



Jindabyne Education Campus  
207 Barry Way, Jindabyne NSW 2627  
Educational Development

## OPERATIONAL WASTE MANAGEMENT PLAN

9/11/2021  
Report No. SO1094  
Revision E

Client

---

### School Infrastructure NSW

Level 8, 259 George Street, Sydney NSW 2000  
[www.schoolinfrastructure.nsw.gov.au](http://www.schoolinfrastructure.nsw.gov.au)  
T 1300 482 651 • E [schoolinfrastructure@det.nsw.edu.au](mailto:schoolinfrastructure@det.nsw.edu.au)

Architect

---

### DJRD Architects Pty Ltd

63 Myrtle Street, Chippendale NSW 2008  
<https://djrd.com.au>  
T 02 9319 2955 • E [studio@djrd.com.au](mailto:studio@djrd.com.au)

**ELEPHANTS FOOT RECYCLING SOLUTIONS • ABN 70 001 378 294**  
44-46 Gibson Ave Padstow NSW 2211  
[www.elephantsfoot.com.au](http://www.elephantsfoot.com.au)

T +612 9780 3500 • F +612 9707 2588  
E [wmp@elephantsfoot.com.au](mailto:wmp@elephantsfoot.com.au)

## REVISION REFERENCE

Revision	Date	Prepared by	Reviewed by	Description
A	22/06/2021	D Trinder	A Armstrong	Draft
B	08/07/2021	D Trinder	A Armstrong	Updated Draft
C	22/07/2021	D Trinder	A Armstrong	Final
D	10/08/2021	D Trinder	A Armstrong	Final updated
E	09/11/2021	D Trinder	A Armstrong	Updated plans

The information contained in this document produced by Elephants Foot Recycling Solutions (EFRS) is solely for the use of the client identified on the cover sheet for the purpose for which it has been prepared for. EFRS undertakes no duty, nor accepts any responsibility for any third party who may rely upon this document. Reproduction, publication or distribution of this document without written permission from EFRS is strictly prohibited.

## TABLE OF CONTENTS

TABLE OF FIGURES.....	iv
LIST OF TABLES.....	iv
GLOSSARY OF ABBREVIATIONS AND TERMS .....	i
1.0 INTRODUCTION.....	3
1.1 SCOPE OF REPORT .....	3
1.2 REPORT CONDITIONS.....	4
2.0 LEGISLATION & GUIDANCE.....	5
2.1 COUNCIL OBJECTIVES.....	5
3.0 DEVELOPMENT OVERVIEW .....	6
3.1 SITE DESCRIPTION .....	7
4.0 EDUCATION CAMPUS WASTE MANAGEMENT .....	9
4.1 WASTE GENERATION ESTIMATES.....	9
4.2 BIN SUMMARY .....	9
4.3 WASTE DISPOSAL PROCEDURES .....	10
4.4 WASTE COLLECTION PROCEDURES .....	10
4.5 OTHER WASTE MANAGEMENT CONSIDERATIONS .....	10
4.5.1 KITCHEN, OFFICE TEA ROOMS AND FOOD PREPARATION AREAS .....	10
4.5.2 BATHROOMS.....	10
4.5.3 PRINTING & PHOTOCOPYING ROOMS .....	10
4.5.4 FOOD WASTE.....	10
4.5.5 BULKY & SPECIAL WASTE .....	11
4.5.6 LIQUID WASTE .....	11
4.5.7 PROBLEM WASTE.....	11
5.0 STAKEHOLDER ROLES & RESPONSIBILITIES .....	12
6.0 SOURCE SEPARATION .....	13
7.0 EDUCATION .....	14
7.1 SIGNAGE .....	14
7.2 POLLUTION PREVENTION .....	14
8.0 WASTE ROOMS .....	15
9.0 BIN MOVING PATHS .....	16
9.1 CONSTRUCTION REQUIREMENTS.....	17
10.1.1 ADDITIONAL CONSIDERATIONS .....	17
11.0 USEFUL CONTACTS .....	18
APPENDIX A: ARCHITECTURAL PLANS .....	19
APPENDIX A.1 GROUND FLOOR PLAN.....	20
APPENDIX B: PRIMARY WASTE MANAGEMENT PROVISIONS.....	21
APPENDIX B.1 TYPICAL BIN SPECIFICATIONS.....	22

APPENDIX B.2 SIGNAGE FOR WASTE & RECYCLING BINS ..... 23

APPENDIX B.3 TYPICAL COLLECTION VEHICLE INFORMATION..... 25

APPENDIX C: SECONDARY WASTE MANAGEMENT PROVISIONS ..... 27

APPENDIX C.1 TYPICAL WORM FARM SPECIFICATIONS..... 28

APPENDIX C.2 TYPICAL COOKING OIL CONTAINERS ..... 29

APPENDIX C.3 TYPICAL SOURCE SEPARATION BINS FOR COMMERCIAL USE ..... 30

## TABLE OF FIGURES

Figure 1. Site Location ..... 6

Figure 2. Site Aerial ..... 8

## LIST OF TABLES

Table 1: Estimated Waste and Recycling Volumes ..... 9

Table 2: Stakeholder Roles and Responsibilities..... 12

Table 3: Operational Waste Streams ..... 13

Table 4: Waste Room Areas ..... 15

Table 5: Waste Room Requirements ..... 15

## GLOSSARY OF ABBREVIATIONS AND TERMS

<b>TERM</b>	<b>DESCRIPTION</b>
<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

## **OPERATIONAL WASTE MANAGEMENT PLAN**

---

<i>SRV</i>	Small Rigid Vehicle described by AS 2890.2-2002 Parking facilities – Off-street commercial vehicle facilities
<i>WHS</i>	Workplace Health and Safety
<i>Wheel-in wheel-out service</i>	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

## 1.0 INTRODUCTION

This Operational Waste Management Plan accompanies an Environmental Impact Statement (EIS) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act) in support of an application for a State Significant Development (SSD No 15788005). The SSDA is for a new education campus at Jindabyne, comprising of a new primary and high school, located at the Jindabyne Sport and Recreation Centre (JSRC).

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) addresses the Secretary's Environmental Assessment Requirements (SEARs), notably:

- Identify, quantify and classify the likely waste streams to be generated during operation.
- Provide the measures to be implemented to manage, reuse, recycle and safely dispose of this waste.
- Identify appropriate servicing arrangements (including but not limited to, waste management, loading zones, mechanical plant) for the site.

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 has been provided separately by EFRS.

## 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.

## 2.0 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:

- Snowy River Development Control Plan 2013
- Snow River Local Environmental Plan 2013

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:

- Snowy River Development Control Plan 2013
- 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

Council considers waste management to be highly important for the protection and enhancement of both the natural and built environments. A such, Council's objectives via the Snowy River Development Control Plan are:

- Encourage best practice in waste management that minimises waste generation, facilitates waste separation and maximises reuse and recycling.
- Ensure quality design of waste management facilities that complement the building design and minimise noise, odour and visual impacts on adjacent uses and the public domain.
- Ensure sufficient, accessible and efficient waste storage, recycling and collection areas in all development.
- Assist in achieving Federal and State targets for waste minimisation and resource recovery.
- Minimise the overall environmental impacts of waste in line with the principles of Ecologically Sustainable Development (ESD).

### 3.0 DEVELOPMENT OVERVIEW

The proposed development is for the construction of the Jindabyne Education Campus comprising a new primary school and a new high school at Jindabyne (the proposal). The proposal is located within the JSRC located at 207 Barry Way (the site) and will accommodate approximately 925 students with the capacity for expansion in the future.

The new primary school will be located generally in the northern portion of the site whilst the new high school will be to the south of the site with a common visitor entry point to co-located school administration facilities. While the schools are inherently separate identities, with separate student entries, opportunities for integration are provided in a central shared plaza, as identified in Figure 1 below. This outdoor learning space is activated by the school canteen (shared) and separate core facilities including the primary school hall and library, and the high school gym and library, and provides opportunities for shared community use.

The new primary school will provide for a Core 21 school. This will comprise of 20 home base units and 2 support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, out of school care facilities, library and special programs. Landscaped areas include active and passive open space play areas, and a games court.

The new high school will provide for a stream 2 high school. This is to comprise of 20 general/specialised learning spaces and support learning units, administration and staff facilities, covered outdoor learning area (COLA), hall, staff and student amenities, library, an agricultural learning unit. Landscaped areas include active and passive open space play areas, a sports field and multipurpose games courts.

A new access driveway is proposed off Barry Way Road along the western boundary of the site and includes car parking, bus and private vehicle drop-off zones, and delivery zones.

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

Figure 1. Site Location



Source: DJRD Architects, Proposed Site Plan

### 3.1 SITE DESCRIPTION

The site of the proposed new education campus at Jindabyne is located within the western extent of the existing JSRC at 207 Barry Way (101 DP1019527). The site is located within the Snowy Monaro Regional Council local government area and is approximately 2.2km south of the Jindabyne town Centre. A site aerial is provided in Figure 2.

The site is approximately 9ha in size, containing a former golf course and three existing workers cottages which were occupied during the construction of the Snowy Hydro Scheme. The site is undeveloped and contains scattered trees. Much of the surrounding land comprises remnant grassland, woodland and agricultural land.

As identified above, the site is within the existing JSRC which is a high performance and community sport centre located directly east of the site. The JSRC has a range of sporting facilities including a synthetic running track, cycling track, netball and tennis courts, fitness and indoor sports centres, and sporting ovals, as well as other services and accommodation facilities. The newly constructed BMX track is located directly east of the site with the new ski jump currently under construction to the northeast.

TAFE NSW have recently lodged a development application for a Connected Learning Centre (CLC) and Mobile Training Unit (MTU) which is proposed to the south of the site. The CLC and MTU will utilise interactive, digitally enabled, flexible, and multipurposed learning environments to provide high-quality training and learning experiences accommodating a maximum of 20-25 students and 3 teachers.

The surrounding locality is generally rural in character with other land uses also including the Jindabyne Aero Club located to the west of the site on Tinworth Drive, an industrial area to the southwest and the Jindabyne Community recycling centre is located east of the JSRC.

Figure 2. Site Aerial



Source: DJRD Architects, Site aerial

## 4.0 EDUCATION CAMPUS 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

The NSW EPA’s *Better practice guide for resource recovery in residential developments 2019* (The Better Practice Guide) has been referenced to calculate the total number of bins required for the school. Calculations are based on generic figures, and waste generation rates may differ according to actual waste management practices. The waste and recycling generation rates from The Better Practice Guide have been adapted to reflect litres per 100m<sup>2</sup> per day.

The following table shows the estimated volume (L) of general waste and recyclables that will be generated as well as recommended bin numbers for the site. It is assumed that all operations within the site will share waste bins, storage rooms, and the collection service.

The following estimates are based on a five-day operating week.

*Table 1: Estimated Waste and Recycling Volumes*

# Students		General Waste Generation Rates (L/student/day)	Generated Garbage (L/week)	Recycling Generation Rate (L/student/day)	Generated Recycling (L/week)
Primary	515	15	386.25	20	515
Secondary	400	20	400	15	300
Type	NLA (m <sup>2</sup> )	General Waste Generation Rates (L/100m <sup>2</sup> /day)	Generated Garbage (L/week)	Recycling Generation Rate (L/100m <sup>2</sup> /day)	Generated Recycling (L/week)
HS Gym	764	20	764	15	573
Semi-Commercial Kitchen	129	150	967.5	75	483.75
OSHC Kitchen	20	150	150	75	75
Canteen	69	150	517.5	75	258.75
Offices	528	10	264	15	396
<b>TOTAL</b>	<b>982</b>		<b>3449.25</b>		<b>2601.5</b>
Bins & Collections	General Waste Bin Size (L)		1100	Recycling Bin Size (L)	
	General Waste Bins Per Week		4	Recycling Bins Per Week	
	General Waste Collections per Week		2	Recycling Collections per Week	
	Total General Waste Bins Required		<b>2</b>	Total Recycling Bins Required	

### 4.2 BIN SUMMARY

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

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

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

Bin sizes, quantities, and/or collection frequencies may be modified by the building manager 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.

### 4.3 WASTE DISPOSAL PROCEDURES

Suitably labelled waste, recycling and food bins (optional) will be placed in each room throughout the campus. Garbage and recycling receptacles should be provided in convenient locations and areas of high traffic and waste generation.

Students, staff and visitors will be responsible for placing their waste and recycling into the correct receptacles. The fullness of the source separation bins will be monitored by building management and cleaners.

Cleaners will circulate throughout the campus after hours and empty the waste, recycling and food waste receptacles throughout the school. Cleaners will then transport the waste and recycling to the bulk bins in the waste holding room and dispose into the appropriate bins. Food waste will be taken to the agricultural area and disposed of accordingly.

### 4.4 WASTE COLLECTION PROCEDURES

A council or private contractor collection vehicle will be engaged to service the waste and recycling bins per an agreed schedule. On the day of service, a council or private contractor waste collection vehicle will enter the site from Barry Way and park in front of the waste holding room. The waste caretaker/facilities manager will provide the driver with access to the waste holding room. Once the bins are serviced, the collection vehicle will exit the site onto Barry Way in a forward direction.

### 4.5 OTHER WASTE MANAGEMENT CONSIDERATIONS

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

#### 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, a recycling bin and a food waste 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 FOOD WASTE

During daily operations staff will be responsible for the collection of food waste back of house. At the end of the day, nominated staff or cleaners will bring the food waste bins to the central food waste area for collection. The building management will be responsible for the management of food waste. It is recommended that food waste be utilised in the agricultural area as feed for animals and/or compost to be used on the gardens. Segregating food waste from the general waste stream may also reduce the number of general waste bins collected each week.

#### 4.5.5 BULKY & SPECIAL WASTE

It is recommended that a room or caged area be made available for the storage of discarded bulky items and special waste for recycling, such as e-waste and chemical waste. This room should have a minimum doorway width of 1.5m to allow for easy movement of large waste items in and out of the room. It is recommended that the bulky waste room is at least 8m<sup>2</sup> for this development.

#### 4.5.6 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. A trade waste application must be made to Council under section 68 of the Local Government Act when liquid waste is proposed to be discharged to Council's sewer.

#### 4.5.7 PROBLEM WASTE

The building manager 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. Retail and Commercial tenants will need to liaise with the building manager when disposing of problem waste streams.

Problem waste streams include:

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

## 5.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

Table 2: Stakeholder Roles and Responsibilities

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

## 6.0 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
<b>General Waste</b>	The remaining portion of the waste stream that is not recovered for reuse, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc.	Landfill	Waste should be bagged before placing in the designated waste bins.
<b>Recycling</b>	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 cardboard bin.
<b>Secure Documents</b>	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.
<b>Green Waste</b>	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.
<b>Food Waste</b>	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.
<b>Electronic Waste</b>	Discarded e-waste, electronic components and materials such as computers, mobile phones, keyboards, etc.	Resource Recovery Centre	Campus manager arranges collection for e-waste recycling as needed.
<b>Bulky Items</b>	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	Staff coordinate with Facilities Manager for storage of bulky items in an appropriate manner. Facilities Manager arranges with Council for removal on an as-needed basis.
<b>Sanitary Waste</b>	Feminine hygiene waste generated from female bathrooms.	Incineration or Landfill	Sanitary bins are serviced by sanitary waste contractor.
<b>Other</b>	Other recyclable items that require special recovery may include ink cartridges, batteries, chemical waste, fluorescent tubes, etc.	Resource Recovery Facility	Waste/Facilities Manager arranges collection by appropriate recycling services when required.

## 7.0 EDUCATION

Educational materials encouraging correct separation of general waste and recyclables must be provided to students, staff and contractors. 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 facilities manager 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

Facilities 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

## 8.0 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 4: Waste Room Areas*

Level	Waste Room Type	MGBs	Estimated Area Required (m <sup>2</sup> )	Actual Area Provided (m <sup>2</sup> )
G	Waste Holding Area PS	1 x 1100L MGB general waste 1 x 1100L MGB recyclables	6*	11.73
G	Waste Holding Area HS	1 x 1100L MGB general waste 1 x 1100L MGB recyclables	6*	11.73

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.

\*As the current Jindabyne Central School has an approximate capacity of 800 students at any one time, and is collecting up to 4 x 1100L MGBs twice weekly, it is recommended that greater capacity be given to the waste holding rooms to allow for current actual waste generation rates, and future-proofing for the expansion of the school. It is therefore recommended that the waste holding rooms be at least 10m<sup>2</sup> to allow for the future growth of the school.

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

*Table 5: Waste Room Requirements*

Waste Room Type	Waste Room Requirements
Waste Holding Areas	<ul style="list-style-type: none"> <li>Bins should be arranged so that all bins are accessible. Bins are not be placed in front another or in such away as to restrict access to the other bins for use.</li> </ul>

## 9.0 BIN MOVING PATHS

The building 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 must assess manual handling risks and provide any relevant documentation to key personal.

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 developer is responsible for suppling 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.

Once the site is operational (and the developers is no longer involved) the building proprietors/strata will be responsible for maintaining, repairing and replacing waste management equipment.

## 9.1 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Snowy River Development Control Plan 2013*, 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.

### 10.1.1 ADDITIONAL CONSIDERATIONS

- Waste room to be designed to ensure there is no contamination by snow (particularly if above the 1500m snow-line);
- 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/m<sup>2</sup> 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.

## 11.0 USEFUL CONTACTS

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

### LOCAL COUNCIL

---

Snowy Monaro Customer Service Ph: 1300 345 345 E: [council@snowymonaro.nsw.gov.au](mailto:council@snowymonaro.nsw.gov.au)

### PRIVATE WASTE COLLECTION PROVIDER

---

Capital City Waste Services	Ph: 02 9599 9999	E: <a href="mailto:service@ccws.net.au">service@ccws.net.au</a>
Remondis	Ph: 02 9032 7100	
Suez Environmental	Ph: 13 13 35	
Wastewise NSW	Ph: 1300 550 408	E: <a href="mailto:admin@wastewise.com.au">admin@wastewise.com.au</a>

### BIN MOVING DEVICE SUPPLIERS

---

Electrodrive	Ph: 1800 333 002	E: <a href="mailto:sales@electrodrive.com.au">sales@electrodrive.com.au</a>
Sitecraft	Ph: 1300 363 152	E: <a href="mailto:sales@sitecraft.com.au">sales@sitecraft.com.au</a>
Spacepac	Ph: 1300 763 444	

### ORGANIC DIGESTERS AND DEHYDRATORS

---

Closed Loop	Ph: 1300 762 166	
Orca		E: <a href="mailto:contact.australia@feedtheorca.com">contact.australia@feedtheorca.com</a>
Soil Food	Ph: 1300 556 628	
Waste Master	Ph: 1800 614 272	E: <a href="mailto:hello@wastemasterpacific.com.au">hello@wastemasterpacific.com.au</a>

### COOKING OIL CONTAINERS AND DISPOSAL

---

Auscol	Ph: 1800 629 476	E: <a href="mailto:sales@auscol.com">sales@auscol.com</a>
--------	------------------	---

### ODOUR CONTROL

---

Purifying Solutions	Ph: 1300 636 877	E: <a href="mailto:sales@purifyingsolutions.com.au">sales@purifyingsolutions.com.au</a>
---------------------	------------------	---

### SOURCE SPERATION BINS

---

Source Separation Systems	Ph: 1300 739 913	E: <a href="mailto:info@sourceseparationsystems.com.au">info@sourceseparationsystems.com.au</a>
---------------------------	------------------	---

### MOBILE GARBAGE BINS, BULK BINS AND BIN EQUIPMENT

---

SULO	Ph: 1300 364 388	E: <a href="mailto:sales@sulo.com.au">sales@sulo.com.au</a>
OTTO Australia	Ph: 02 9153 6999	

### CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

---

Elephants Foot Recycling Solutions	Ph: 1800 025 073	E: <a href="mailto:info@elephantsfoot.com.au">info@elephantsfoot.com.au</a>
------------------------------------	------------------	---

## APPENDIX A: ARCHITECTURAL PLANS

APPENDIX A.1 GROUND FLOOR PLAN



Source: DJRD Architects, Drawing No. SSDA.0202 Rev G, Ground Floor Plan, 29.06.2021

Key	
	Waste Holding Rooms

## 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 <sup>2</sup> )	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 <sup>2</sup> )	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 & 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](http://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**

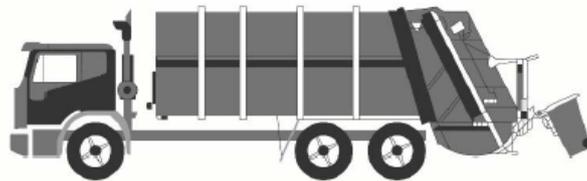
Vehicle type	Rear-loading	Side-loading*	Front-lift-loading	Hook truck	Crane truck
Length overall (m)	10.5	9.6	11.8	10.0	10.0
Width overall (m)	2.5	2.5	2.5	3.0	2.5
Travel height (m)	3.9	3.6	4.8	4.7	3.8
Operational height for loading (m)	3.9	4.2	6.5	3.0	8.75
Vehicle tare weight (t)	13.1	11.8	16.7	13.0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

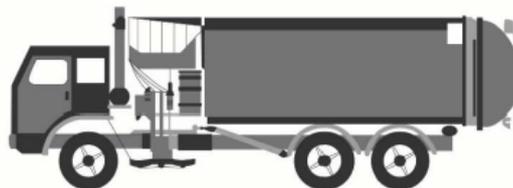
These vehicles are commonly used for domestic waste collections from MUDs and RFBs and sometimes for recycling. They can be used to collect waste stored in mobile bins or bulk bins, particularly where bins are not presented at the kerbside. They are also used for collecting bulky waste.



**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 C: SECONDARY WASTE MANAGEMENT PROVISIONS

## APPENDIX C.1 TYPICAL WORM FARM SPECIFICATIONS

### Worm farms



Worm farms or vermiculture systems transform food and other organic material into vermicast (worm compost) and vermi-liquid (liquid extraction from a worm farm). Seafood, seafood shells, meat or bones, and dairy products are not an acceptable part of the worms' diet and should not be applied to these systems. Worm farms can occupy a small footprint and be located on balconies or in gardens. The worm farm should be placed in a sheltered position to avoid getting too hot in summer.

Worm farms come in different sizes and designs and are sold through hardware stores and often at local government offices. Medium and large-scale worm farms can service many households and commercial activities. These larger systems need a management process to ensure they are properly maintained.

### Onsite composting



Compost tumblers and bins and compost bays transform food and other organic material into useful soil enhancer (compost). They are more versatile than worm farms as they can generally process a wider range of materials, including woody garden organics and can be placed in the sun. A variety of compost bins and tumblers are available from hardware stores or some local councils. There are also various online resources on how to construct them using recycling materials such as timber pallets. The footprint area requirement for a typical single household compost bin is about 1m x 1m x 1m.

Before setting up an onsite composter or worm-farm system, check with council for any local requirements such as setback distances from property boundaries.

*SOURCE: Better practice guide for resource recovery in residential developments 2019, NSW Environmental Protection Authority*

**APPENDIX C.2 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.3 TYPICAL SOURCE SEPARATION BINS FOR COMMERCIAL USE



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