## 42-46 Unley Road, Unley

# Waste Management Plan

## Date: 26 February 2025

**Prepared for:**

Otello Projects

**Colby Phillips Advisory Pty Ltd**

Suite 117, 147 Pirie Street

Adelaide, SA 5000

info@colbyphillips.com.au

| *Rev.* | *Date* | *Description* | *Doc No./Name* | *Originator* | *Approved* |
|---|---|---|---|---|---|
| 0 | 14 Aug 2023 | For lodgement | WMP | JPH | JPH |
| 1 | 26Feb2025 | Updated GF | WMP | JPH | JPH |
| | | | | | |
| | | | | | |

Distribution List

| | |
|---|---|
| Zoe Steele | Otello Projects |
| Dan Harris | Otello Projects |
| Enzo Caroscio | Enzo Caroscio Architects |

## Contents

# 1 INTRODUCTION

This document presents a waste management plan (WMP) for the proposed mixed used development at 42-46 Unley Road, Unley (the "Development"). The Development is a combination of high density residential dwellings and an office/studio. The project proponent is Otello Projects, the architect is Enzo Caroscio Architects, and the traffic engineer is Cirqa.

The WMP explains how the Development can manage waste effectively to achieve regulatory requirements and desired design and operating objectives, including those recommended by the South Australian Better Practice Guide (State Guideline) (Zero Waste SA, 2014), the SA Planning & Design Code, and Council expectations for waste management in this type of development. The WMP should be read in conjunction with other planning approval documentation for the Development.

# 2 DEVELOPMENT DESCRIPTION

The Development is at 42-46 Unley Road, in the City of Unley (Council) – see Figure 2-1 which shows the overall site layout. Per plans provided (Drawings – 22006-A2.00 to A3.10, dated 25 Feb 2025), the Development is a mixed use, multi-storey building. The site has frontage onto Unley Road with rear access from Irwin Lane.

The dwellings are to be targeted at the premium market, with generous internal dimensions.

Table 2-1 gives the proposed Development Metrics. In summary, the Development would comprise:

- *Residential Apartments (Levels 1 – 6)*
  - *6 x 2-bedroom apartments.*
  - *8 x 3-bedroom apartments.*
  - *1 x 4-bedroom apartment.*
- *Commercial tenancy (Ground Level)*
  - *1 x Office tenancy (221 $m^2$ GLA)*

Table 2-1 includes the recommended Waste Resource Generation Rate (WRGR) classification (for each land use) based on the State Guideline (Zero Waste SA, 2014), which are used for estimation of waste and recycling volumes to assess waste storage required for the site.

**Table 2-1:** Summary of land uses for the Development, their WRGR Description(s) and relevant Development Metric(s).

| Land Use | Description | Site Location | Land Use Type for WRGR | Dev. Metric(s) | |
|---|---|---|---|---|---|
| Residential | Apartments | Levels 1 – 6 | High Density Residential Dwelling | 15 | Dwellings |
| | | | | 40 | Bedrooms |
| Commercial | Offices | Ground Level | Offices or Consulting Rooms | 138 | m2 GFA |

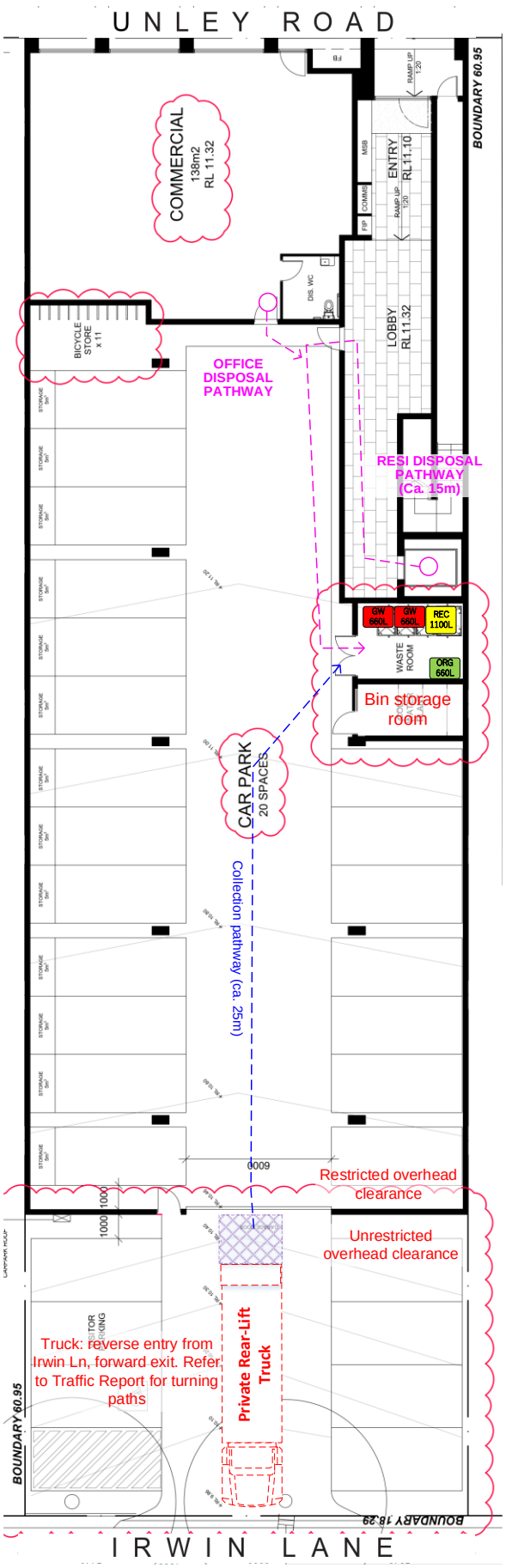


**Figure 2-1** *Site overview, including main features of waste system*

# 3 DESIGN ASSUMPTIONS

## 3.1 Waste & Recycling Service Provision

Table 3-1 outlines the recommended waste services by land use per Table 2-1. The different waste service classifications listed in Table 3-1 are explained below.

- ***Routine Services –*** These require on-site waste storage and routine and regular collections, and would include services for general waste, dry (comingled) recyclables and food waste.
- ***At-call services –*** These involve non-frequent collections, such as Hard waste and are organised and provided on an as-needed basis.
- ***Maintenance services –*** Some waste items (e.g. lighting in common areas or commercial tenancies, sanitary waste in public/common toilets) would be removed and disposed of (off-site) by the contractor providing the related maintenance service (and hence on-site waste storage is not usually needed or provided).
- ***External Services –*** These are where waste items (e.g. printer cartridges, batteries, lighting) that can be dropped off by tenants/residents at external locations (e.g. Officeworks, waste depot) (and thus, separate on-site waste storage is not usually needed or provided).

Routine Landfill, Recycling, and Food Waste services for all residents and commercial at the Development would be provided by Private on-site collection.

## 3.2 Waste & Recycling Volumes

Table 3-2 estimates expected waste and recycling volumes for the Development (in Litres/week). WRGRs (in the State Guideline) do not exist for lighting, printer cartridge or battery waste. Volumes of these waste items, however, are relatively small, and thus, have not been estimated estimates expected waste and recycling volumes for the Development (in Litres/week).

**Table 3-1** Expected or recommended waste & recycling services for the Development

| Service Type | Residential | Commercial |
|---|---|---|
| | **Apartments** | **Offices** |
| ***Routine (regularly scheduled)*** | General Waste<br>Recycling<br>Food Organics | General Waste<br>Mixed Recycling<br>Food Organics<br>Confidential Paper |
| ***At-call (as needed)*** | Hard/E-waste | |
| | Printer Cartridges | |
| | Batteries | |
| ***Maintenance (waste removed by contractor)*** | Sanitary (office toilets, if applicable) | |
| | Lighting (where applicable) | |

**Table 3-2** Estimated waste & recycling volumes (Litres/week) for Development.

| Waste/Recycling Service | Residential | Commercial |
|---|---|---|
| | ***Apartments***<br>*L/week* | ***Offices***<br>*L/week* |
| General Waste | 1200 | 110 |
| Dry Comingled Recycling | 1000 | 80 |
| Confidential Paper | | 20 |
| Food / Garden Organics | 400 | 30 |
| Hard waste | 168 | 5 |
| E-waste | 20 | 1 |
| TOTAL | 2,788 | 236 |

# 4 WASTE MANAGEMENT SYSTEM

## 4.1 Waste Storage Area

Waste Storage at the development combines both commercial and residential waste. The office is anticipated to generate very low volumes of waste (less than 10% of overall site generation). Combining the waste systems simplifies the storage and collection of waste, and reduces cost to residents for waste collection by sharing the cost with the office.

The waste storage room is located at ground level and will contain a set of shared private skip bins.

The various bin storage areas are as described below. Table 4-1 gives a schedule of recommended bin storages for routine services (based on estimated waste volumes in Table 3-2 on page 6) and includes for each service:

- *Number and type of bins;*
- *Collection frequency (expected or proposed); and*
- *Service provider.*

**Table 4-1** Waste storage and bin schedule for Routine Services, including collection frequency and collection service provider.

| Source | Local Disposal Location | Routine Service | Estimated Waste/Recycling Volumes (L/wk) | Collection Frequency (Events/wk) | Provider | Max. Bins/Items Stored & Collected (per Event) | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | *No.* | *Size (L)* | *Type* |
| **Combined Residential and Commercial** | Ground Level Waste Room | General Waste | 1310 | 1 | Private Rear Lift | 2 | 660 | Skip |
| | | Dry Comingled Recycling | 1080 | 1 | | 1 | 1,100 | Skip |
| | | Food / Garden Organics | 430 | 1 | | 1 | 660 | Skip |
| **Commercial** | In Tenancy | Confidential Paper | 20 | NA | Shredded | | NA | |

## 4.2 Residential (Apartments)

### 4.2.1 User Storage

Residents would be provided suitable kitchen bins with handles to enable easy carriage to the waste rooms on each level.

a) *General waste / Recycling bins – at least 20L in size.*
b) *Food organics bin – Kitchen food waste caddy, ca. 6L in size*

*(a)* *(b)*

**Figure 4-1– Examples of suitable waste and recycling kitchen bins:** *(a) General waste & recycling in pull-our drawer; and (b): Bench-top food waste kitchen caddy with handles*

### 4.2.2 Local Disposal and Waste Storage

Residents on Levels 1 to 6 would carry their general waste, mixed recycling, and food waste down the residential lift and to the Waste Storage Room.

Transfer pathways would be free of steps, grades ≤ 1:10, with appropriate hard /even surfaces, and wide enough to accommodate the types of bins being transferred.

The maximum disposal path distance from any apartment is approximately 15 m, in line with the recommendation in the South Australian Guidelines.

Residential Waste will be stored in a shared waste room at ground level adjacent to the car park.

As shown in Figure 2-1. (page 4), the shared skips would consist of:

- 2 x 660L General Waste Skip Bin
- 1 x 1,100L Mixed Recycling Skip Bin
- 1 x 660L Organics Bin


**Figure 4-2:** Typical Apartment Level

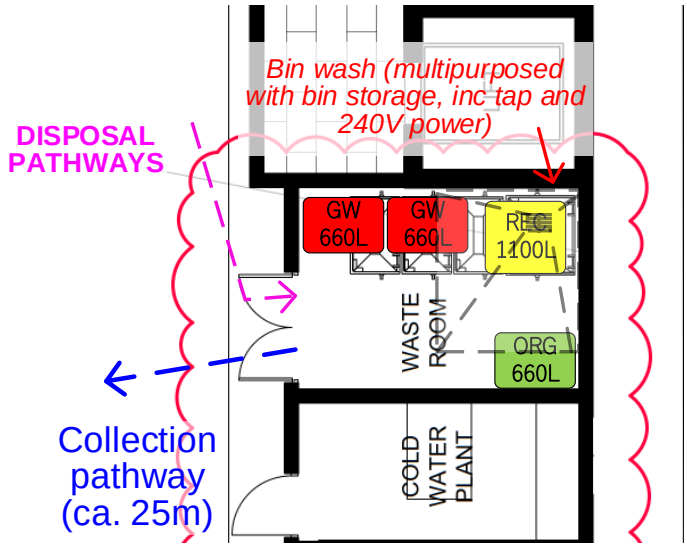


**Figure 4-3–** Waste storage room – residential and office

## 4.3 Commercial Tenancy User Storage and Local Disposal

### 4.3.1 User Storage

- The tenancy would have bins located in-tenancy for disposal of their waste and recycling.
- The types and size of bins would be decided during tenancy fit-out as they depend on type of commercial activity and services elected by the tenants.
- The office may also have a dedicated Confidential Paper MGB as required.

### 4.3.2 Local Disposal and Waste Storage

- Table 4-1 (page 7) gives a list of bin types and numbers to service the assumed tenancy configuration in Table 3-1.
- Tenancy staff or cleaners would transfer waste & recycling from the local points of user disposal to the waste storage area as shown in Figure 2-1.
- As shown in Figure 2-1 on page 4, the commercial tenancy would share bins with residential tenants.

## 4.4 Presentation and Collection

- Bins would be collected directly from the bin room by the Private waste contractor (pull in / pull out service).
- Bins would be collected by a private waste collection contractor using rear-lift trucks.
- Each truck would reverse into the carpark from Irwin Lane and stop within the property boundary, as shown in Figure 2-1 on page 4.
- The private contractor would collect bins from the bin room, empty them and finally replace them to the bin room.
- Collections would be up to:
    - Once weekly for General Waste
    - Once weekly for Recycling
    - Once weekly for Food Waste
- The time required to lift bins should be around 3 to 5 minutes for each service.

## 4.5 Hard/E-waste

- Council does not currently guarantee a hard waste collection service for this type of development. Management (on residents' behalf) should inquire with Council regarding whether these residents can access the Council's hard waste collection service when the building becomes operational, including establishing suitable arrangements and a presentation location.
- If a Council service is not available, management would facilitate private hard waste collection services for residents.
    - This would involve at-call hard waste collection by a private contractor.
- The waste contractor would temporarily park alongside the waste to deliver the hard waste collection services.
- The Building User Manual(s) for residents at the Development would advise on availability and/or organizing the Hard /E-waste collection services.

## 4.6 Maintenance Services

Waste would be generated by some maintenance services or activities in the building and commercial tenancies at the site (e.g. lighting, repair work, cleaning of commercial toilets, etc.). These maintenance-generated waste materials would be handled and disposed of by the contractor undertaking these services. Dedicated on-site storage for these waste materials is therefore not needed.

## 4.7 External

Residents and commercial tenants would be able to dispose of smaller waste items, such as printer cartridges, batteries and lighting, to publicly available external drop off points (e.g. supermarkets, Office works, telco retail stores, etc.), which accept these materials.

The Building User Manual(s) for residents and commercial tenants at the Development will include advice on external drop-off points for these waste items, which may include reference to Council advice available at their Web site.

## 4.8 Bin cleaning (& On-site Bin Wash Area)

A dedicated on-site bin cleaning area could be provided inside the Residential Waste Storage Area – see **Figure 4-3**.

- This bin wash area would require grading to a sewer drain with basket screen to remove gross solids, tiles or epoxy coating to water-proof adjacent walls and flooring, standard cold-water supply faucet and commercial-grade electrical power supply (if pressure washer system is to be used), plus bunds and screens for use during bin wash events.
- Bin washing activity for residential bins and access by commercial tenants would be managed by the Building/Facilities Manager.
- Bin washing would be timed to occur immediately after bins are emptied.

Alternatively, bin cleaning at the Development could be outsourced to an external contractor (e.g. http://binforce.com.au/).

- These external contractors generally have self-contained bin washing systems on back of ute or truck that enable them to clean bins on site – e.g. Figure 4-4 below.
- Some service providers will remove bins from site, replacing them with an empty spare, clean the bins, then return them to site.


**Figure 4-4** On-site bin wash system for rear-lift trucks on back of ute. *Source: http://binforce.com.au/*

## 4.9 Transfer pathways

There are range of transfer pathways for the waste systems at the Development, which were described in earlier in Section 4. The following is provided as a guide for sizing and designing these transfer pathways.

- *Transfer pathways –*
  - *User disposal – prefer less than 50m each way and free of steps, no grades greater than 1:15, and cater for mobility impaired users.*
  - *Local disposal points to central storage – enough width to accommodate relevant bins or waste loads being transferred, free of steps, no grades greater than 1:12*
  - *Collection – less than 30m with no steps or grades greater than 1:10*
- *Corridor widths –*
  - *240L MGBs or smaller bins / loads – min. 1,000 mm (1,200mm preferred)*
  - *660L skip bins – min. 1,200mm (1,400mm preferred)*
  - *1,100L skip skips and/or other waste loads – min. 1,500mm (1,600mm preferred)*
- *Doors –*
  - *Local disposal access – 800mm*
  - *Transfer pathways– Appropriate to the size of bin to be transported, e.g.*
    - *240L MGB (or smaller) – min. 800mm*
    - *660L skip – min. 1,200mm*
    - *1,100L skip – min 1,400mm*
- *Floors – Hard surfaces where bins and skips are to be carted*

Based on current plans, these requirements for transfer pathways in the Development appear to be generally satisfied. All relevant transfer pathways should be reviewed and confirmed at detailed design stage to ensure they are appropriate, including with Council for their residential collection services.

## 4.10 Collection & Traffic

The waste collection points for the Development introduced above are reiterated below.

- Collection of residential waste would be by Private Rear-lift truck which will park inside the building carpark as shown in Figure 2-1 on page 4.
  - Refer to the report from the Traffic Engineer discussing impacts on traffic.
- Collections would have frequency as listed in Section 4.1
- The time required to lift bins should be 3 to 5 minutes for each service.
- The collections should be scheduled to
  - Fit in with commercial collection contractor requirements.
  - Avoid peak times for carpark use by building tenants/visitors
  - Comply with EPA noise restrictions

## 4.11 Management & Communication

### 4.11.1 Responsibilities

Table 4-2 summarises the responsibilities of different parties / stakeholders for proposed waste management and operational activities at the Development. In summary:

- ***Residents*** – The Building / Facilities Manager would be responsible for managing the waste system, but residents would play an important role in managing their local

disposal activities and accessing the Council hard waste service (if agreed), and Council (at its discretion) may support the Building / Facilities Manager with resident engagement and education to help drive good waste management outcomes.

- ***Commercial tenancy*** – The Building / Facilities Manager would manage the waste system, including ensuring that good waste management outcomes by tenants were achieved.

**Table 4-2** Management & operational responsibilities for the waste systems at the Development

| Waste System | Activity | Responsible party |
|---|---|---|
| ***Residential*** | *Local Disposal & External Disposal* | Residents |
| | *Waste Storage Areas, Hygiene, Odour Management & Cleaning* | Building Manager & their property management staff |
| | *Collection services – Standard Waste & Recycling* | Commercial / Private Contractor(s) |
| | *Collection services – Hard Waste by private contractor* | Building Manager booking it with private contractor on tenants' behalf |
| | *Management* | Building Manager |
| | *Education, Training & Engagement (Residents)* | Building Manager, possibly with Council support |
| ***Commercial Tenancy*** | *Local Disposal, Hard Waste & External Disposal* | Tenants |
| | *Waste Storage Areas, Hygiene, Odour Management & Cleaning* | Tenants, Building Manager |
| | *Collection services – Waste & Recycling* | Commercial / Private Contractor(s) |
| | *Management* | Building Manager |
| | *Education, Training & Engagement (tenants)* | Building Manager, possibly with Council support |

### 4.11.2 Implementation & Communication

#### *4.11.2.1 Residential*

To successfully implement this WMP, the following may need to be considered or should be put in place.

- ***Mandated responsibilities for apartment residents –*** Obligations for residents to properly access, operate and use the waste systems provided should be written into any tenancy residency agreement and/or incorporated into the Community/Strata plan lodged with the Lands Titles Office.
- ***Resident Induction –*** Should include first-day guidance on how to correctly use the waste systems.
- ***Building User Manual*** – Advice and instructions on waste management and using the waste systems should be included in the Building User Manual(s) developed for residents, including contact information for further information, questions and issues.
    - This may include advice to residents on how to properly dispose of other waste / recycling items including lighting, batteries and hazardous household waste

- This may include clear written and pictorial signs in the bin room to help residents understand what goes in each bin.

- ***Emergency Response &/or Property Management Plan(s) –*** Should include response measures (or contingencies) for:
  - Collection services suspended or not available;
  - Incorrect use by residents of the waste systems; and
  - Illegal dumping on-site.

*4.11.2.2 Commercial tenants*

Like the residential system above, the following should be put in place for the commercial system:

- ***Community/Strata title arrangements for commercial property owners –*** Obligations for the commercial tenants and/or property owners to properly access, operate and use the waste systems would be written into any tenancy agreement and the Community/Strata plan lodged with the Lands Titles Office.
- ***Site Management System / Manual*** – Advice and instructions on waste management and using the waste systems should be provided for tenants, including contact information for further information, questions and issues.
- ***Tenant Induction –*** Should include guidance on how to correctly use waste /recycling bins as well as the site approach to waste and recycling.
- ***Emergency Response or Site Management Plan(s) –*** Should include response measures (or contingencies) for:
  - *Waste collection services suspended or not available;*
  - *Incorrect use by tenants of the waste systems;*
  - *Illegal dumping on-site; and*
  - *Poor waste management outcomes (including cleanliness, odour and/or low diversion).*

## 4.12 Other Waste System Design or Management Issues

The following would be considered and/or implemented for waste systems at the Development. More details for some of these items can be resolved at detailed design stage with the waste contractor and/or Council.

1) **Bins** – These would comply with Australian Standard for Mobile Waste Containers (AS 4213).
2) **Signage** –
   - Appropriate signage in all Local Disposal and Waste Storage Areas should be used to ensure correct disposal of waste and recycling.
   - This signage should conform to the signage requirements of Council and/or the State Guideline (Zero Waste SA, 2014).
   - Written and pictorial guidance recommended. Consider providing information in languages other than English.
3) **Vermin, hygiene & odour management (inc. ventilation)**
   - ***Inspection & Cleaning*** –
     - An inspection and cleaning regime would be developed and implemented by the Building / Facilities Manager for waste systems at the Development, including ensuring that surfaces and floors around disposal areas, transfer pathways and waste storage areas are kept clean and hygienic and free of loose waste and recycling materials.

- *Where putrescible general waste or food waste is being stored, Local Disposal and Waste Storage areas should be graded to a sewer drain with tiling or epoxy coating to floors and adjacent walls to waterproof the area and for cleaning.*

- ***Odour Control*** –
  - All Waste Storage Areas –
    - *Where putrescible general waste or food waste is being stored, mechanical ventilation should be installed.*
    - *The ventilation would extract to atmosphere, to prevent odour build up.*
    - *The extraction vent discharge location would be selected to avoid impact on residents, tenants and/or neighbours.*
    - *It should be a requirement for food waste bins in Waste Storage areas that lids are closed after use.*

4) **Access & security** –
   - All Waste Storage Areas (residential and commercial) in the Building should be secure and only accessible by key or fob or access code.
     - *This key or fob or access codes would be provided to residents, tenants, property management staff and/or waste contractor(s) collecting from these areas.*
     - *CCTV is recommended to monitor waste disposal practices in all Waste Storage Areas.*

# 5 PLANNING & DESIGN CODE OBJECTIVES

The applicable policies relating to Waste are provided in the following table. The third column states how these policies have been addressed in the proposed design.

| **General Development Policies** | | |
|---|---|---|
| PO 20.1<br>Provision is made for the adequate and convenient storage of waste bins in a location screened from public view | DTS/DP 20.1<br>None are applicable | Response:<br>Bin volumes are provided in accordance with the SA Better Practice Guide recommendations and calculations are provided in Table 3-2. |
| PO 26.3<br>Provision is made for suitable household waste and recyclable material storage facilities which are:<br>(a) Located away, or screened, from public view, and<br>(b) Conveniently located in proximity to dwellings and the waste collection point | DTS/DPF 26.3<br>None are applicable | Response:<br>The waste storage areas at ground level are internal to the building and hence will be screened from public view.<br>Waste disposal is convenient, via elevators accessible from each level. Disposal distance approximately 15m. |

| | | |
|---|---|---|
| PO 26.4<br>Waste and recyclable material storage areas are located away from dwellings | DTS/DPF 26.4<br>Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window. | Response:<br>The waste storage area at ground level is internal to the building within a dedicated bin storage room and hence is located away from dwellings. |
| PO 26.5<br>Where waste bins cannot be conveniently collected from the street, provision is made for on-site waste collection, designed to accommodate the safe and convenient access, egress and movement of waste collection vehicles. | DTS/DPF 26.5<br>None are applicable | Response:<br>Waste is to be collected via Private rear-lift collection service.<br>The truck would reverse into the site from Irwin Lane and stop fully within the property boundary.<br>Collection would be completed within 3 to 5 minutes. |
| PO 30.4<br>Provision is made for suitable household waste and recyclable material storage facilities conveniently located and screened from public view | DTS/DPF 30.4<br>None are applicable | Response:<br>The waste storage area at ground level is internal to the building and hence will be screened from public view.<br>Waste disposal is convenient, via elevators accessible from each level. |
| PO 30.5<br>Waste and recyclable material storage areas are located away from dwellings | DTS/DPF 30.5<br>Dedicated waste and recyclable material storage areas are located at least 3m from any habitable room window. | Response:<br>The waste storage area at ground level is internal to the building within the ground level car park and hence is located away from dwellings. |
| PO 30.6<br>Provision is made for on-site waste collection where 10 or more bins are to be collected at any one time | DTS/DPF 30.6<br>None are applicable | Response:<br>Residential waste is to be collected via Private rear-lift collection service.<br>The truck would reverse into the site from Irwin Lane and stop fully within the property boundary.<br>Collection would be completed within 3 to 5 minutes. |

| **Design in Urban Areas** | | |
|---|---|---|
| PO 11.1<br>Development provides a dedicated area for on-site collection and sorting of recyclable materials and refuse, green organic waste and wash bay facilities for the ongoing maintenance of bins that is adequate in size considering the number and nature of the activities they will serve and the frequency of collection. | DTS/DPF 11.1<br>None are applicable | Response:<br>Collection systems are provided for source-separated landfill, recycling, and food waste. A dedicated bin wash area is to be co-located within the bin storage room as shown in Figure 4-3. |

| | | |
|---|---|---|
| PO 11.2<br>Communal waste storage and collection areas are located, enclosed and designed to be screened from view from the public domain, open space, and dwellings | DTS/DPF 11.2<br>None are applicable | Response:<br>The waste storage area at ground level is internal to the building and hence is located away from dwellings. |
| PO 11.3<br>Communal waste storage and collection areas are designed to be well ventilated and located away from habitable rooms. | DTS/DPF 11.3<br>None are applicable | Response:<br>The waste storage area at ground level will be mechanically ventilated. |
| PO 11.4<br>Communal waste storage and collection areas are designed to allow waste and recycling collection vehicles to enter and leave the site without reversing. | DTS/DPF 11.4<br>None are applicable | Response:<br>Collection of waste is proposed to be on site. The narrow site, combined with requirement for activation of the Unley Road frontage, means that the truck must reverse off Irwin Lane to enter the site for collection. The truck can then exit the site in a forward direction to Irwin Lane. |
| PO 11.5<br>For mixed use developments, non-residential waste and recycling storage areas and access provide opportunities for on-site management of food waste through composting or other waste recovery as appropriate | DTS/DPF 11.5<br>None are applicable | Response:<br>Space has been allocated for separation and collection of General Waste, Mixed Recycling, Food Waste, and Confidential Paper by the office tenancy. |

# 6 REFERENCES

Plan SA. (2021). *South Australia Planning and Design Code.*

Zero Waste SA. (2014). South Australian Better Practice Guide – Waste Management in Residential or Mixed Use Developments.