



Campbelltown Arts Centre  
1 Art Gallery Rd, Campbelltown NSW  
State Significant Development Application.

## OPERATIONAL WASTE MANAGEMENT PLAN

24/04/2026  
Report No. 707905  
Revision F

Client

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Francis-Jones Carpenter Pty Ltd

Architect

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Fjc Studio

<https://fjcstudio.com/>

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## GLOSSARY OF ABBREVIATIONS AND TERMS

| TERM                                 | DESCRIPTION                                                                                                                                                                                                                      |
|--------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Bin-Carting Route</i>             | Travel path for transporting bins from their allocated storage location to the nominated collection point                                                                                                                        |
| <i>Bin Mover</i>                     | Either a handheld device (commonly referred to as a bin tug) or a ride-on device (typically a tractor or Class C vehicle with an attached bin trailer) used to facilitate the movement of bins across long distances or up ramps |
| <i>Collection Area/Point</i>         | Designated area or point where bins are loaded onto the collection vehicle for servicing                                                                                                                                         |
| <i>Communal Bin Room</i>             | A central, shared bin room accessible to all residents or staff to dispose of their waste stream                                                                                                                                 |
| <i>DA</i>                            | Development Application                                                                                                                                                                                                          |
| <i>DCP</i>                           | Development Control Plan                                                                                                                                                                                                         |
| <i>EPA</i>                           | Environment Protect Authority                                                                                                                                                                                                    |
| <i>FOGO</i>                          | Food Organics and Garden Organics                                                                                                                                                                                                |
| <i>General Waste</i>                 | All non-recyclable and non-hazardous waste that is sent to landfill                                                                                                                                                              |
| <i>HRV</i>                           | Heavy Rigid Vehicle                                                                                                                                                                                                              |
| <i>L</i>                             | Litre                                                                                                                                                                                                                            |
| <i>LEP</i>                           | Local Environmental Plan                                                                                                                                                                                                         |
| <i>Mobile Bins</i>                   | Containers with a capacity up to and including 1100L designed to be collected by a rear-loading vehicle                                                                                                                          |
| <i>MRV</i>                           | Medium Rigid Vehicle                                                                                                                                                                                                             |
| <i>Onsite Collection</i>             | A collection arrangement whereby all bins are serviced by a collection vehicle within the property boundary, either in the building's basement or at grade and off-street.                                                       |
| <i>Owners Corporation</i>            | An organisation or group of persons that is identified by a particular name and that acts, or may act, as an entity                                                                                                              |
| <i>Recycling</i>                     | Waste stream that combines all recycling, including comingled recycling, paper/cardboard and metals.                                                                                                                             |
| <i>Source Separation Receptacles</i> | Communal containers used throughout the development for the day-to-day disposal of different waste streams                                                                                                                       |
| <i>SRV</i>                           | Small Rigid Vehicle                                                                                                                                                                                                              |
| <i>Waste Stream</i>                  | A classification used to describe waste of a particular type (eg. food waste stream)                                                                                                                                             |
| <i>WHS</i>                           | Workplace Health and Safety                                                                                                                                                                                                      |

## 1.0 ACKNOWLEDGEMENT OF COUNTRY

Elephants Foot Consulting (EFC) acknowledges that every project we work on takes place on First Peoples land. We recognise Aboriginal and Torres Strait Islander People as Traditional Custodians of this land. We pay respect to ancestors and Elders, past and present.

## 2.0 INTRODUCTION

Elephants Foot Consulting (EFC) has been engaged to prepare the following Operational Waste Management Plan (OWMP) to satisfy the conditions of the State Significant Development Application (SSDA) for the development located at Campbelltown Arts Centre, 1 Art Gallery Rd, Campbelltown NSW.

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

- i. **Promote responsible source separation** to reduce the amount of waste that goes to landfill by implementing convenient and efficient waste management systems.
- ii. **Ensure adequate waste and recycling provisions and procedures** are established 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 OWMP identifies and details the following components:

- Waste streams expected to be generated onsite and anticipated volumes;
- Suitable bin sizes and quantities;
- Waste and recycling disposal procedures;
- Bin room size estimations and equipment recommendations; and
- Waste collection strategies, locations and frequencies.

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

### 2.1 SCOPE OF REPORT

This 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.

## 2.2 REPORT CONDITIONS

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

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

### 3.0 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. At the local level, councils or Local Government Areas (LGAs) require OWMPs to be included in new development applications.

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:

- Campbelltown City Council: Volume 1 Development Controls for All Types of Developments: Part 6 Commercial Development
- NSW Better Practice Guide For Resource Recovery In Residential Developments 2019
- NSW Better Practice Guidelines for Waste Management and Recycling in Commercial and Industrial Facilities 2012
- NSW Waste Avoidance and Resource Recovery (WARR) Strategy 2014-2021
- NSW Waste and Sustainable Materials Strategy 2041
- NSW Waste Classification Guidelines 2014
- Australia's National Waste Policy 2018

## 4.0 INTRODUCTION

This Operational Waste Management Plan (OWMP) prepared by EFC on behalf of Campbelltown City Council is submitted to the Department of Planning, Housing and Infrastructure (DPHI) in support of a State Significant Development Application (SSDA) for the expansion of the existing Campbelltown Arts Centre (CAC) on land at 1 Art Gallery Road, Campbelltown (the site). This SSDA seeks approval for:

- Demolition of parts of the existing buildings and structures on site.
- Expansion and redesign of the existing CAC, including the following elements:
  - Reorientation of the building towards Queen Street in the north to create a more substantial, welcoming and visible connection to the City Centre.
  - Addition of a new 350 seat theatre with back of house facilities.
  - Providing rehearsal spaces, creative and educational workshop areas, and community facilities.
  - Provision of ancillary artists' residences.
  - Provision of commercial spaces including a café/restaurant, retail, and conference facilities.
  - Provision of expanded gallery spaces for the exhibition of artists' collections and dedicated storage for loaned artworks and collections.
- Landscaping works including provision of feature planting and paving.
- Expansion and reconfiguration of at grade car parking.
- Extension and augmentation of services and infrastructure as required.

For a further detailed project description, please refer to the Environmental Impact Statement prepared by Colliers Urban Planning, the Architectural Drawings prepared by fjcstudio, and the other accompanying technical documents that form part of the State Significant Development Application.

### 4.1 THE SITE

The site is located at 1 Art Gallery Road, Campbelltown and is legally identified as Lot 500 DP777387, Lot B DP157318, Lot 1 DP1038779, Lot 2 DP259807 and Lot 3 DP259807, as illustrated in the Site Aerial at **Figure 1**. It is situated within the Campbelltown local government area (LGA) immediately southwest of the Campbelltown City Centre and railway station. The existing development on site consists of the current Campbelltown Arts Centre, characterised by a double storey built form with open space and an at-grade carpark.

The site is bounded by Art Gallery Road to the west, Narellan Road to the south, Oxley Street to the east and Camden Road to the north. The northern part of the site is separated from the southern portion by Art Gallery Road as shown in **Figure 1**. The site comprises a total site area of approximately 18,877m<sup>2</sup>.



 The Site      (1) LOT 500/DP 777387      (2) LOT B/DP 157318      (3) LOT 1/DP 1038779      (4) LOT 2/DP 259807      (5) LOT 3/DP 259807      (NOT TO SCALE)

Figure 1 Site Aerial

Source: Nearmap / Colliers Urban Planning

## 4.2 RELEVANT SEAR TO THIS REPORT

This OWMP has been prepared in response to the Secretary's Environmental Assessment Requirements (SEARs) for the proposed development dated 7 August 2024 for SSD-74509208. Specifically, this report has been prepared to respond to those SEARs outlined in **Table 1** below.

Table 1: Secretary's Environmental Assessment Requirements relevant to this Report

| SEAR                        | SEAR Description                                                                                                                                                  | Section this is addressed and summary of response |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>18. Waste Management</b> | <i>Identify, quantify and classify the likely waste streams to be generated during construction and operation.</i>                                                | Section 5.1, 5.2 and 5.5.                         |
|                             | <i>Provide the measures to be implemented to manage, reuse, recycle and safely dispose of waste in accordance with any council waste management requirements.</i> | Sections 5.3 & 5. 5.                              |
|                             | <i>Identify appropriately sited waste storage areas, collection access paths/roads, and appropriate servicing arrangements for the site.</i>                      | Sections 5.4 and 12.                              |
|                             | <i>If buildings are proposed to be demolished or altered, provide a hazardous materials survey.</i>                                                               | Refer to Hazardous Materials Survey.              |

### 4.3 ESD PATHWAY

This OWMP meets the specific SEARs conditions that is required for the waste. The intent of this objective is to ensure the building is appropriately designed and managed to support best-practice waste minimisation and resource recovery outcomes, aligning with the project's bespoke ESD pathway rather than formal Green Star certification.

#### 4.1 Pre-building audit

For projects located on sites with existing infrastructure, a pre-building audit should be undertaken to identify materials and components that can be salvaged, reused, or donated prior to demolition or construction.

#### 4.2 Responsible construction

- The builder or head contractor is to implement an environmental management system to manage environmental impacts during construction activities.
- An environmental management plan should be in place outlining how construction impacts will be monitored and mitigated.
- Construction and demolition waste should achieve high diversion rates from landfill, with contractors using facilities that provide transparent and verifiable waste reporting.
- The head contractor should provide training to staff and subcontractors on the project's sustainability targets, including waste-related objectives.

#### 4.3 Responsible resource management

- Waste storage and collection systems must be designed to enable safe, efficient separation and recovery of operational waste streams.
- The building should accommodate the collection of multiple separated waste streams (minimum of five) and include dedicated infrastructure for recyclables and food organics.
- Waste storage areas are to be appropriately sized for projected volumes.
- Safe, direct, and efficient access must be provided for both building occupants and waste collection contractors.

#### 4.4 Operational Waste Management Plan implementation

For all controlled or specialist waste types expected during building operations (e.g., batteries, pesticides, lamps, mercury-containing equipment, and electronic waste), an operational Waste Management Plan should be developed and implemented. The plan is to include:

- Defined roles, responsibilities, and contracted service providers for implementing the plan.
- Identification of waste sources estimated waste generation rates, and waste minimisation strategies.
- Collection strategies for each waste stream, ensuring they are separately contained in clearly labelled receptacles and removed from the building within appropriate timeframes.
- Protocols for managing spills or breakages involving hazardous materials (e.g., mercury, pesticide residues, battery electrolyte).
- Processes for measuring, tracking, and reporting waste stream performance over time.

Table 2: ESD Pathway

| Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Operational Waste Management Plan (OWMP) Overview                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1 Collection of Separate Waste Streams</b></p> <p>The building must provide bins or storage containers to building occupants to enable them to separate their waste. These bins must be labelled and easy to access, and evenly distributed throughout the building. They must also allow for separating the following as a minimum:</p> <ul style="list-style-type: none"> <li>• General waste going to landfill.</li> <li>• Recycling streams to be collected by the building's waste collection service, including:               <ul style="list-style-type: none"> <li>• paper and cardboard</li> <li>• glass</li> <li>• plastic</li> </ul> </li> <li>• One additional waste stream identified by the project team. This may include collecting any of the following waste types: organics, e-waste, batteries etc.</li> </ul> <p>Any other single waste stream (except food waste) that is expected to represent more than 5% of total annual operational waste and resources (by volume) must also be included.</p>                                             | <p>Refer to the following sections in the OWMP:</p> <ol style="list-style-type: none"> <li>1. Section 5.2: Bin summary for general waste and recycling streams</li> <li>2. Sections 5.5.1 &amp; 5.5.2 Other waste streams representing more than 5% of total annual operational waste.</li> <li>3. Section 5.5.7 for future separation of current waste streams into additional waste streams</li> <li>4. Section 8. Education and signage of waste rooms and bin facilities across the student accommodation.</li> </ol>                                                                                                                                                            |
| <p><b>2 Dedicated Waste Storage Area</b></p> <p>A dedicated area, or areas, for the storage and collection of the applicable waste streams must be provided. The storage area must be sized to accommodate all bins or containers, for all applicable waste streams, for at least one collection cycle. The calculations used to demonstrate that the area provided is adequately sized to handle the recyclable waste streams specified must be based on:</p> <ul style="list-style-type: none"> <li>• Forecasted waste generated by occupants</li> <li>• Collection frequency for each waste stream</li> </ul> <p>The calculations for waste generation rates must be based on figures outlined within third-party best practice guidelines.</p> <p>The storage area(s) must have efficient and safe access by collection vehicles. This includes driveway access to the building, appropriate height clearances, any onsite roads and loading docks, and the storage areas themselves providing safe and easy access for bins to be emptied into collection vehicles.</p> | <p>Refer to the following sections in the OWMP:</p> <ol style="list-style-type: none"> <li>1. Section 5.2 for each resource recovery stream volumes and collection frequencies for best practice waste management</li> <li>2. Section 5.5.7 for future separation of current waste streams into additional waste streams.</li> <li>3. Section 12: Waste rooms, waste room areas and waste room requirements</li> <li>4. Section 5.1 for calculations for waste room areas for best practice waste management, including third-party best practice guidelines.</li> <li>5. APPENDIX A.1: Architectural set illustrating efficient and safe access for collection vehicles.</li> </ol> |
| <p><b>3 Signoff by Waste Specialist and/or Contractor</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <p><i>Contractor will certify that they have constructed the works in accordance with the designs.</i></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

|                                                                                                                                                                                                               |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <p>A waste specialist and/or contractor must sign-off on the designs to confirm they are adequately sized and located for the safe and convenient storage and collection of the waste streams identified.</p> |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

## 5.0 WASTE MANAGEMENT

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

### 5.1 WASTE GENERATION ESTIMATES

The Campbelltown City Council, Volume 1: Development Controls for All Types of Developments, Part 6 – Commercial Development has been referenced to determine the estimated quantity of bins required for the anticipated tenants. For food organics, the City of Sydney's *Guidelines for Waste Management in New Developments 2018* have been applied, as the Campbelltown DCP does not specify rates for organics. These rates are relevant to the current project and will be adopted to satisfy ESD requirements.

Calculations are based on generic generation rates. Actual volumes of waste and recycling may differ in operation according to the tenants' actual waste management practices. The following table shows the estimated volume (L) of general waste and recycling that will be generated by the commercial and retail tenants. Note: the Artist residences has been calculated in Table 3 as 'per bed' in lieu of GFA

Table 3: Estimated Waste and Recycling Volumes

| Tenancy                            | Tenancy Type                     | Floor Area (m <sup>2</sup> ) | General Waste Generation Rate (L/100m <sup>2</sup> /day) | Generated General Waste (L/week) | Recycling Generation Rate (L/100m <sup>2</sup> /day) | Generated Recycling (L/week) | FOGO Generation Rate (L/100m <sup>2</sup> /day) | Generated FOGO (L/week) |
|------------------------------------|----------------------------------|------------------------------|----------------------------------------------------------|----------------------------------|------------------------------------------------------|------------------------------|-------------------------------------------------|-------------------------|
| Café Commercial Café               | Café                             | 240                          | 100                                                      | 1680                             | 120                                                  | 2016                         | 100                                             | 5                       |
| Ceramics Workshop/Studio & Theatre | Cultural & Recreational Services | 1547                         | 5                                                        | 541                              | 10                                                   | 1083                         | 5                                               | 541                     |
| Offices/Conference                 | Offices                          | 1042                         | 10                                                       | 729                              | 15                                                   | 1094                         | 5                                               | 365                     |
| Retail                             | Retail: Other non-food           | 30                           | 50                                                       | 105                              | 100                                                  | 210                          | 5                                               | 11                      |
| Galleries                          | Showrooms                        | 2198                         | 10                                                       | 1539                             | 25                                                   | 3847                         | 5                                               | 769                     |
| Artist Residences                  | Accommodation                    | 3                            | 10                                                       | 210                              | 5                                                    | 105                          | 5                                               | 105                     |
| TOTAL                              |                                  | 5060                         |                                                          | 4804                             |                                                      | 8355                         |                                                 | 1796                    |
| Bins & Collections                 |                                  |                              | General Waste Bin Size (L)                               | 1100                             | Recycling Bin Size (L)                               | 1100                         | FOGO Bin Size (L)                               | 240                     |
|                                    |                                  |                              | General Waste Bins per Day                               | 0.6                              | Recycling Bins per Day                               | 1.1                          | FOGO Bins per Day                               | 1.1                     |
|                                    |                                  |                              | General Waste Collections per Week                       | 2                                | Recycling Collections per Week                       | 2                            | FOGO Collections per Week                       | 3                       |
|                                    |                                  |                              | <b>Total General Waste Bins Required</b>                 | <b>3</b>                         | <b>Total Recycling Bins Required</b>                 | <b>4</b>                     | <b>Total FOGO Bins Required</b>                 | <b>3</b>                |

## 5.2 BIN SUMMARY

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

**General Waste:** 3 x 1100L bins collected **3 x weekly.**

**Recycling:** 4 x 1100L bins collected **2 x weekly.**

Note: the Artist residences has been calculated in Table 3 as 'per bed' in lieu of GFA.

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 should also be considered.

A food organics stream and a battery waste stream (see section 5.5.1) will also be integrated into the waste management strategy of the site. The recommended bin quantities and collection frequencies are as follows:

**Food Organics:** 3 x 240L MGBs collected **3 x weekly.**

**Batteries:** Up to 20L receptacles, collected when required.

General waste and recycling can be further divided into more specific waste and recycling streams to increase resource recovery. The general waste stream can be separated into landfill waste, food organics and soft plastics recycling. The recycling streams can be further divided into glass recycling and refundable plastic containers.

It is recommended that the separation of waste streams further is conducted once the site is operational to best reflect the operations of the site and the proportion of each waste stream generated. It is also recommended that annual waste audits are conducted to help understand the composition and total volumes of each waste stream generated during operation.

## 5.3 WASTE DISPOSAL PROCEDURES

The building operators will be responsible for their own resource disposal procedures within their own vicinity/residences. On completion of each trading day or as required, nominated staff or contracted cleaners will transport all resource material to the bin storage room and place into the appropriate collection bins.

Each disposal point will be appropriately labelled with either 'general waste', 'recycling' and 'food organics' to ensure resource materials are placed into the correct receptacle. A receptacle will be provided on the ground floor for the disposal of the batteries stream. This will provide all guests and staff a common access point that is easy to locate.

The fullness of the source separation receptacles will be monitored and managed by the building operators and/or contract cleaners. The building operators and/or cleaners are responsible for transporting/rotating the resource bins, and decanting them into the bins provided within the main bin storage room when required.

## 5.4 WASTE COLLECTION PROCEDURES

A private waste contractor will be engaged to service all resource bins as per an agreed collection schedule. This report assumes the collection frequencies listed in section 5.2.

On the day of service, a private waste collection vehicle will enter the site from Art Gallery Road and park in the loading bay. The building caretaker will provide the driver with access to the bin storage room. Once the bins are serviced, the collection vehicle will exit the site onto Art Gallery Road in a forward direction.

## 5.5 OTHER WASTE MANAGEMENT CONSIDERATIONS

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

### 5.5.1 BATTERIES (ADDITIONAL STREAM)

A receptacle for batteries will be placed at the ground floor for guests and staff to dispose of. This receptacle will be frequently monitored by the building operators and contract cleaners. Once full (or during cleaning procedures), this receptacle will be disposed of via a private contractor.

*Figure 2: Examples of battery storage receptacles/bins.*



### 5.5.2 FOOD ORGANICS (RETAIL TENANCY)

During daily operations, the building operators will be responsible for the collection of food organics back of house. At the end of the day, nominated staff or cleaners will bring the food waste bins to the main bin storage area for collection. The building operators will be responsible for providing or food waste bins and collection service through a private contractor.

### 5.5.3 WASHROOM FACILITIES

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

### 5.5.4 PRINTING & PHOTOCOPYING ROOMS

It is recommended that rooms designed for printing or photocopying be provided with an area for the interim storage of paper receptacles, as well as separate receptacles for used toner and/or printer cartridges for recycling. The cleaners or nominated staff are responsible for monitoring these receptacles and ensuring that items are collected and recycled by an appropriate contractor.

### 5.5.5 LIQUID WASTE

Liquid wastes as such cleaning products, chemicals, paints, solvents, and motor and cooking oil will be stored in a secure room and enclosed by a low wall intended to contain any liquid spillage or inundation to other areas. Liquid waste will be drained to a grease trap, in accordance with legislation and the requirements of State government authorities and agencies. Further information can be provided by the Services Consultant.

### 5.5.6 PROBLEM WASTE

The building operators are responsible for making arrangements for the disposal and recycling of problem waste streams with an appropriate contractor. Problem wastes cannot be placed in the general waste stream as they can have adverse impacts to human health and the environment if disposed of in landfill.

Problem waste streams include:

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

### 5.5.7 FUTURE WASTE AND RECYCLING RESOURCE SEPARATION

To design each bin storage rooms and waste facilities on site, all possible waste and recycling streams have been grouped into 'general waste' and 'comingled recycling'. This is to ensure that the waste facilities have adequate capacity to manage total volumes of waste and recycling streams, regardless of the management of waste and recycling during operation.

Once the Arts Centre is operational, the building operators can choose to separate the general waste stream and the recycling streams and into more specific recyclable waste streams (i.e., splitting a normal recycling stream into container recycling and paper/cardboard recycling). This allows the site's waste management system to have greater potential to divert waste from landfill and contribute to wider environmental sustainability.

As more waste streams are separated, the more complex the waste management strategy will become. This is likely to increase operational costs, manual input of building operators and cleaners, as well as the level of engagement required by all stakeholders involved in waste management. Therefore, it is recommended that the decision to separate and manage any additional waste streams comes directly from the building operators once the Arts Centre is operational and is directed by the operational experience and needs of the development.

As identified in the NSW Department of Education *Educational Facilities Standards and Guidelines Requirement DG02 (2.7.2 Operational Waste)*, the waste streams that can be managed at universities are as follows:

- Food Organics and Garden Organics
- Co-Mingled Container Recycling
- Paper & Cardboard Recycling
- Container Deposit Scheme Recycling
- General Waste
- Other waste streams such as batteries, e-waste, coffee cups

The building operators can choose which waste streams are handled in the waste management strategy at any time by assessing the composition of waste and recycling generated in operation as well as the costs/benefits at that time.

The successful separation of the waste streams will be determined by the behaviour of the waste generators and the key personnel who look after the waste management systems on site. The managers of the waste system will be the building operators and contract cleaners.

The following points are the key responsibilities required for successful ongoing source separation of waste streams. These responsibilities should be taken into consideration when assessing whether to introduce the separation and management of additional waste streams.

#### **Responsibilities of the waste stream generator:**

- Correctly identify the waste type.
- Place the waste item into the correct bin.

Pending on waste item, partially dismantle waste item into different stream types (e.g. empty food waste into organics, lid into recycling and main container into landfill).

**Responsibilities of personnel managing the waste systems:**

- Provide source separation bins in convenient locations;
- Monitor contamination of waste streams;
- Organise contracts with collection and recycling services of all waste streams;
- Educate waste stream generators on an ongoing basis;
- Provide signage on all bins, and;
- Monitor and correct any issues.

If any additional waste stream is introduced during operation, the building operators would be responsible for setting up and maintaining the waste stream management procedures. This includes:

- The provision of appropriate source separation bins around the student accommodation at convenient locations.
- Update all waste related signage and waste management education material.
- The introduction of the collection bins of the waste stream in each bin storage room.
- The reduction to the number of bins (or size of bins) for the general waste or general recycling stream being diverted.
- Engaging a specialist contractor to collect the bins and recycle the waste stream.
- Ensuring the collection timetables minimise conflicts with the loading area.
- Educating all staff and students on the new procedures, including which items are accepted in each bin.

Separation of food organics and soft plastic recycling streams will reduce the volume of general waste. Therefore, it is assumed that the number of general waste bins would go down by the corresponding number of food waste bins and or/soft plastic bins.

Separation of items refundable under the container deposit scheme will reduce the volume of commingled recycling. Therefore, it is assumed that the number of commingled recycling bins would decrease by the corresponding number of refundable container bins introduced.

In addition, as identified in the NSW Department of Education's *Educational Facilities Standards and Guidelines Requirement DG02 (2.7.2 Operational Waste)*, during operation the University can implement measures to reduce the volumes of waste generated by:

- Examining all processes to determine where wastes are produced and to devise measure for waste prevention or reduction.
- Devising ways of recycling waste with students so they too can share in the savings (for example rewards for students who reduce waste).
- Partnering with other organisations to assist with waste minimisation.
- Keep track of changes and improvements
- Reusing drums, cartridges and containers where possible
- Selling or donating usable waste materials to other organisations.

## 6.0 STAKEHOLDER ROLES & RESPONSIBILITIES

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

*Table 4: Stakeholders and Responsibilities*

| Roles                                        | Responsibilities                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Building Operators or Waste Caretaker</b> | <ul style="list-style-type: none"> <li>• Co-ordinate the waste strategy within the site.</li> <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> <li>• Co-ordinate 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 bin storage areas.</li> <li>• Investigate and ensure prompt clean-up of illegally dumped waste materials.</li> <li>• Prevent storm water pollution by taking necessary precautions (secure bin rooms, prevent 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 prepare a manual handling control plan for bin transfers.</li> <li>• Ensure site safety for staff, children, visitors and contractors; and</li> <li>• Ensure effective signage, communication and education is provided to occupants, tenants, maintenance staff, and cleaning contractors.</li> </ul> |
| <b>Internal Operators</b>                    | <ul style="list-style-type: none"> <li>• Management co-ordinates own private contractor collections.</li> <li>• Manage general waste and recycling within their tenancy during daily operations.</li> <li>• Correctly separate general waste and recycling streams.</li> <li>• Flatten cardboard within the recycling bin.</li> <li>• If required, arrange for storing used and unused cooking oil in a bunded area,</li> <li>• Organise grease interceptor trap servicing, and</li> <li>• Ensure the suitable storage for chemicals, pesticides and cleaning products waste back of house.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Waste Collection Contractor</b>           | <ul style="list-style-type: none"> <li>• Provide a reliable and appropriate bin collection service.</li> <li>• Provide feedback to building managers/tenants regarding contamination of recyclables; and</li> <li>• Work with building managers to customise waste systems where possible.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Gardening/Landscaping Contractor</b>      | <ul style="list-style-type: none"> <li>• Remove all garden organics generated during gardening maintenance activities for recycling at an offsite location.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

## 7.0 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 5: 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 re-use, processing, or recycling. May include soft plastics, food scraps, polystyrene, etc.                                                                    | Landfill                             | General waste should be bagged before placing in in designated general 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.<br><br>Cardboard should be flattened before placing in the designated recycling bin. |
| <b>Garden Organics</b>   | Garden organics 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 garden organics from site during scheduled maintenance.                                                                                 |
| <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>Electronic Waste</b>  | Discarded e-waste, electronic components and materials such as computers, mobile phones, keyboards, etc.                                                                                                                           | Resource Recovery Centre             | Building management arrange for recycling of their own e-waste.                                                                                                                           |
| <b>Bulky Waste 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 | Building management are responsible for removal of their bulky items.                                                                                                                     |
| <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           | Building management arrange collection by appropriate recycling services when required.                                                                                                   |

## 8.0 EDUCATION

Educational material encouraging correct separation of general waste, recycling and FOGO must be provided to all members. This should include the correct disposal process for bulky waste such as unwanted furniture, large discarded items, and other materials including electronic and chemical wastes. It is recommended that building management ensures that information is provided in multiple languages to support correct behaviours, and to minimise the possibility of contamination in communal bins.

Education and communication must be provided consistently on a regular basis to encourage behaviour change and account for transient building personnel such as new tenants, or cleaning staff. Information should include:

- Descriptions of items accepted in the general waste and recycling streams (refer to Council guidance);
- How to dispose of bulky waste and any other items that are not general waste or recycling;
- Tenants' obligations to health and safety as well as building management; and
- How to prevent cross contamination among waste streams.

### 8.1 SIGNAGE

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

- Clear and correctly labelled 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.

Building management 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.

## 9.0 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

## 10.0 BIN WASHING

The bins will be cleaned by the building manager and or cleaners periodically to ensure hygiene and minimise odour. Bin washing can occur within the bin rooms, using the room clean down facilities (i.e. tap connection and drain). Alternatively, a specialist bin washing contractor can be engaged to clean the bins to an agreed schedule. The specialist bin contractor would collect the bins from the bin holding area and clean the bins with their specialised vehicle.

## 11.0 BIN MOVING PATHS

Minimal movement of bins is anticipated for this site, as bins are to be collected directly from their storage location. The building manager will be responsible for any transportation of bins that does occur.

Any 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 personal.

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.

## 12.0 WASTE ROOMS

The areas allocated for waste storage and collection areas are detailed in the table below and are estimates only.

Table 6: Waste Room Areas

| Level | Waste Room Type  | Equipment                                                                         | Estimated Area Required (m <sup>2</sup> ) | Actual Area Provided (m <sup>2</sup> ) |
|-------|------------------|-----------------------------------------------------------------------------------|-------------------------------------------|----------------------------------------|
| GF    | Bin Storage Area | General waste: 3 x 1100L bins<br>Recycling: 4 x 1100L bins<br>FOGO: 3 x 240L bins | 23                                        | 23                                     |

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

The waste room areas have been calculated based on equipment requirements and/or bin dimensions with an additional 70% of bin GFA factored in for manoeuvrability. In addition, all doorways and passageways facilitating the movement of bins and/or bulky waste items must be at least 1500mm wide.

The following table provides further waste room requirements.

Table 7: Waste Room Requirements

| Waste Room Type         | Waste Room Requirements                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bin Storage Area</b> | <ul style="list-style-type: none"> <li>• Bins should be arranged so that all bins are accessible. Bins are not to be placed in front of one another or in such a way as to restrict access to the other bins for use.</li> <li>• Rooms must be well ventilated either naturally or mechanically in accordance with AS1668.4.2012</li> <li>• Cleaning facilities such as hose cock and drainage for odour and hygiene control must be provided.</li> <li>• It is recommended a dustpan and broom is provided in this room for staff and cleaners to clean up unexpected spillages when using bins.</li> </ul> |

## 13.0 CONSTRUCTION REQUIREMENTS

Waste room construction must comply with the minimum standards as outlined in the *Campbelltown Development Control Plan 2015*, 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.

### 13.1 ADDITIONAL CONSIDERATIONS

- Waste room floor to be sealed with a two-pack epoxy;
- All corners coved and sealed 1,200mm up, this is to eliminate build-up of dirt;
- Hot and cold water 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.

## 14.0 USEFUL CONTACTS

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

### LOCAL COUNCIL

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Campbelltown Customer Service      Ph: (02) 4645 4000      E: [council@campbelltown.nsw.gov.au](mailto:council@campbelltown.nsw.gov.au)

### PRIVATE WASTE COLLECTION PROVIDER

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|                             |                  |                                                                         |
|-----------------------------|------------------|-------------------------------------------------------------------------|
| Capital City Waste Services | Ph: 02 9599 9999 | E: <a href="mailto:service@ccws.net.au">service@ccws.net.au</a>         |
| Sydney Waste                | Ph: 02 8661 0031 |                                                                         |
| Waste Clear                 | Ph: 1300 525 352 | E: <a href="mailto:admin@wasteclear.com.au">admin@wasteclear.com.au</a> |

### BIN MOVING DEVICE SUPPLIERS

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|                          |                  |                                                                                       |
|--------------------------|------------------|---------------------------------------------------------------------------------------|
| Elephants Foot Equipment | Ph: 1300 435 374 | E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a> |
| Sitecraft                | Ph: 1300 363 152 | E: <a href="mailto:sales@sitecraft.com.au">sales@sitecraft.com.au</a>                 |

### BALER SUPPLIERS

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|                          |                  |                                                                                       |
|--------------------------|------------------|---------------------------------------------------------------------------------------|
| Elephants Foot Equipment | Ph: 1300 435 374 | E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a> |
|--------------------------|------------------|---------------------------------------------------------------------------------------|

### ORGANIC DIGESTERS AND DEHYDRATORS

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|                          |                  |                                                                                         |
|--------------------------|------------------|-----------------------------------------------------------------------------------------|
| Elephants Foot Equipment | Ph: 1300 435 374 | E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a>   |
| Waste Master             | Ph: 1800 614 272 | E: <a href="mailto:hello@wastemasterpacific.com.au">hello@wastemasterpacific.com.au</a> |

### COOKING OIL CONTAINERS AND DISPOSAL

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|         |                  |                                                                 |
|---------|------------------|-----------------------------------------------------------------|
| Cookers | Ph: 1300 882 299 | E: <a href="mailto:info@cookers.com.au">info@cookers.com.au</a> |
| Auscol  | Ph: 1800 629 476 | E: <a href="mailto:sales@auscol.com">sales@auscol.com</a>       |

### ODOUR CONTROL

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|                          |                  |                                                                                       |
|--------------------------|------------------|---------------------------------------------------------------------------------------|
| Elephants Foot Equipment | Ph: 1300 435 374 | E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a> |
|--------------------------|------------------|---------------------------------------------------------------------------------------|

### SOURCE SPERATION BINS

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|                  |                  |
|------------------|------------------|
| Method Recycling | Ph: 0499 890 455 |
|------------------|------------------|

### BINS AND BIN EQUIPMENT

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|                          |                  |                                                                                       |
|--------------------------|------------------|---------------------------------------------------------------------------------------|
| Elephants Foot Equipment | Ph: 1300 435 374 | E: <a href="mailto:equipment@elephantsfoot.com.au">equipment@elephantsfoot.com.au</a> |
| SULO                     | Ph: 1300 364 388 | E: <a href="mailto:sulosales@pactgroup.com">sulosales@pactgroup.com</a>               |

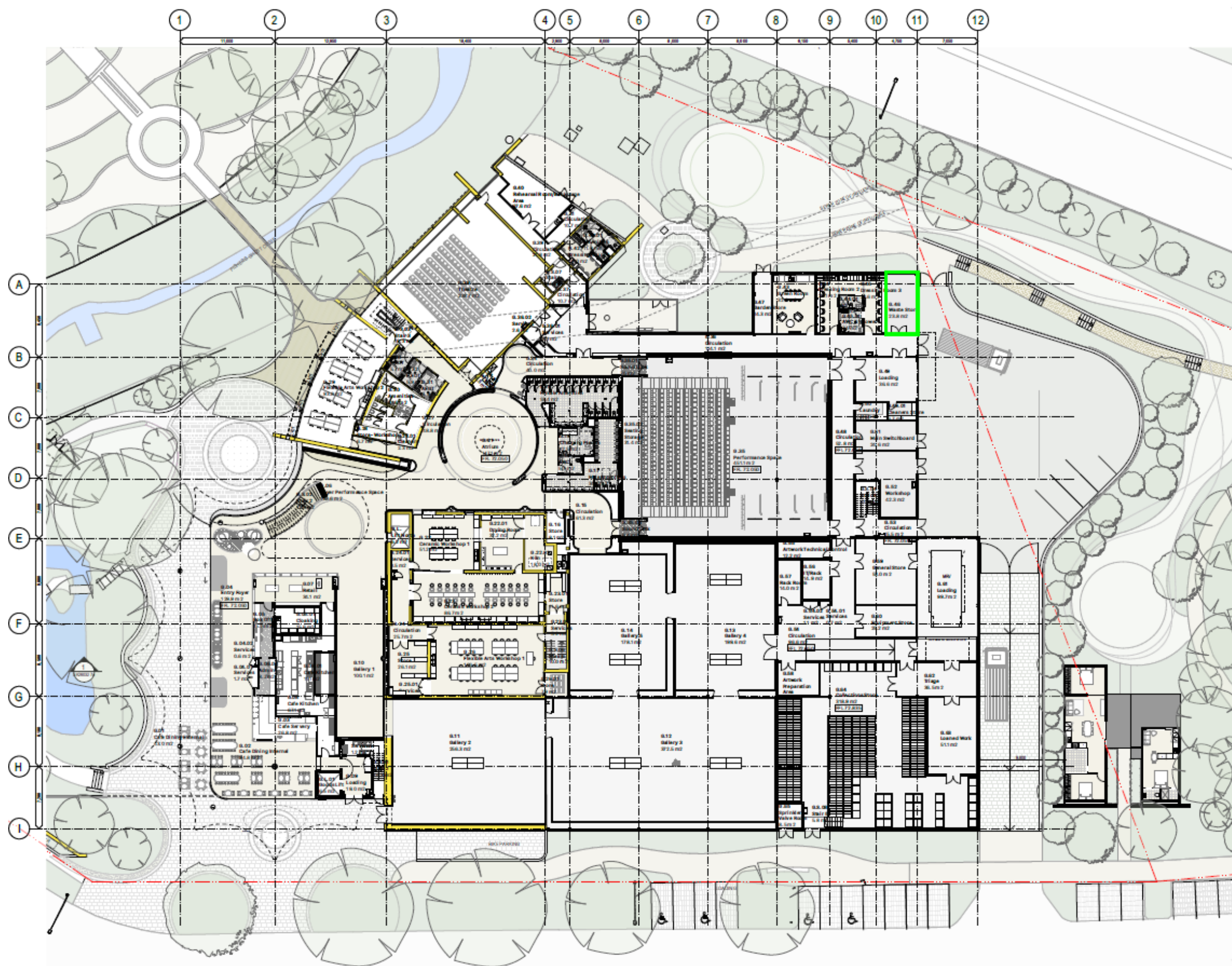
### CHUTES, COMPACTORS AND EDIVERTER SYSTEMS

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|                                |                  |                                                                                 |
|--------------------------------|------------------|---------------------------------------------------------------------------------|
| Elephants Foot Chute Solutions | Ph: 1300 435 374 | E: <a href="mailto:chutes@elephantsfoot.com.au">chutes@elephantsfoot.com.au</a> |
|--------------------------------|------------------|---------------------------------------------------------------------------------|

## APPENDIX A: ARCHITECTURAL PLANS

# APPENDIX: A.1 GROUND FLOOR PLAN



Source: FJC Studio, Drawing no. 2000, Rev 12, 16.04.2026 – Ground Floor Plans.

## 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 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](https://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 EXAMPLE 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**

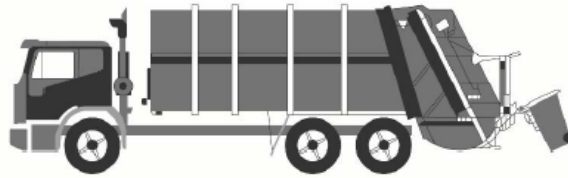
| Vehicle type                       | Rear-loading | Side-loading* | Front-lift-loading | Hook truck | Crane truck |
|------------------------------------|--------------|---------------|--------------------|------------|-------------|
| Length overall (m)                 | 10.5         | 9.6           | 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 EXAMPLE SOURCE SEPARATION RECEPTACLES

