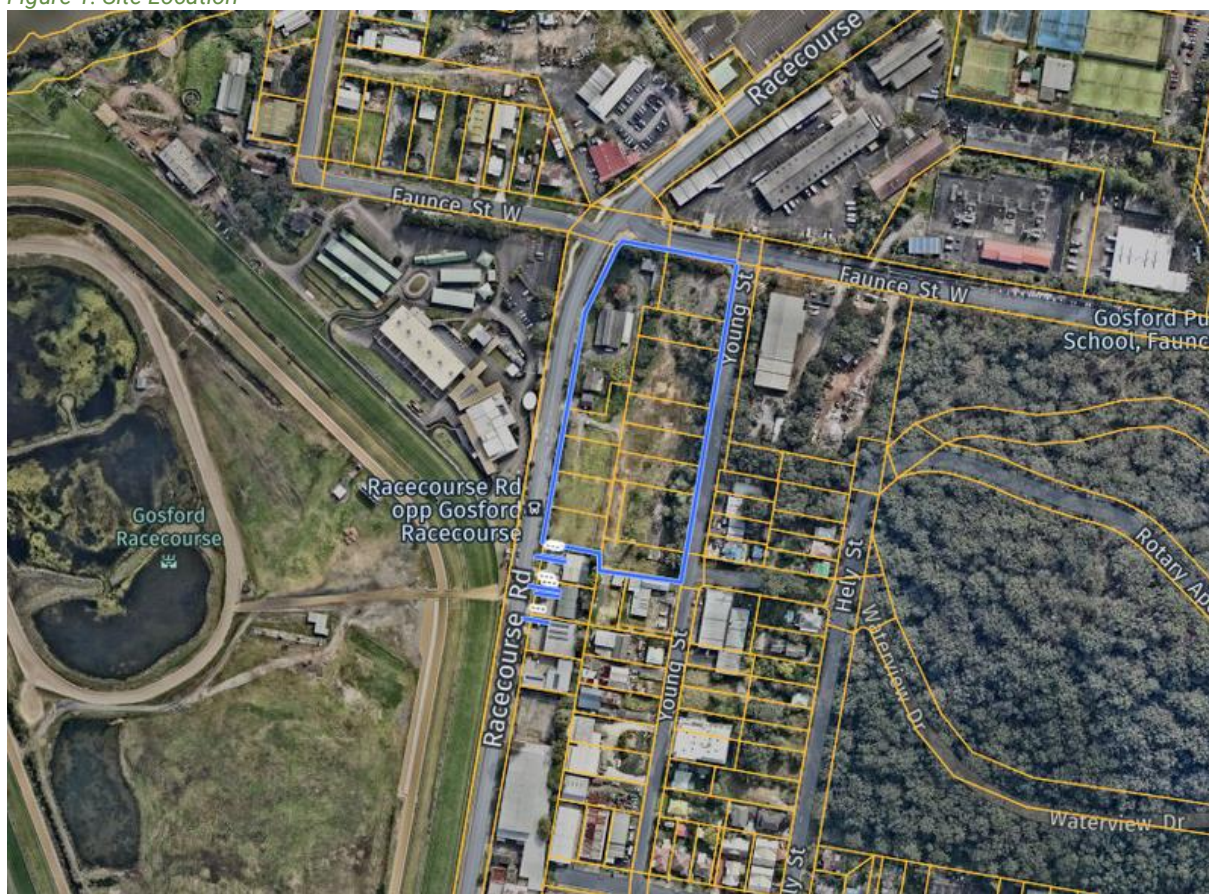
The proposed development falls under the LGA of Central Coast Council and consists of 96 parking buses at grade with associated servicing workshops, office administration and staff parking.

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

3.1 SITE LOCATION

The site is located at 7A-11 Racecourse Road, 5-9 Faunce Street, and 36 Young Street, West Gosford, as shown in Figure.1. The site has frontages to Racecourse Road, Faunce Street and Young Street, with vehicle access via Racecourse Road and Young Street.

Figure 1. Site Location



Source: Nearmap

4 BUS DEPOT WASTE MANAGEMENT

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

4.1 WASTE GENERATION ESTIMATES

Waste generation rates from the New South Wales Environmental Protection Authority *Better Practice Guide for Resource Recovery* (2019) have been referenced to calculate the total number of bins required for the office areas. As this document does not provide waste generation rates for the workshop, rates for warehouses from the Sustainability Victoria *Waste Management and Recycling Better Practice Guide* (2018) have been referenced for the workshop. Calculations are based on generic figures; waste generation rates may differ according to the tenants' waste management practice.

The following table shows the estimated volume (L) of general waste and recyclables that will be generated by the development. These estimates are based on a seven-day operating week.

Table 1: Estimated General Waste and Recycling Volumes

Building	GFA (m ²)	General Waste Generation Rate (L/100m ² /day)	Generated General Waste (L/week)	Recycling Generation Rate (L/100m ² /day)	Generated Recycling (L/week)
Workshop	2346	10	1642	10	1642
Admin Office	335	10	235	15	352
TOTAL	2681		1877		1994
Collections & Equipment	Bin Size (L)		1100	Bin Size (L)	1100
	Collections per Week		1	Collections per Week	1
	Total General Waste Bins Recommended		2	Total Recycling Bins Recommended	2

4.2 BIN SUMMARY

Based on the estimated waste generated, the recommended bin quantities and collection frequencies are as follows:

General Waste: 2 x 1100L MGBs collected **1 x weekly**

Recycling: 2 x 1100L MGBs collected **1 x weekly**

Bin sizes, quantities, and/or collection frequencies may be modified by management once the proposed development is operational. 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.

4.3 WASTE DISPOSAL PROCEDURES

General waste and comingled recycling receptacles will be located centrally on each level of the office building and in the workshop.

On completion of each trading day, or as required, nominated staff or contracted cleaners will collect general waste and recyclables and deposit them into the appropriate collection bins located in the bin storage room near the office building.

The tenants will be required to contract private waste services for collection of general waste, recycling and other waste. The contractor will review and conduct an audit of the site's needs in relation to removal of specific wastes.

4.4 WASTE COLLECTION PROCEDURES

It is anticipated that a private contractor will service general waste and recycling bins to an agreed schedule. This report is based on the assumption that collections for both general waste and recycling will occur on a weekly basis.

On collection days, the private collection vehicle will enter the site and park in the loading bay in front of the bin storage room and empty the bins.

A designated staff member will ensure bins are accessible on servicing days, and that they are returned to resume operational use afterward.

4.5 OTHER WASTE MANAGEMENT CONSIDERATIONS

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

1.1.1 WORKSHOP

Bins for general waste and comingled recycling will be located centrally in convenient locations within the workshop. At the end of each trading day or as required, nominated staff or cleaners will transfer waste to the bin storage room, decanting general waste and recycling into the corresponding collection bins.

1.1.2 ADMIN OFFICE

Typically, bins for paper and general waste are positioned next to each worker's desk or workstation. Bins for general waste and comingled recyclables are also located centrally in office areas. These bins are emptied by contract cleaners, with waste usually stored in the cleaner's cart before being transferred to the collection bins in the bin storage room.

4.5.1 KITCHEN, OFFICE TEA ROOMS AND FOOD PREPARATION AREAS

Any food preparation area, including kitchens and office tea rooms will be provided with dedicated source separation bins including a general waste bin and a recycling bin. Cleaners or nominated staff will be responsible for monitoring these bins and emptying them as required.

4.5.2 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.

4.5.3 PRINTING & PHOTOCOPYING ROOMS

It is recommended that printing rooms and photocopying rooms are supplied with bins for the collection of paper, as well as separate receptacles for ink toner cartridges for recycling. The cleaners or nominated staff are responsible for monitoring these bins and ensuring the items are collected and recycled by an appropriate contractor.

4.5.4 E-WASTE

E-waste (electronic waste) refers to any equipment containing printed circuit boards. E-waste must not be placed in standard general waste or recycling, as E-waste can potentially contaminate soil and surrounding water bodies if not disposed of correctly.

A 240L MGB will be provided in the bin storage room for the collection of E-waste. Staff will need to liaise with management to access the E-waste bin.

E Waste is a waste stream that is generated in frequently. Management will be responsible for arranging collections with an appropriate E-waste recycling service when the E-waste bin is full.

4.5.5 HAZARDOUS WASTE

All industrial and hazardous waste will be managed in accordance with the Protection of the Environment Operations Act 1997.

Hazardous waste management measures will be put in place by management prior to operation in accordance with the type of hazardous or industrial waste produced.

The tenant is responsible for storing their industrial or hazardous waste within designated areas and disposing of the industrial or hazardous waste in accordance Protection of the Environment Operations Act 1997.

If hazardous waste storage areas are built within any of the buildings, these should be located away from food and cleaning storage areas, it must not be accessible to the public and it must have a lockable door and rigid impervious flooring. Clean up facilities, spills kits, appropriate drainage and bunding should be provided. Where wastes are stored in bins the bin must be locked and a specific area, with adequate drainage, for washing equipment should be designated.

Management will need to ensure that all staff comply with the correct production, storage and disposal controls associated with industrial and hazardous waste. At no time will hazardous waste be mixed or disposed of with general or recycling waste streams.

Hazardous and industrial waste will be collected directly from their storage areas by a specialised waste contractor. The tenant is responsible for arranging the specialist private contractor and must co-ordinate with management.

4.5.6 RE-USEABLE COMMERCIAL ITEMS

Space will be provided back of house in each building for the storage of re-usable commercial items such as crates, pallets, kegs and strip out waste. Management will be responsible for ensuring that storage of these items in public places is completely avoided.

5 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 2: Stakeholder Roles and Responsibilities

Roles	Responsibilities
Management	<ul style="list-style-type: none"> Ensuring that all waste service providers submit monthly reports on all equipment movements and waste quantities/weights; Organising internal waste audits/visual assessments on a regular basis Purchasing any on-going waste management equipment or maintenance of equipment once building is operational; and Managing any non-compliances/complaints reported through waste audits. <ul style="list-style-type: none"> Coordinating general waste and recycling collections; Cleaning and transporting bins as required; Organising replacement or maintenance requirements for bins; Organising, maintaining and cleaning the waste holding area; Organising bulky goods collection when required Investigating and ensuring prompt clean-up of illegally dumped waste materials. Preventing storm water pollution by taking necessary precautions (securing bin rooms, preventing overfilling of bins) Abiding by all relevant WH&S legislation, regulations, and guidelines; Providing staff/contractors with equipment manuals, training, health and safety procedures, risk assessments, and PPE to control hazards associated with all waste management; Assessing any manual handling risks and preparing a manual handling control plan for waste and bin transfers; Ensuring site safety for residents, children, visitors, staff and contractors; and Ensuring effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors.
Staff	<ul style="list-style-type: none"> Managing the back of house storage of generated waste and recycling during daily operation. Correctly separating waste and recycling streams. Including bagging general waste and ensuring recyclables are not bagged. Flattening cardboard within the recycling bin. If required, making arrangements for storing used and unused cooking oil in a bunded storage area, Organizing grease interceptor trap servicing, Ensure dry basket arrestors are provided to the floor wastes in the food preparation, and Ensuring 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 to customise waste systems where possible.
Gardening/Landscaping Contractor	<ul style="list-style-type: none"> Removal of all garden organic waste generated during gardening maintenance activities for recycling at an offsite location.
Developer	<ul style="list-style-type: none"> Purchasing all equipment required to implement this OWMP prior to the occupation of the building to be provided to the strata.

6 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 3: 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	General waste should be bagged before placing in the designated general 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 into the recycling bins.
Secure Documents	Secure documents are printed paper materials that contain sensitive information.	Recycling Facility	Secure documents are placed in allocated secure document bins. Private contractor removes bins from site.
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	Electronic waste should be placed loosely into the designated e-waste bin. Management arranges collection for e-waste recycling as required.
Bulky Items	Items that are too large to place into general rubbish collection. This includes disused and/or broken furniture, white goods, etc.	Resource Recovery Centre or Landfill	Management arranged for storage and collection of bulky waste items as and when required.
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	Management arranges collection by appropriate recycling services when required.

7 EDUCATION

Educational materials encouraging correct separation of general waste and recyclables must be provided to each 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.

7.1 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 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.

7.2 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

8 WASTE ROOMS

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

Table 4: Waste Room Areas

Level	Waste Room Type	Equipment	Estimated Area Required (m ²)
GF	Bin Storage Room	2 x 1100L MGBs (General Waste) 2 x 1100L MGBs (Recycling) 1 x 240L MGB (E-Waste)	20

EFRS recommends bins sizes, collection frequencies and/or equipment for best practice waste management at this site, however EFRS 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.

The following table provides further waste room requirements.

Table 5: Waste Room Requirements

Waste Room Type	Waste Room Requirements
Bin Holding Room	<ul style="list-style-type: none"> In order to ensure staff safety, all bins should be arranged so they can be accessed without moving another bin. Doorway should be a minimum of 1500mm wide.

9 BIN MOVING PATHS

Minimal movement of bins is anticipated for this site. Management will be responsible for coordinating any transportation of bins that does occur.

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

The routes along any bin moving paths 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.

10 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Gosford Development Control Plan 2013, Part 7.2 – Waste Management*, 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 storage 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.
- Ensuring 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.

10.1 ADDITIONAL CONSIDERATIONS

- Waste room floor to be sealed with a two-pack epoxy;
- All corners coved and sealed 100mm up, this is to eliminate build-up of dirt;
- Tap height and light switch height of 1.6m;
- Storm water access preventatives (grate);
- All walls painted with light colour and washable paint;
- Equipment electric outlets to be installed 1700mm above finished floor level;
- Optional automatic odour and pest control system installed
- If 660L or 1100L bins are utilised, 2 x 820mm (minimum) double-doors must be used;
- All personnel doors are hinged, lockable and self-closing;
- Conform to the Building Code of Australia, Australian standards and local laws; and
- Childproofing and public/operator safety shall be assessed and ensured
- Waste and recycling rooms must have their own exhaust ventilation system either;
 - Mechanically - exhausting at a rate of 5L/m² floor area, with a minimum rate of 100L/s minimum; Mechanical exhaust systems shall comply with AS1668.4.2012 and not cause any inconvenience, noise or odour problem or
 - Naturally - permanent, unobstructed, and opening direct to the external air, not less than one-twentieth (1/20) of the floor area.

11 USEFUL CONTACTS

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

LOCAL COUNCIL

Central Coast Council Customer Service Ph: 1300 463 954 E: ask@centralcoast.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

Purifying Solutions	Ph: 1300 636 877	E: sales@purifyingsolutions.com.au
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SOURCE SEPARATION 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

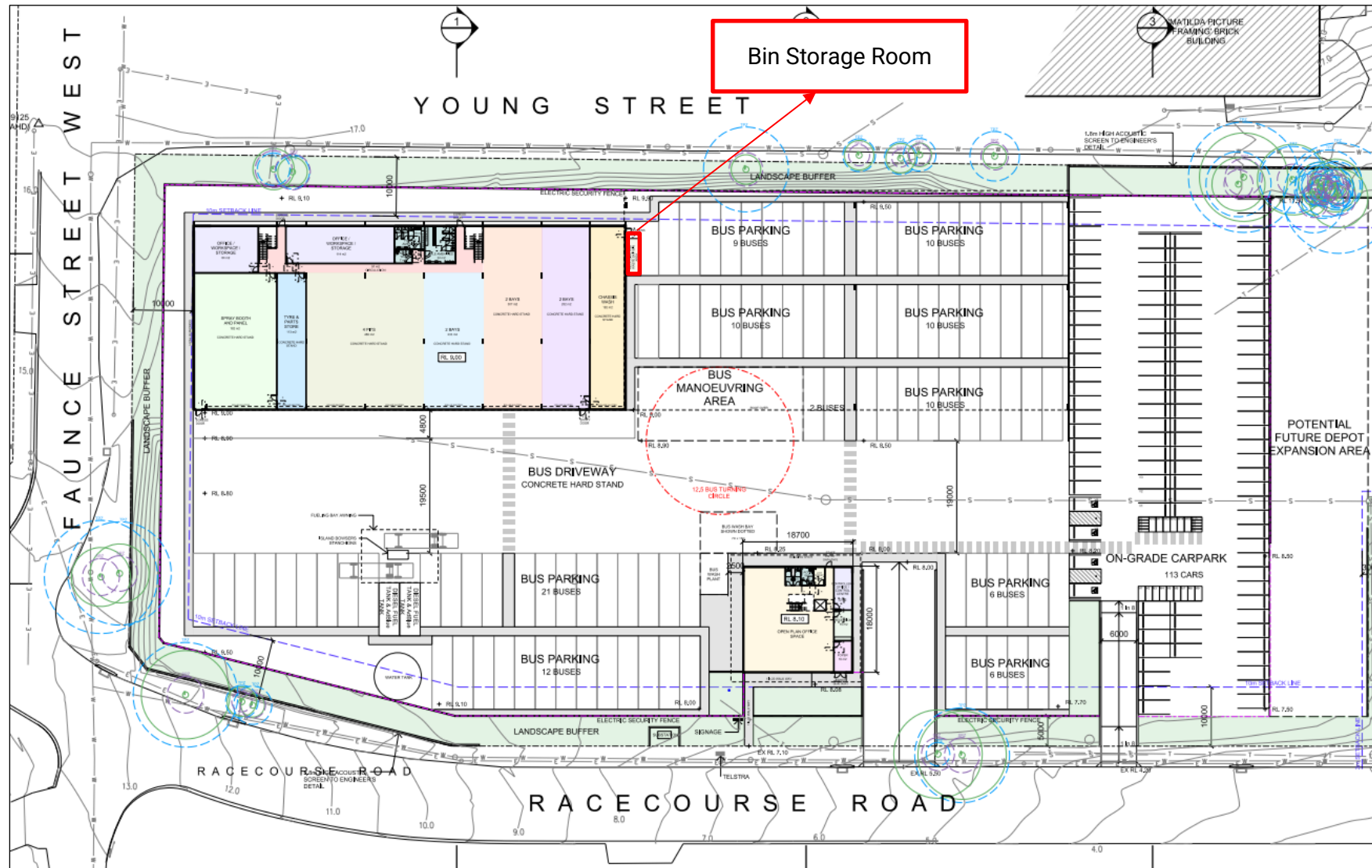
SULO	Ph: 1300 364 388	E: sales@sulo.com.au
OTTO Australia	Ph: 02 9153 6999	

CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

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

APPENDIX: A.1 SITE PLAN



Source: Dem, Drawing number: ar-0200, Rev 03, 14/12/2022, Site 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

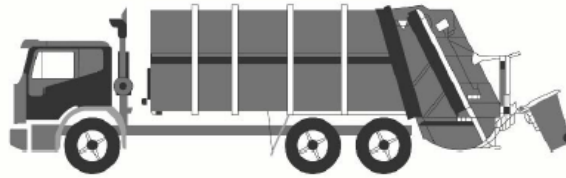
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0	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

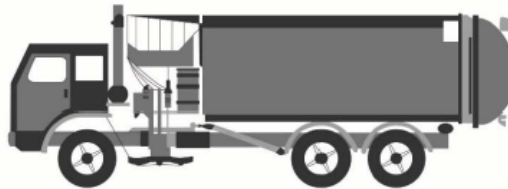
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



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